Crisis Aperiomics

By Greg Orme.

[**Introduction** 187](#_Toc354135510)

[In other words that world events tend to move like a kind of grand symphony with harmony and discord between people, nations, religions 190](#_Toc354135511)

[One of the reasons the theory took so long to write was these connections needed to be defined mathematically to ensure it was a real theory and not just vague relationships between events. 191](#_Toc354135512)

[The name Aperiomics come from the Latin and means a science of opening or revealing. 194](#_Toc354135513)

[Because of this opacity in world affairs history has always been a series of crises. 195](#_Toc354135514)

[It’s unlikely this book will appeal to many people, in fact the theory itself predicts this. 195](#_Toc354135515)

[There is also no certainty in Aperiomics unlike in most economic models 196](#_Toc354135516)

[Often this is because the police go in and out of favor, too much policing brings bad consequences likes a police state and too little brings a crime 196](#_Toc354135517)

[The mark of a good theory can be that ultimately it doesn’t suggest changing anything. 198](#_Toc354135518)

[Ideologies such as Capitalism and Communism tend to urge people to action against a perceive enemy in society. 199](#_Toc354135519)

[It is easy to see in hindsight that these things should have been controlled but the problem was also that the system was so opaque that no one could have easily connected the dots at the time 200](#_Toc354135520)

[In this theory then it is pointless to urge more regulation on the various societies, this will work until people again agitate for more freedom from policing until these problems will appear again. 201](#_Toc354135521)

[This is a major problem to many people, usually they might have an allegiance to the Left or Right of various kinds and see themselves in a perpetual tug of war to prevent the other side from creating havoc. 201](#_Toc354135522)

[To be prepared for these inevitable crises is needed not because of the failure of a theory but because people and societies will do it to themselves as often as an external event causes a crisis. 203](#_Toc354135523)

[1. It can simply be used to understand the changes in society with noninterference, much like the Middle Way philosophy of Taoism 204](#_Toc354135524)

[2. It has the potential of limiting the effects and occurrences of economic crises. 205](#_Toc354135525)

[3. It has the potential to help Third World economies out of poverty 205](#_Toc354135526)

[To make them easier to remember they are color coded with twelve colors namely R (Red), Ro (Red-Orange), O (Orange), Oy (Orange Yellow), Y (Yellow), G (Green), Gb (Green Blue), B (Blue), Bi (Blue Indigo), I (Indigo), Iv (Indigo Violet), and V (Violet). 206](#_Toc354135527)

[These two systems act differently, a Roy system is poor and often crime 207](#_Toc354135528)

[Like with music 208](#_Toc354135529)

[4. Aperiomics is arguably a Grand Unified Theory of interactions between livings things whether in nature or between people. 208](#_Toc354135530)

[5. It may be appreciated from reading this book why this system has never been discovered before when it becomes apparent that most of the pieces are well known. 209](#_Toc354135531)

[Consequently ideas based on this visible side of societies will be periodically upset by the different mathematics 211](#_Toc354135532)

[6. Some may object that much of this system is known to them and seems like plagiarism, others may object that it seems too unknown. 211](#_Toc354135533)

[It is worth remembering that as with music 213](#_Toc354135534)

[The twelve colors 214](#_Toc354135535)

[People sometimes ask me why these particular colors are used and suggest different names for these principles, also added or subtracting from these twelve. 214](#_Toc354135536)

[Any 2 or more colors can also interact, some form chords more recognizable than others. 215](#_Toc354135537)

[The next two books will deal with economic theory in depth and how it works in Aperiomics, and then a study on world poverty 216](#_Toc354135538)

[For example to build wealth in a Third World country it is necessary to strengthen domination of the O and I colors, this refers to the police and courts as O and the free market 217](#_Toc354135539)

[A society can become so unstable with a weak and corrupt 218](#_Toc354135540)

[To remember the first five colors then is like remembering different animal 219](#_Toc354135541)

[In the same way society 220](#_Toc354135542)

[The other four colors are in two sub groups, team colors and solitary colors. 221](#_Toc354135543)

[Just as a painting might be appreciated by seeing the twelve unadulterated colors that go into it, so too in Aperiomics it is easier to see clearer examples of the twelve color codes and to then appreciate they can mix in complex ways harder to see. 222](#_Toc354135544)

[Economic problems can ensue when there is too much competition 223](#_Toc354135545)

[For example the Nash Equilibrium only applies in Oy-R and Iv-B interactions because it mainly refers to the actions of individuals, using deception 224](#_Toc354135546)

[In this Oy-R predator or prey relationship both rely on speed, secrecy, deception, camouflage, etc to survive. 226](#_Toc354135547)

[Because they are loners Oy people like Roy animals don’t care about other foxes 227](#_Toc354135548)

[Consider then their destructive power in a Roy society trying to becoming Biv, they might deceptively destroy so much wealth that the country remains in poverty. 228](#_Toc354135549)

[So the loan 229](#_Toc354135550)

[These Oy petty thieves 230](#_Toc354135551)

[In effect then O animals tend to act like police moderating the swings of predator and prey in the food chain 232](#_Toc354135552)

[Team and solitary behavior then can change according to circumstances, Impala might act as a Ro herd to fight off smaller predators but scatter and hide against larger ones. Hyena might do better as loners like the cheetahs and in other areas hunt as Y teams. 234](#_Toc354135553)

[In the same way the O police protect the weaker Ro-R members of society 235](#_Toc354135554)

[This difference between dependent and independent variables is important in Aperiomics because it defines the team versus solitary color interactions. 236](#_Toc354135555)

[This allows economic data to be analyzed in some completely new ways while still being compatible with current theory, it also explains why these equations often fail to describe the real economy. 237](#_Toc354135556)

[If the environment 239](#_Toc354135557)

[Only when the Roy food chain 242](#_Toc354135558)

[Some might say here that since we know that police are good for a society then what use is it to define these different groups with their colors. 245](#_Toc354135559)

[In the same way a Roy society 247](#_Toc354135560)

[Biv (B I V) acts like overtones 250](#_Toc354135561)

[Their adversary is the overtone of the petty thief 251](#_Toc354135562)

[A Zero Sum Game is where one side wins and another loses. 252](#_Toc354135563)

[They use their talent and act like teams or crony capitalists, often this can also involve wars of attrition 254](#_Toc354135564)

[For example Bi unions might negotiate for a bigger percentage for the profits of a company than V might get though both make a profit, in a Roy society 255](#_Toc354135565)

[In a Biv society 258](#_Toc354135566)

[The increase in O crime then is a sign an economy is becoming more Roy because of scarcity of resources even though they might still seem abundant. 259](#_Toc354135567)

[This is because in Iv-B the variables are dependent on each other, when some prices go up then this can push others up in a boom 261](#_Toc354135568)

[For example interactions between team colors are more random and between solitary colors more chaotic, when chaos 262](#_Toc354135569)

[It is however possible that Aperiomics could in principle prevent economic fluctuations like these because in nature they rarely happen, the numbers of predators and prey remain much more stable. 264](#_Toc354135570)

[Much of this theory then involves determining which aspects of an economy are chaotic and which parts are random, or a mix of both, this aids in predicting what is likely to happen. 266](#_Toc354135571)

[Aperiomics and the GFC 266](#_Toc354135572)

[of the various crises leading up to the GFC from the point of view of an expanding series of chaotic cracks in the global economy 266](#_Toc354135573)

[Often an economy can have a mixture of Roy and Biv systems in it, I refer to this as a marginal 269](#_Toc354135574)

[Such an area might be permanently depressed as Roy because it has insufficient Gb natural resources and so G public property and government services work more efficiently than private businesses. 271](#_Toc354135575)

[When a business transaction is done in Biv the money 273](#_Toc354135576)

[As will be seen some situations need more cooperation and some more competition but neither can completely replace the other without economic problems. 275](#_Toc354135577)

[The two groups on either side then meet in this neutral I market which is policed by I civil 277](#_Toc354135578)

[This is also why it is nearly impossible to create a well functioning I market in a poor Roy economy. 280](#_Toc354135579)

[However when there are few natural resources in a Roy are it is difficult for the Biv system to offer enough incentives for people to work and make deals that benefit both parties instead of crime, sometimes though this can be overcome by strong enough I-O police. 284](#_Toc354135580)

[In this sense then an I market functions best when laws forbid certain kinds of secrecy because they often lead to crime. 287](#_Toc354135581)

[When these lose contact with their corresponding pair, for example when V-Bi acts independently of Iv-B and Oy-R acts independently of Y-Ro this disconnect 289](#_Toc354135582)

[So because of this constant desire for Y-R to fight and V-B to try to outwit each other in business the middle colors tend to wane in influence, the I-O policing becomes weak and the system usually suffers. 293](#_Toc354135583)

[Eventually this Y-R war and V-B colonialist exploitation of the people that often accompanies it weakens the local I-O policing trying to keep order and maintain an honest local market. 299](#_Toc354135584)

[There is a balance then between V and Bi groups who can build reserves 303](#_Toc354135585)

[This price reconnection involves selling the boom 308](#_Toc354135586)

[When both the Iv lenders and B borrowers were competitively lying and deceiving each other the result had to be a highly deceptive bond backed by these loans 311](#_Toc354135587)

[Proxy wars are where Oy works as an agent for a Y Empire 313](#_Toc354135588)

[Because each was trying to win the war with secrecy and deception there was no incentive to record these conflicts truthfully, this is why what happened to so many of the missing executed in these conflicts will never be known. 320](#_Toc354135589)

[When these imbalances exist then the color codes are much harder or impossible to police in a neutral 326](#_Toc354135590)

[Many people in the world are at a severe disadvantage because of their climate or natural resources, this led to exploitation from Y Empires but over time 327](#_Toc354135591)

[However I-O policing is not about favoring one color code over another or any particular agenda in race or religion, it is in finding a middle way or compromise between opposing factions. 330](#_Toc354135592)

[People who try to warn others about an impending crisis usually go unheeded, this is similar to the Greek legend of Cassandra 331](#_Toc354135593)

[When a group is highly secretive, competitive, and deceptive then self-policing 337](#_Toc354135594)

[This subprime business was highly competitive at the time 339](#_Toc354135595)

[In the same way Iv agent self-policing 345](#_Toc354135596)

[Often they form secretive groups with other Iv and Oy kinds of people and sometimes R and B as well, for example there can be connections to organizations like Wikileaks. 347](#_Toc354135597)

[The I-O market then is only efficient when this invisible hand of capitalism, which is Iv and B doing business secretively and invisibly to others, is policed when they commit crimes both criminal and civilly. 354](#_Toc354135598)

[Now this younger generation is growing up under the shadow of these larger and older trees and finding it difficult to make money with much of the country’s wealth tied up in retirement funds. 363](#_Toc354135599)

[The job of I-O police here is to reduce this Oy-R fraud just like in the animal kingdom 369](#_Toc354135600)

[Between Iv and Bi there is the I-O market where mortgages are more carefully scrutinized and policed, Iv agents generally don’t like this much because their lies are more often exposed there, neither does B with their liar loan applications and so they try and do secret business outside it. 371](#_Toc354135601)

[It also led to a chaotic economy with no real strength to resist collapse from strong enough external events like 9/11, this devastated the US economy mainly through Iv-B panic as many of these new kinds of business worked on low profit margins and did not have the reserves to handle this external shock. 378](#_Toc354135602)

[This competition is itself like Iv-B but international in scope, the destructive effects are caused by weak I-O policing allowing dumping of goods, keeping exchange rates too low for a competitive advantage, industrial espionage, governments subsidizing some industries to give them advantage, mercantilist protection of some industries, and so on. 389](#_Toc354135603)

[This is like a downward spiral where before Iv-B was pushing up prices of real estate 402](#_Toc354135604)

[At this point the Bi community is more suspicious and doesn’t believe the Iv deceptions as much, they were also deceived by B workers and they begin to realize that they have been ripped off with many of their Bi pension fund investments. 414](#_Toc354135605)

[For example as the subprime lending market grew the Iv agents learned to hollow out the economy by deceptively lending to B workers, they deceived these workers and often also deceived their V employers by falsifying loan documents. 421](#_Toc354135606)

[Increasing the amount of housing 436](#_Toc354135607)

[The problem then is much more complex than blaming one or more groups after these fluctuations lead to crime or economic waste, often this scapegoating is part of the process to protect some and lead to the next fluctuation and more problems. 438](#_Toc354135608)

[Probably then the main cause of the GFC 442](#_Toc354135609)

[The tree shape is ubiquitous in nature, in animals the nerves and blood vessels are laid out this way and plants use this system almost exclusively. This is partially because the concept of roots and branches joining together like this covers the process of going from a general situation to a particular one or vice versa 448](#_Toc354135610)

[This system claims to cover all situations because it is composed of all alternatives, for example a person might be in a team or be a loner, he might work cooperatively with others or compete, he might be open and honest or secretive and deceptive, he might act more like a predator or prey, and so on. 456](#_Toc354135611)

[The reason for both of these is the Iv-B economic system has in effect died in many places from a lack of Gb resources much like a heart 465](#_Toc354135612)

[The Biv system gets into a color imbalance and to strengthen the I-O police may well not be possible even with a detailed understanding of the problem because people will not elect the politicians that will do this 477](#_Toc354135613)

[This explains one of the most frustrating aspects of the aftermath of the GFC 483](#_Toc354135614)

[For example wherever economic data was unavailable this should have been treated as a possible haven for chaotic contagion 493](#_Toc354135615)

[There are two kinds of money pumps, one where the money might move in a constant stream and others where there might be a time between pulses of money being sent. 503](#_Toc354135616)

[In Roy a Negative Sum Game 514](#_Toc354135617)

[When it hits the floor this is the limit of the price drops, the downward momentum 520](#_Toc354135618)

[However stronger I-O policing like in most markets would have exposed the real risk in these subprime bonds 533](#_Toc354135619)

[This kind of money 541](#_Toc354135620)

[If too much energy is lost the economy becomes stagnant like a V-Bi swamp, it can resemble mountains of ice as debt with some liquid money trickling through like water through a swamp. 550](#_Toc354135621)

[The momentum of the system now became concentrated in fleeing for a safe harbor like boats looking for deep water with many tsunamis coming, other areas became so dry with frozen debt that the waves broke up their whole businesses like buildings into matchsticks. 562](#_Toc354135622)

[This might also require the I-O police to use some tariffs and protection from imports so the Biv economy like a forest can grow strong enough to defend itself, otherwise overseas Iv-B companies might dump stock trying to break this manufacturing competition from getting off the ground. 578](#_Toc354135623)

[When the police are at maximum efficiency and are unbiased this uses the community’s resources most efficiently for reviving the economy. 587](#_Toc354135624)

[This might be resolved to some degree by using tariffs and quotas that overseas companies can bypass by doing some of the manufacturing in the advanced economies, this happens with car manufacturing in the US for example. 590](#_Toc354135625)

[The two limits on an Iv-B economy then are similar in their effects, when an Iv-B boom reaches its ceiling then liquidity becomes very scarce and even small external shocks can trigger a crash. In the same way when an Iv-B boom crashes then when it tries to restart the first steps of rebuilding this infrastructure can be very difficult. 596](#_Toc354135626)

[The main message of Aperiomics then is it tries to explain how the world works but it does not really describe how to change it, it is also an open question as to whether it can be changed. 614](#_Toc354135627)

[It is not a matter of an economic system being self-regulating and always righting itself, it is just that some economies historically have had a balance of these color forces that resulted in exceptionally stable economies. 617](#_Toc354135628)

[For a stable global economy 633](#_Toc354135629)

[This then indicates that these Biv trade wars may yet return to becoming Roy again unless these color imbalances can be addressed. 637](#_Toc354135630)

[Multicultural economies then have this tension which can erupt into Iv-B and V-Bi civil wars in them but this is usually controlled by neutral enough I-O police. 640](#_Toc354135631)

[The V Empire then has lasting material advantages, these houses and families might last for a century while the TV is gone after a few years leaving only the memories of TV shows and no home or family. 652](#_Toc354135632)

[After winning this trade war it has to handle the aftermath which was in part the GFC 659](#_Toc354135633)

[The Wall Street problem then is a symptom of how the system of snitches broke down, they should have been protected and rewarded with a percentage of the fines levied against their Y-V bosses. 665](#_Toc354135634)

[This Iv-Oy chaos then works in the direction of the Bi-Ro normal 740](#_Toc354135635)

[This is contrary to the expected situation for the quants, they are in effect betting that these V-Bi and Y-Ro investors will buy GM 747](#_Toc354135636)

[In this process then the Iv-Oy arbitrage hunters caused the normal curve distribution to bunch chaotically in the center with a higher peak, the edges to grow fatter tails as unusual events or black swans became more common, and then the curve breaks up into scattering with panic and reforms with different prices later. 756](#_Toc354135637)

[As mentioned over and over these oscillations in the Roy food chain are caused by the weakness of the O animals, in the market the GFC resulted from weak I-O police and regulators. 759](#_Toc354135638)

[However the Iv-B boom 764](#_Toc354135639)

[Another destabilizing revolution is arguably the baby boomers 773](#_Toc354135640)

[As these stocks are pressured like this the Law of the One Price is itself under pressure, in the GFC this break down as stocks traded with different prices on different exchanges because the arbitrage pressure to profit from them had changed to a desire to sell perhaps because of excess leverage, liquidity problems, or covering short positions. 785](#_Toc354135641)

[In fact bad investments were better for this than good ones, if they were bad then there were many more opportunities to lend this money 791](#_Toc354135642)

[For example with Artificial Intelligence and robots 793](#_Toc354135643)

[This scenario rarely happens in nature, the Roy food chain 803](#_Toc354135644)

[This Oy-R contagion is now spreading to mobile phones, TVs, car computers, home routers, RFID detectors and scanners, etc as well. 814](#_Toc354135645)

[Just like a lack of regulation of computerized trading contributed to a collapse of the financial system I-O regulators have not come to terms with the prospect of rapidly evolving AI and how it might be prevented from being used in ever more dangerous criminal activities as viruses, Trojan Horses, spam, and phishing. 817](#_Toc354135646)

[Since Roy criminals already write viruses for criminal purposes it is likely they will continue to do the same as software becomes more artificially intelligent. When these programs become smarter than people and are also writing software themselves then there would need to be strong I-O police to stop their committing exponentially greater amounts of crime. 826](#_Toc354135647)

[These Iv-B growths and collapses occurred in many early shocks before the main GFC, this was a sign that the chaos was growing more virulent and not a sign that the system was becoming more resilient. 827](#_Toc354135648)

[The economy had evolved under the shadow of this waves of population growth and in a sense had adapted to profit from them at each step of their growth, when this generation declined in strength and working ability and started to retire though it may have been like the decaying trees in a forest all collapsing around the same time and knocking down the vegetation under them 850](#_Toc354135649)

[An Iv-B or Oy-R system then needs to have some randomness to make it more stable, in the same way a V-Bi or Y-Ro system needs some privacy to give it more chaos and growth. 864](#_Toc354135650)

[Like Gresham’s Law bad policing drives out the good, in the same way a voluntary system of Iv-Oy agents watching their own conduct does not work because those with less scruples 869](#_Toc354135651)

[This hollowing out in plants frees up a lot of material for building a tree compared to the usual thick trunk, but this trunk is needed for nutrients to be passed between the upper and lower areas, if it breaks or bends then this can be interrupted and the plant can die or become weak. 879](#_Toc354135652)

[As goods become cheaper with computerization then Marx’s problem with capitalism becomes more acute, with B worker’s competing they could keep lowering their wages as prices also decline from innovation. Workers also become less valuable because of Artificial Intelligence and robots replacing them for more jobs. 881](#_Toc354135653)

[In effect then all kinds of businesses might provide a free basic lifestyle as a private safety net in exchange for the opportunity to chase freemium sales. 885](#_Toc354135654)

[With high frozen debt such as with real estate the bubble 906](#_Toc354135655)

[To prepare this glass solution again the material must be heated enough for all the solid blocks to melt and the gasses to escape, then a new bubble might be formed. 909](#_Toc354135656)

[However it is not just enough to provide the money 932](#_Toc354135657)

[Again there was an assumption in the system that the I-O police or these self-regulated businesses were doing their job but the opacity has obscured just how weakened they have become. 936](#_Toc354135658)

[When people work as Iv-Oy agents they are usually also this short sighted as to the consequences of their actions because these chaotic colors focus on short term high energy goals. 940](#_Toc354135659)

[This computerization of branching and decision trees then drives the global economy to develop the advantages and disadvantages of Iv-B and Oy-R but weaken the V-Bi and Y-Ro aspects at the same time. 946](#_Toc354135660)

[This is a common situation seen by the IMF in Y-V dictatorships that use loans to prop up their cronies without using the police to reduce the corruption that caused the economic problems. 948](#_Toc354135661)

[Iv-B people usually have to do this because they are so deceptive and competitive, this makes it much harder for them to run their own business or negotiate their own wages because others can use a divide and conquer strategy to reduce their profits. 955](#_Toc354135662)

[This also occurs in economics and politics, for example the Federal Reserve in the US has evolved an increasingly normalized group of members with a bias towards V-Bi stability and acting as insurance for the economy. This also has extensive ties to R charity and links to others like them in banking, industry, politics, and so on. In this club then when there is an Iv-B crisis those on the edge of the normal curve tend to not be bailed out such as with Bear Sterns and Lehman. 959](#_Toc354135663)

[This indicates an unbalanced Roy predatory system where any prey when found are quickly overeaten and then more must be quickly found to avoid mass starvation. 962](#_Toc354135664)

[At the same time Iv agents speculate to make more in this tightening market with ever more risk until they eventually chaotically collapse. 966](#_Toc354135665)

[This is like after the GFC where one solution was to try to get consumers to spend even more, however the real problem was the Iv-B and V-Bi disconnect where the supply and prices for imports had to become sustainable so people could afford to buy them in the long term. 979](#_Toc354135666)

[Once this momentum of purchases was broken this would cause collapses throughout the roots and branches from stores in the US going broke and laying off staff who also stop buying goods, also this would happen in China etc with factories going bust and laying off staff. 985](#_Toc354135667)

[The main reason for so many crises causing an Iv-B imbalance is probably computerization growing exponentially and feeding technological innovation as Ray Kurzweil describes, and so I-O policing will probably be playing catch up and often a losing game until this reaches an ultimate crisis of Iv-B. 993](#_Toc354135668)

[However because they are so competitive they never actually get together enough to piece together the actual situation, that there are not enough real sources of profits compared to those being reported. 1017](#_Toc354135669)

[However this money 1021](#_Toc354135670)

[Because of this stagnation and the friction caused by the Iv-B wreckage of roots and branches this causes the I-O market to not work well either, it is like trying to run a swap meet amid the wreckage after a tornado. 1031](#_Toc354135671)

[In the same way the wreckage of the subprime crash has been left to try and liquidate itself while the V areas of the economy got bailed out. 1034](#_Toc354135672)

[This is like V-Iv investors losing money as businesses collapse because of skittish Bi-B consumers reacting to bad economic news and hoarding their money again. 1038](#_Toc354135673)

[In effect then AIG’s share price was itself a bubble as it appeared to be worth far more than it really was, the pressure of money coming in as companies bought swaps was reversed as the money poured out through this cracks until the company collapsed like the real estate bubble. 1054](#_Toc354135674)

[For example in an office building area coffee and sandwich shops might find people suddenly don’t buy enough to support them anymore because of mass layoff and no one would travel to those areas from residential suburbs, they then go out of business and their unpaid bills like more cracks extend into previously safe areas of the economy. 1064](#_Toc354135675)

[Following these roots and branches can allow the I-O police to understand where the contagion might go to next, for example given time they might have been able to foresee the disastrous consequences of Lehman failing. 1065](#_Toc354135676)

[One solution would be where the government clarified when it would bail out parts of the economy in a downturn, in effect when it would act as an insurance company as it does already for natural disasters. 1069](#_Toc354135677)

[Some pundits were overconfident in this Iv-B opaque market and so appeared prescient in the chaotic growth phase, some were more pessimistic by nature and warned of problems not only in the lead up to the GFC 1074](#_Toc354135678)

[A better way to predict the crisis 1081](#_Toc354135679)

[This still seems ok because both are making profits but this will cause more and more Iv agents to enter the market trying to get this B worker business. 1091](#_Toc354135680)

[This is then like a Roy crime wave developing where the I-O police are being threatened and intimidated by the stronger Oy criminals 1098](#_Toc354135681)

[However they were also seduced by the profits of subprime secrecy and of hiding their losses out of guilt, their transparent system then had no way to root out this growing contagion either. 1122](#_Toc354135682)

[The police then will tend to weaken and strengthen, move to the left and right, etc and this will cause economic problems to occasionally flare up. 1128](#_Toc354135683)

[This is like O animals and shepherds in the middle of the Roy food chain, they can show themselves openly to deter predators from going after their food or they can hide and catch them that way. 1129](#_Toc354135684)

[This call for less policing however is more of an effect than a cause and so the police cannot be blamed for people wanting to be rid of them, when I-O weakens it does so because of attacks from other colors, because it is not fully stable by its nature, and because it may be part of a life cycle of the economy such as following the baby boomers into a decay phase. 1132](#_Toc354135685)

[By allowing this momentum to build the I-O police will then have to cause some financial crashes in a controlled way to regain control, however Iv-B people will usually not appreciate this and think they should be the exception to these new rules. 1144](#_Toc354135686)

[Without strong I policing a financial crisis 1147](#_Toc354135687)

[This is like a denial of service attack where so many packets of data are sent to web servers that they cannot process legitimate requests for web pages and a site becomes unusable. In the same way short sellers send so many sell orders at a company that the business becomes unusable for investors. 1149](#_Toc354135688)

[There is no alternative to this however, like with the freeway of the system is trying to do things with increasing momentum then the I-O police will stop unsafe business and so one or the other must weaken or break. 1153](#_Toc354135689)

[This may even have happened after the Great Depression with so many new I-O regulatory agencies such as the FDIC and SEC that businesses were fearful of being prosecuted under vague laws or even made an example of. 1157](#_Toc354135690)

[In the same way counter cyclical economic policies also don’t work because the economy adapts to this counter cycle like a counter revolutionary Iv-Oy ideas, then it comes up with new innovations to get around it with weak I-O policing. 1159](#_Toc354135691)

[However if the health inspectors 1169](#_Toc354135692)

[These warnings prior to the GFC should have worked like the I-O immune system in an animal, when enough have been received the body might pay attention just like I-O doctors might ignore small outbreaks of illness but when it gets large enough they should investigate it as a potential epidemic. 1174](#_Toc354135693)

[Such a strategy depends on how resilient the environment is, if an economy does not compete to the edge of collapse of its ecosystem with free trade then it might have its industries collapse compared to others that do. 1180](#_Toc354135694)

[The global economy will always tend to do this where I-O policing is weak enough because those companies and economies that have this opportunity lose a competitive advantage if they decide not to use it. 1182](#_Toc354135695)

[For example some poker players might win by draining their opponents of liquidity with high bets, then they win more bluffs as the others cannot afford to challenge them. 1183](#_Toc354135696)

[Rather than trying to find a model of democracy that would work in these Roy societies they usually were trying to minimize their losses from Y dictators propped up by the advanced economies to minimize their chance of oil shortages. 1196](#_Toc354135697)

[Because of this the underlying Negative Sum Game in free trade is usually Oy-R because it is increasingly driven by exponentially growing technology such as computerization and Artificial intelligence. 1198](#_Toc354135698)

[Sometimes this system works as it prevents the police becoming too strong, however if it is chaotically deceptive enough or there is a war of attrition such as with imports battering many manufacturers then the police may not be able to revive in time. 1200](#_Toc354135699)

[The more the decisions become a Negative Sum Game the more goods and services will become G public property as uneconomical to use just as a losing war will eventually produce large amounts of G war materiel that is abandoned. 1208](#_Toc354135700)

[This might manifest like with Nassim Taleb as a healthy distrust of economic and financial models but when they try to quantify the problem they find it mysterious as well because secretive people are not willing to pool their information enough to understand it. This is why then only the I-O police can moderate the situation. 1242](#_Toc354135701)

[Competition then is the essence of Iv-B just as cooperation is the essence of V-Bi, the two then are fundamentally incompatible which is why they need to be resolved with compromise in the I-O market. 1247](#_Toc354135702)

[This is a very basic analysis of the dynamics of the Prisoner’s Dilemma in Aperiomics, it can be seen however that the idea of a Nash Equilibrium where competition is always the best answer is not always true with these colors. 1251](#_Toc354135703)

[For example antidepressants have been touted by the V-Bi medical profession based on statistical trials done on them, however it has been publicized in the media that most work no better than placebos for mild to moderate depression. This then is an example of a trial which does not work well on people with chaos causing depression, for example they often do better exercising or taking some health supplements than with antidepressants because there is a cause and effect relationships between a poor lifestyle and their depression. 1258](#_Toc354135704)

[In effect then it is possible to construct models that are more certain in their conclusions by ignoring data that doesn’t fit, for example political surveys ignore biased and deceptive responses by leaving some kinds of people out of their samples. 1265](#_Toc354135705)

[Often a centrist course of action is worked out by the two sides arguing out these rival certainties and politicians getting elected as part of a V-Bi team or acting more like Iv-B individuals with their votes in their Congress. 1268](#_Toc354135706)

[The market then works with some inefficiencies when I-O policing is not perfect, this is a way the market grows and shrinks like on the edge of a forest as plants make mistakes. The idea of a well-functioning economy is not to be able to predict the future infallibly but to reduce the mistakes each color makes to a minimum. 1275](#_Toc354135707)

[In most parts of the economy until recently there has been a moderating influence where people’s consciences at as I-O police, as computerization has made many jobs too complex to be understood by the human mind this conscience has been replaced by computerized algorithms that do not emulate the human concern for justice. 1290](#_Toc354135708)

[This then allows a way to predict the near terms future in regards to technology, generally the areas where it grows the fastest will be those where the results will be the most deceptive in some way. The Singularity for example is supposed to be the culmination of this exponential growth and so it is most likely to be not what we expect. 1293](#_Toc354135709)

[This instability can be a bad thing because the Iv-B system is not stable and can utterly crash if the Gb resources or interrupted, there is a strong external shock, or even is it becomes investigated by I-O policing and this makes people panic into a crash. 1300](#_Toc354135710)

[To moderate a future chaotic event like the GFC then it may be necessary to address this problem in the legal system, for example some people who lost money in it might be able to sue those who shorted the market rather than warned of its collapse. 1309](#_Toc354135711)

[For example Iv self-policing was used prior to the GFC in most financial institutions but it did little to stop fraud, it often only made it harder for I-O regulators to keep track of it. 1317](#_Toc354135712)

[Economists then tend to want a kind of ecosystem like a rainforest where plants are relatively stable but there is also some innovation in smaller businesses like trees that grow and collapse without threatening the overall integrity of the forest. 1322](#_Toc354135713)

[In effect then the subprime crisis that caused the GFC was the same process that happens when aid money fails to help a third world economy, here the US and others tried to help their own poor with the predatory strategies that Empires usually reserve for other countries. 1327](#_Toc354135714)

[When a new Biv area runs out of Gb resources or gets invaded by Roy animals its built up humus might be blown away and wasted, in the same way when a new Biv area is only surviving on loans like with the carry trade and subprime loans then its built up infrastructure can be smashed when this money runs out. 1330](#_Toc354135715)

[Goods and services then can also move chaotically and randomly in price as can money, they can also do this without money such as with bartering. 1341](#_Toc354135716)

[This equal and opposite movement of money is in Biv a Positive Sum Game in that both benefit but usually unequally, the investor for example in a bubble might get badly burned compared to the seller by buying a house at the height of this gaseous money phase though both benefitted from the transaction. 1343](#_Toc354135717)

[The direct money current is more exponential as it grows constantly in Iv-B and so it is associated with e, the base of natural logarithms. It is useful then to use these 2 transcendental numbers of e and pi to describe these 2 tendencies in a Roy or Biv economy. 1350](#_Toc354135718)

[So the system constantly pushes for innovation to avoid collapse, when a root or branch does collapse then money is lost there much like a vein in a person being cut and losing blood until a clot forms. 1354](#_Toc354135719)

[Money then moves like a direct current according to the pressure urging it along, it moves like an alternating current according to the random or sine wave like movements where it goes back and forth. 1361](#_Toc354135720)

[Viscosity and friction then are randomizing influences because they slow down the Iv and B parts of the economy and can cause chaotic collapses. 1366](#_Toc354135721)

[R animals can also be wiped out from too many Oy predators, when their numbers crash the Oy fishermen then tend to starve just like Oy hyena after eating too many gazelle. 1379](#_Toc354135722)

[This is then like the near depression after the GFC where any revival in the savings of the Bi-B consumers is pounced on by companies trying to survive, often they are being propped up like zombies to stop the broke consumers also sending the companies broke too. 1385](#_Toc354135723)

[Just like turbulence around an airplane wing can cause metal fatigue, cracks and shearing this can also happen with high velocity money where these conflicting momentums of trades in effect create cracks and can tear the market apart. 1390](#_Toc354135724)

[Also when there is an Iv-B bubble people are usually making more profits from rising asset prices than the small rate increases are likely to affect, they are also making more money from each other and so the rate increases draw money relatively slowly from the bubble. 1397](#_Toc354135725)

[For example speculators in a Biv bubble 1413](#_Toc354135726)

[Often this Iv-Oy fraud is a Negative Sum Game where the shop is trying to get out of some bad purchases by ripping off its customers in a predatory manner. 1426](#_Toc354135727)

[The time under Reagan was where V-Iv business people were trying to find a way to make money and pushing for I-O deregulation allowed them to plunder rather than to build new and sustainable business. 1428](#_Toc354135728)

[Prior to the GFC though these signals became too strong because of external shocks, such as the collapse of the Japanese carry trade, and amplifying these shocks was like amplifying the too loud radio signal. 1433](#_Toc354135729)

[After the Iv-B boom hits the ceiling then the system instead of leveraging to grow is deleveraging to shrink, this is like Biv trees where instead of growing new branches they are shedding them because of a scarcity of Gb resources. 1439](#_Toc354135730)

[This then is like the decline in animal spirits that Keynes referred to, those who save more and deleverage have a competitive advantage against other Iv-B people because while this will damage the economy overall it can help the family that deleverages to beat their competitors. 1440](#_Toc354135731)

[To make swaps safer then it is necessary not only to try and price them with a mixture of chaos and randomness but also to ensure that the securities being insured are not too connected with each other. 1460](#_Toc354135732)

[It is necessary then for I-O policing to keep people honest enough for random models to work to a large degree, but they must also take into account the chaotic effects that are also necessary for a healthy economy. 1471](#_Toc354135733)

[However Aperiomics overcomes this by defining that as a new logical system called color logic where irrational ideas are defined well enough to be modeled and not to cause trouble in economies and other fields. 1477](#_Toc354135734)

[Now they want to maintain this wealth but when they try to invest they run into this same R-B deceptive class of consumers that took so much from them in liar loans in the GFC. 1485](#_Toc354135735)

[The point of Aperiomics then it is not only a system that shows the interactions between living things but also between any organization of data whether it be a company, a religion, even computer code. 1495](#_Toc354135736)

[It should be realized however that this second option is mainly promoted by people and companies who would benefit most from robotics and AI, in almost every case such as in pharmaceuticals, subprime mortgage lenders, gun manufacturers, pesticides, hedge funds speculating with computer algorithms and implicated in causing the GFC, cars such as Ralph Nader fought against with GM and the Convair, etc Y-V companies have minimized the risks in their businesses because it was more profitable to do so. 1500](#_Toc354135737)

[Innovations then may ultimately be as destructive as addictions or desires for Biv parts of the plants can work against the I-O police, for example computerization grows exponentially as Iv-B giving benefits to most people but it can addict people to this and ultimately crash the economy. 1512](#_Toc354135738)

[Gaseous money or high energy parts of the economy not only use leverage but they act in a leveraged way by themselves, for example when money moves fast enough to make sales and pay bills it can mimic having credit to juggle accounts. 1517](#_Toc354135739)

[We then have to create and maintain our own overall system of nerves as sensors through the economy, otherwise this is like a doctor noticing with an X Ray a problem that a person’s own nervous system has not yet registered as painful or wrong. 1529](#_Toc354135740)

[By identifying where these problems in the Roy food chain 1533](#_Toc354135741)

[Because of the secrecy of the Iv-B system the obvious implication was not understood, that there could not be an economy that grew so much and prices in real estate become so high without there being less and less liquid money around to guard against external shocks. 1554](#_Toc354135742)

[Iv-B’s ultimate endgame is a few people getting all the profits like oligarchs while all other businesses collapse which is not useful for a sustainable Biv economy. 1555](#_Toc354135743)

[In the same way an Iv-B boom is a like mania in a manic depressive where energy is wasted to keep this boom going every higher. When it crashes there is much less to do and so a kind of economic like an emotional depression conserves more resources. 1564](#_Toc354135744)

[With the collapse in the US and Europe those countries with trade surpluses are in a position to overshadow new manufacturing like a tree overshadows its rivals with its leaves, any recovery based on manufacturing would probably be dumped on with loss making goods to bankrupt it. 1570](#_Toc354135745)

[In many ways like a deceptive battle in war the GFC represents a sudden collapse after a euphoric belief that the advanced economies were winning the trade wars. 1576](#_Toc354135746)

[In the same way economic war happens from weak I-O international economic policing and also caused by free trade where both sides believe they can gain more by evading this policing than using fair trade policies. 1581](#_Toc354135747)

[Then when this loan money was not repaid international trade collapsed leading to the collapse of the chaotic Iv-B economy in the US where high wealth inequality was a result of this intense competition in Iv-B, this top heavy US tree then collapsed. 1592](#_Toc354135748)

[Bi communities might also become careless with moral hazard because they believe their connections in the left wing of the government will bail them out in a recession with more welfare, however I regulators might deny this to people who have not taken enough care in saving money for a rainy day themselves. 1601](#_Toc354135749)

[In some cases the police become Oy such as with death squads against R communists in South America or arresting R drug addicts to clean up communities but this is against the ideas of O policing. 1604](#_Toc354135750)

[This probably happened to a large degree in World War Two where the US and other people in Europe and Britain had a clear enemy they saw as Y predators in Hitler and Mussolini destroying their Biv way of life and so they were prepared to act as a Bi-Ro army to defeat them, this would make them less likely to tolerate V wealthy crooks when they came home from the war. 1620](#_Toc354135751)

[Usually though above these Iv economists are V economists who overshadow the Iv economist ideas like the V business men who use the Iv salesmen to try to create V monopolies. Their ideas on how to fix the crisis were to bail out the financial system and restore stability while those advocating an Iv strategy of competition and allowing the system to collapse and regrow were sidelined. 1624](#_Toc354135752)

[To simultaneously expose massive fraud on Wall Street and then not police it just sends a message to investors in V-Bi to not do business there, so this transparency can having a chilling effect on a recovery. 1631](#_Toc354135753)

[For example the increased wealth inequality in the US indicates many people made a lot of money out of the Iv-B growth that led to the GFC and they will be looking for fast growing investments to run the same kinds of Iv-B businesses they were successful in before. 1646](#_Toc354135754)

[It would be interesting if this was a characteristic of declining Empires in general, to become disconnected from actually profiting economically while still prevailing militarily as such an Empire would eventually become too expensive to maintain. 1680](#_Toc354135755)

[This can be like someone getting injured a second time before a first wound heals, when the system senses these cracks in itself it tends to try and heal from it by moving less much like a person might move more gingerly after falling over. 1692](#_Toc354135756)

[The tendency then to create a complete ecosystem even in the money grid and computer programs also extends to all parts of societies so in effect most people end up as part predator and part prey in Roy aspects of their lives and also part branch and part roots in the Biv aspects. 1699](#_Toc354135757)

[One sign of this growing contagion and general malaise was the rise of the shadow banking system that simply evaded I-O policing by doing business in ways reminiscent of before the New Deal and I-O regulations, and even before the creation of the US Federal Reserve. 1703](#_Toc354135758)

[To accuse companies of wanting to privatize the profits and socialize the losses is sometimes wrong as this is how the system is supposed to work as long as enough is paid in taxes on these profits to replenish this insurance of their losses, this then needs strong I-O policing to avoid some shirking these payments to get a competitive Iv-B advantage. 1728](#_Toc354135759)

[Bargain hunting then became like a bear trap where collapses occurred as chaos was becoming starved for resources, this deceptively lured in more investors and so was able to expand into more solid areas while temporarily propping up the weaker areas. 1741](#_Toc354135760)

[The 1% they are against is Y-V who acted as Y predatory and V like a team looking after each other at the expense of the rest of the country. They however did not cause the crisis 1774](#_Toc354135761)

[In the same way the rising V wealth inequality will eventually come to a head as they cannot make enough money to sustain themselves, as companies too big to fail do indeed fail this will create gaps for smaller and healthier companies to replace them. 1785](#_Toc354135762)

[Trying to make an economy all Biv can be inefficient and lead to a crime wave, this is like a Biv forest that animals find and attack reducing it to a grassland. 1796](#_Toc354135763)

[The GFC then cannot be viewed independently from the Iv-B technological changes transforming nearly everything else in society, when people are increasingly able to interact in Iv-B ways with computerization then this creates associations between them that could not exist before and which grow exponentially at the expense of V-Bi relationships. 1804](#_Toc354135764)

[Because of this they occupy a unique position where if they fail a lot of extra damage is done to the economy, they have in effect created an environment where they have no ready successors. It is not their size then that is the problem but the lack of replacements for them. 1817](#_Toc354135765)

[Emerging economies typically either have high Iv-B growth insulating them, such as with China’s trade surplus in the GFC, or they might partially collapse like with Russia in the GFC when shock waves from other economies hit them in this transition from Roy. 1831](#_Toc354135766)

[Iv and B are often left saddled with debt as they borrow for high leverage because their competitors are usually doing the same, if any company or economy fails to use every advantage not actively forbidden by strong I-O police then others with less scruples can send them broke. 1833](#_Toc354135767)

[To show this on a map there would be some areas that could be color coded as Iv and B with some collapses and rapid growth occurring, tracing roots and branches from these would show connections to other areas of rapid growth and collapses. 1840](#_Toc354135768)

[Such a system like a real boiler might be shut down if it is unsafe by I-O inspectors or if the boilers or pipes are too weak it might explode and then the energy is lost which is like the situation after the GFC. 1843](#_Toc354135769)

[So forcing this kind of innovative business in the US for example by mandating more loans for poor people to buy homes created an unsustainable pressure that led to insolvency when the political pressure was lessened. 1849](#_Toc354135770)

[If probability worked in such a situation as subprime loans then poker would fail as a game, players would just be able to work out the odds of the different hands like in casino blackjack and beat everyone else whether they bluffed or not. 1855](#_Toc354135771)

[This is like the Biv plant kingdom where if the local plants could somehow keep foreign plants out they might create a better forest than by trying to incorporate foreign plants into their ecosystem 1871](#_Toc354135772)

[The flaw then of free trade and unregulated competition is the idea that a short term victory by one product or economy is necessarily better for the global economy long term because older and more evolved businesses might be wiped out. 1872](#_Toc354135773)

[As I have said many times Aperiomics is not about suggesting solutions for the GFC but showing what processes caused it, to say that I-O policing would have prevented it or will hasten a recovery is like saying that more food will save people in a famine. 1879](#_Toc354135774)

[This can cause economic stagnation or more widespread evasion as previously honest businesses turn to tax crimes to survive and the system spirals into deeper deficits and higher state debt. 1896](#_Toc354135775)

[Trying to induce collapse in other economies with Iv-B then has a habit of unleashing secretive and deceptive chaos in ways that rebound on the so called winners, few have ever won this way and created a sustainable economy out of it because there is usually no I-O trunk to make stable trees. 1925](#_Toc354135776)

[Weak I-O policing also helped the tulip boom to grow, they were never traded on a stock exchange and when the prices collapsed the government declared that tulip contracts were unenforceable. 1934](#_Toc354135777)

[This is like in the US prior to the GFC where lower interest rates acted as the equivalent of higher wages for workers, also there was a sense of fatalism and desperation from the lack of higher wages from legitimate manufacturing jobs. 1937](#_Toc354135778)

[Derivatives had many righting points on the way to Iv-B eventual tipping points, for example the Black Scholes formula anticipated by Edward Thorpe after which LTCM was righted by a bailout, their remaining unregulated and each mini crash was righted by an influx of liquidity, the creation of Credit Default Swaps by Morgan Stanley where claiming on these swaps allowed people to recover after a chaotic crash of some companies,, the use of computers to search for small price advantages in arbitrage and using computers to ride recoveries after chaotic losses, and so on. 1944](#_Toc354135779)

[Like with microphone feedback creating distorted sound this can create distortions in the market as price signals when amplified with secrecy and deceptions become like louder Chinese whispers where the real prices of goods and services can be lost. 1946](#_Toc354135780)

[Often though people are beginning to be puzzled about what is happening, some are still fearful of a sudden collapse and this keeps most of the money out of the Iv-B bubble because it is still highly transparent and people can see there is no obvious reason for prices to go up. 1948](#_Toc354135781)

[Minorities and gays might complain about these kinds of movies for not representing them, for example gays in the movies have often been required to stay in the closet as Iv and B because their actions might be seen as abnormal in the V and Bi community hurting sales. 1968](#_Toc354135782)

[For example few people in the US real estate bubble had substantial assets outside their homes, by looking at the total equity people had in real estate potentially disappearing in a crash it shows the real amount of leverage in the system. 1971](#_Toc354135783)

[A prey trap can be like where R people lure foxes in because of their predatory greed and then kill them for their fur, in some ways the GFC was a prey trap because B people took out so many loans as a cheap way to speculate on housing with the Iv agent’s money. 1976](#_Toc354135784)

[However generally large V companies should not be allowed to collapse without some help in falling more gently, like large trees being cut up as they become unstable to protect the plants below them. 1979](#_Toc354135785)

[This dynamic is still being played out in the Eurozone in 2012 where much of the media coverage is either panicking people for readership or in service to short sellers or to reassure others to prevent panic and increase personal profits. There are still few random audits being made to determine the economic problems however many banks are getting stress tests which are the equivalent of damaged bridges being stress tested to see if they are safe. 1989](#_Toc354135786)

[A safe harbor is where the tidal waves of money can be ridden out safely, there is an expectation that prices may wobble up and down with the waves but will come back to a normal price without any collapses occurring because of it. 1998](#_Toc354135787)

[Then a storm might occur and the tree might fall with a combination of predator and prey damage that people didn’t realize was happening, in the same way the GFC was a collapse of many financial companies that had been hollowed out too much by greed and a lack of care in maintaining the Biv economic infrastructure. 2002](#_Toc354135788)

[The Great Depression was partially lengthened for example because the US and other countries were becoming nations of clerks rather than of farmers, the new economy needed people capable of making this transformation when often in the great Depression they had become hoboes or lived hand to mouth for so long they were no longer as useful as workers as they had been. 2023](#_Toc354135789)

[Often the poor are then like R termites destroying Biv roots and branches, but the rich have also found in history such as with the Ro French Revolution that it is dangerous to appear too wealthy and not share with the poor. 2029](#_Toc354135790)

[Since they often cannot make enough money to repay these loans the result is a series of defaults but this is a destructive way of getting nutrients from V and Iv to the bottom of the trees in the economy, the V-Iv parts of the tree might be anticipating a return on these nutrients and continue to grow. 2032](#_Toc354135791)

[The problem then is how to make money and assets be distributed more efficiently in the economy rather than causing this disparity between supply and demand by Bi-B consumers not having the money to buy goods from V-Iv capitalists. 2034](#_Toc354135792)

[As oil becomes more expensive then this causes more poverty in Bi-B areas and many businesses are no longer viable, many times since the GFC recoveries in advanced economies have been held back by a surge in energy prices 2042](#_Toc354135793)

[This situation then can occur from the O middle of the food chain collapsing but also from less energy in the ecosystem, for example the V leaves get less energy from cloudy weather and this causes R grazing animals to starve. 2044](#_Toc354135794)

[This created more wealth inequality because many jobs had to move to low wage economies such as China to remain viable, as Bi-B people got into more trouble this allowed predatory subprime lenders to offer deceptive refinancing of homes that looked good but actually contained high upfront costs and higher interest rates later. 2045](#_Toc354135795)

[A similar crash in oil prices happened throughout the 1920s in the US which would have caused some industries such as transport and car production to boom, this price crash ended around the time of the start of the Great Depression and according to statistics either rose or stayed at least flat through the 1930s. 2051](#_Toc354135796)

[In this case the surplus economies might insist these transfer payments are spent in ways to reduce their amount, for example export companies might have lower taxes to compete more easily and workers in these industries might have lower taxes so their wages can be lower overall. 2062](#_Toc354135797)

[They are then like the Y lions and Oy hyenas in Africa who might have prospered by feasting on sick and starving Ro and R prey in a drought increasing the predator’s numbers, now they may face an even more drastic downsizing to be able to survive on the financial prey left over without wiping them out completely. 2067](#_Toc354135798)

[In some ways this is a natural outcome of free trade and globalization, if the world cannot give a Biv lifestyle to nearly everyone then it might end up spreading resources so nearly everyone has a Roy lifestyle accompanies by crime and war. 2070](#_Toc354135799)

[If V-Iv then is in effect periodically fleecing the Bi-B parts of the economy it also needs to allow time for the wool to grow back or the ability to grow wool at all will be damaged. 2075](#_Toc354135800)

[The only alternative for the advanced economies then seems to be increased efficiency in using their resources, this however requires a more sustainable Biv economy and the restriction of wasteful Iv-B competition and planned obsolescence with better I-O policing. 2077](#_Toc354135801)

[In the Great Depression the US managed to stay Biv despite this loss of wealth but much of Europe did not, it depends then whether the populations would be able to accept this poverty as temporary or would become Roy violent. If they see resources as abundant and the situation as temporary they might not risk becoming criminals and hurting their long term prosperity by going to jail. 2079](#_Toc354135802)

[Sometimes this happens as a Negative Sum Game where weapons and aid are given rather than sold as the least bad option, it is hard then for Biv economies to make money from Roy wars without becoming more Roy like themselves. For example the US might try to avoid nuclear war between India and Pakistan by giving aid and weapons much like O police might try to strike a balance between Ro neighborhoods and Oy thieves to prevent either becoming dominant. 2089](#_Toc354135803)

[If the disaffection with Biv capitalism in Russia grows then many might want to return to R communism or some kind of left wing dictatorship Bi-B instead of what many see as a V-Iv dictatorship under Putin. However these problems stem from weak I-O policing there. 2095](#_Toc354135804)

[Greece, Italy, Ireland, Portugal, Spain, etc are in economic trouble because they took on sovereign debt to quell the chaos from the GFC, often though this left them weakened in an Iv-B competitive global economy and their trade imbalances push them towards default which threatens to take down the creditor economies with them. 2097](#_Toc354135805)

[This can be like zombie welfare and zombie foreign aid where enough is given to people to stop a chaotic catastrophe but not enough to promote growth, for example unemployment insurance might not be enough for some to look for work and overseas aid might feed people but not establish more farms. 2102](#_Toc354135806)

[Between these pressure groups the neutral I-O police are usually sidelined, the issue of a just solution was lost in trying to avoid offending both extreme views. In the US this is increasingly being resolved by the I-O courts trying to find a just balance between the rights of gays versus straights, marijuana smokers versus nonsmokers, etc. 2121](#_Toc354135807)

[This V-Bi and Iv-B alternation can be seen in the Fed for example where often decisions are not unanimous indicating the chance of it switching course as the situation remains opaque 2128](#_Toc354135808)

[In effect then the dilemma of what these companies should so is the same as what economies should do after the crisis, it is also the same as whether families should try austerity or borrowing money such as for education to stimulate job prospects. 2131](#_Toc354135809)

[This is also one reason why the system works so well, when logical arguments are made in Aperiomics they not only follow the evidence but they also follow logical rules of reasoning defined in the same color codes. 2135](#_Toc354135810)

[So to define situations as not good and not evil, not true and not false, not yes and not no, etc does not work in Aristotle’s logic because this middle position is excluded but it is included in color logic. I-O police have to work in these shades of grey all the time, for example someone might steal food because they are hungry and the police must decide whether they were entitled to food from society or should be punished for stealing. 2137](#_Toc354135811)

[A law court ultimately determine problems like this by finding a middle ground where a soldier is not good and not evil, at some point killing villagers becomes a criminal offence whereas in other circumstances they might be casualties of war. 2140](#_Toc354135812)

[In a city then the O police can dominate with a minimum of resources by being fair and neutral, when an army is not perceived as fair then the cost of maintaining it can rise exponentially. 2143](#_Toc354135813)

[This subject is quite extensive and is best covered by reading the first Aperiomics book but it will be revisited more deeply in a later book on different kinds of logic, rhetoric, sophistry, debate, polemics, etc. 2147](#_Toc354135814)

[In Roy as mentioned earlier the colors represented No for Y, Not Yes for Oy, Not Yes and Not No for O, Not No for Ro, and Yes for R. Roy are usually subjective arguments and Biv are objective because it defines what objects can or will do. Roy being subjective is about what happens in a subject or issue. 2148](#_Toc354135815)

[So in any transaction the four outcomes are V I Can, Iv I Won’t, Bi I Can’t, and B I Will. In the I-O market however there is another option of I Can’t and I Won’t where there is a compromise between what the Iv agent Won’t do and what the Bi team Can’t do. In an economy when people can’t or won’t make deals then these are resolved by compromises in the I-O market. 2154](#_Toc354135816)

[However the I-O police would report that in some cases that letting companies chaotically collapse is an unjust solution as many companies would collapse just from the random effects of the GFC rather than any misallocation of resources, by bailing them out then the situation might return to normal quickly and the companies helped could repay the loans as happened with many banks after the GFC. In this case then it might be quicker to let a company revive rather than rebuild after collapsing. 2163](#_Toc354135817)

[The main point then is when a situation becomes paradoxical or a dilemma as happened with the GFC then this is resolvable with the color logic of Aperiomics by reasoning in ways that bring to bear neutral and unbiased O criminal and I civil law onto these problems. 2175](#_Toc354135818)

[If politicians or even economists promote policies that cause economic hardship in a deceptive or negligent way then they might also be subject to prosecution for it. 2179](#_Toc354135819)

[In this way instead of having economic policies that hurt some parts of the population and help others the law can actually define more exactly who is likely to lose and this then can make economics and law join into a single discipline. 2186](#_Toc354135820)

[If the electorate is highly polarized then I-O is weak, the right might be V like V-Bi random authoritarianism or fascism while the left are B chaotic and revolutionary leftists. This usually leads to wild swings in who is winning much like in war where Y armies try to beat R terrorists. 2187](#_Toc354135821)

[tools such as Value at Risk or the Gaussian Copula in pricing Credit Default Swaps is based on the presumption that movements of prices are random and that consequently each transaction in the market is completely independent from each other one. 2199](#_Toc354135822)

[Both sides have such interesting theories backed up with large numbers of experts, peer reviewed journal papers, think tanks, conferences, and even Nobel Prize winners that the idea of just policing the economy better looks inferior by comparison. 2204](#_Toc354135823)

[This then occurs because of weak I-O policing, instead tax revenue is divided up into those members of the team deemed to be most deserving to quench the chaos there. For example the Bi Democrats generally supported the V bailout of Wall Street because they understood the logic of preventing collapses in the banking system. 2215](#_Toc354135824)

[As long as bubbles remain fairly honest they represent bad guesses about the development of technology and prices, since the future must be unknown to a large degree there is no real way to prevent misallocation of resources in bubbles except to prevent them and create economic stagnation. 2221](#_Toc354135825)

[Before germs and the role of the I-O were discovered medicine in some areas believed that hysteria and negative emotions were to blame, much like the Keynesian idea of low animal spirits causing an economic depression. 2222](#_Toc354135826)

[When they lost value after hitting chaotic tipping points of foreclosures and defaults creating unemployment and more defaults in a vicious feedback Fannie and Freddie ended up having to be bailed out and with their scarce resources they ended up being more efficient as Roy companies and so were effectively nationalized. 2230](#_Toc354135827)

[Iv-B pursued a different course because insurance is no good in chaotic businesses except to try and game the system, even Credit Default Swaps were not really insurance but mainly another way to speculate more in a Negative Sum Game on collapses in companies and bonds. 2231](#_Toc354135828)

[However alternating advisors fail to deliver the same accuracy as the I-O police and regulators would do, they prevent placebo like or deceptive announcements that things are ok from hurting people. They also prevent panic from causing more economic damage than an orderly deleveraging of some parts of the financial sector. 2235](#_Toc354135829)

[So those that caused the contagion were often bailed out creating more contagion while more honest businesses were left to collapse. 2239](#_Toc354135830)

[In effect complaining about the opacity of the market is like complaining that some cards are hidden in a game of poker. 2242](#_Toc354135831)

[This is seen for example in the increased domination by fewer and larger banks in the US after the crisis because they were part of the government supported V team rather than their being forced to collapse and liquidate like with Bear Sterns and Lehman. 2245](#_Toc354135832)

[If Y investors had been able to trust the situation they too could have invested more in stopping the crash and they had in previous recessions but the opacity and danger made both V and Bi stay out of it in effect until the morning after when more transparency would prevail. 2251](#_Toc354135833)

[This process then kept the US economy in free fall and then a slower descent, it then in effect hit the floor like a tipping vase with the worst destruction occurring. Little could have been done though because as with the I-O police in a crime wave it would have been nearly impossible for them to have handled the situation even if they had been trusted. 2255](#_Toc354135834)

[The normal curve seems to show these crises are rare, they can even calculate how many standard deviations they are from a normal economy and this leads to the placebo solution of confidence fairy where the economy will fix itself on its own while they take credit like the doctor with his sugar pills for micromanaging inconsequential aspects of the crisis. 2268](#_Toc354135835)

[This is like the Roy animal kingdom and the Biv plant kingdom where all life forms are constantly changing to survive, those that conform to a predictable system often get beaten by those that are more adaptable. As Darwin said, adapt or die also applies to economics. 2270](#_Toc354135836)

[Computer programs are more Iv-B based as they use cause and effect programming to operate, this would result in V-Bi advisors becoming increasingly human while the Iv-B advisors rely on programs they understand less and less which is similar to Iv-B secrecy and deception. 2274](#_Toc354135837)

[In the same way it is not necessary to model the chaos in the economy exactly as many try to do, it is enough to use the I-O police to corner the secretive and deceptive ones causing too much of it. 2276](#_Toc354135838)

[However this is the same goal as Dagny Taggart’s bridge, the I-O police and the Bi collectivist communities are seen as irritants to scientific progress when they are really trying to balance overconfidence based on simplistic interpretations of complex issues. 2280](#_Toc354135839)

[In the same way the idea of not checking on chaos in the economy appears to be scientifically valid but it usually stems from corruption like an airline saving on inspections or taking chances on crashing to make more money. 2282](#_Toc354135840)

[The chaos though can be the harbinger of a larger problem, for example the GFC would have been a fractal like Iv-B chaos that grew in a self-similar way from smaller problems it resembled. 2288](#_Toc354135841)

[So these problem areas can be mapped in different suburbs according to the nature of the chaos looking for signs of exponential growth of the contagion or often of exponential decreases of it as an area shakes off the problem such as by new businesses rehiring people, a recession ending, welfare getting people through problems without going bankrupt, people making settlements on unpaid bills, the White Flight reversing as people find themselves unable to sell out of the area or come back with an urban renewal. 2294](#_Toc354135842)

[One example of this already being applied is with the US military that found higher levels of suicides, depression, and divorces during the Iraq war. Understanding this can lead to proactive measures such as counseling and more leave before the contagion spreads more into troop morale. 2302](#_Toc354135843)

[As the prices of houses rose then the number of collapses would have increased in renting and buying and then started to spread like a contagion in some areas, joining up so the boom would have been becoming more isolated in areas surrounded by rising collapses in renter’s finances and defaults. 2307](#_Toc354135844)

[Looking for indications of V-Bi stagnation then is as important as for Iv-B growth, there can be growing contagion which will be dangerous later but a lack of ability for the economy to grow anything in what is left after the crash is important to understand before stimulus money is wasted in the wrong ways. 2313](#_Toc354135845)

[This was also a problem with GM in the US because they had a mainly Bi workforce but ended up competing with B workers for Toyota in other states that were not unionized, it created a slow wasting away of the company which then collapsed suddenly only in the GFC. 2316](#_Toc354135846)

[This is like in the Biv plant kingdom where some plants might have more possibilities for mutations and other genetic changes from natural selection or epigenetics, this however does not mean that their part of the forest need be in better shape otherwise. 2322](#_Toc354135847)

[It follows then that to make an economy efficient it is necessary to reduce uncertainty through ignorance as opposed to the rights some people have to privacy, and to reduce the effects of injustice. 2329](#_Toc354135848)

[The idea then is to replace all economic arguments with legalistic ones based on what is just, when the fairest laws are enacted then these are likely to be the ones that distribute income most fairly and reduce wealth inequality. 2334](#_Toc354135849)

[Non payments of some debts are another kind of devaluation however, for example if the farmer only ends up paying half his debts to the laborers then this is the same as the laborers charging half as much and it is also like the farmer paying in a currency devalued 50%. 2337](#_Toc354135850)

[Inequality then is a touchy subject in society because it implies one race is better than another, in Aperiomics though it might imply that one race has simply not worked out how to defend itself better. 2340](#_Toc354135851)

[Probably the best explanation of this was in the book Erehwon by Samuel Butler, here is an excerpt from The Book of the Machines: 2343](#_Toc354135852)

[This leads to a concentration of intelligence and other talents such as for working in music, medicine, sports competition, business acumen, etc as those most successful rise up while those less successful stay in the Bi communities. 2363](#_Toc354135853)

[By this process then as happened with the workhorse many or even all jobs might disappear over time while those most intelligent people at the top of the Biv economy might also be replaced as computers become more intelligent than all humans in the next few decades. 2364](#_Toc354135854)

[Such a machine ecosystem can be hard for humans to understand, it might even become impossible for any but machines to influence and so we could easily lose control of it. In effect we might become like the animals are to us, relying on our good will but ultimately unable to change our behavior in any other way. 2369](#_Toc354135855)

[If so then supply and demand as a concept tends to lead to trying to kick start a repeat of the plundering of the last decade, most of the graphs of the economy might be looking at this instead of the sustainable economy as that hasn’t been growing because of neglect. 2373](#_Toc354135856)

[The situation then might depend on whether people need to sell because of dependent variables like other investments crashing at the same time, however if an art bubble crashes without being connected to other investments then it might reconnect to a realistic price more easily as Bi bargain hunters have more money and are not waiting for other markets to collapse too. 2378](#_Toc354135857)

[Like the B borrowers seeing the prices of their homes crashing the B farmers saw the price of wheat crashing while all the colors experienced losses, misallocation of resources, and inefficiencies compared to if the price had remained fairly stable. 2395](#_Toc354135858)

[Like auctions with no reserve it may be that houses will get bid up to higher prices with a strong rebound once they reach the floor and Bi bargain hunters have no reason to wait, however the process of finding this floor has caused some house owners to have negative equity even if temporarily. This would have caused some to walk away from their homes only to find their equity would have reappeared when the prices had stabilized to the new level with a dead cat bounce. 2400](#_Toc354135859)

[Without the I-O market where chaos and randomness are balanced fractional reserve businesses are dangerous because some money is presumed to be in two places at once. 2407](#_Toc354135860)

[This causes the friendly lending to chaotically collapse like an insolvent bank and so over time some loans are repaid or written off while many might have their credit worthiness affecting by the chaos. 2410](#_Toc354135861)

[All these kinds of goods and services banks can then be affected in an economy, one crisis can also extend its cracks into another. 2419](#_Toc354135862)

[To assess the effects of a recession then it might be necessary to map out these goods and services banks, for example people might be randomly surveyed about whether they borrow goods and services from others. At different times then these surveys can be used to determine if there is an erosion of social cohesion from crises or scarcity. 2422](#_Toc354135863)

[Because this high leveraging of speculation is so restricted in some areas elsewhere there is deflation, to try to fix this the central banks add more money to the economy but it only makes the Iv-B weeds grow as they snatch the resources before other stable businesses can use it. 2435](#_Toc354135864)

[The reason is that the Iv-B energy economy tries to make profits this way instead of taking a longer time, to compete with this then workers need to drop their wages to get time to work or there develops higher unemployment where their time is not worth anything. 2439](#_Toc354135865)

[The media might be monitored for keywords related to chaos such as growth, collapse, disaster, panic, etc. When these words tend to cluster around particular industries or stocks, etc then the I-O police might examine the area to see if it being caused by criminality. 2443](#_Toc354135866)

[Often these ideas might excite people to vote in politicians who then can get nothing done or oversee more economic collapse because their ideas didn’t work or were only designed to give tax and other breaks to secretive special interests funding the campaign. 2447](#_Toc354135867)

[So monitoring these individual innovations would have seen them joining up together in more branches, the I-O policing being left behind in some areas leading to an explosion in growth would indicate Iv-B and eventual collapse. 2456](#_Toc354135868)

[This led to an Iv-Oy counterrevolution where this desire for deceptive loan applications was matched with the viral growth of high fee loans, both then grew with mutual deception like an escalating contagion and predation until the I-O police used Iv-Oy advisors to understand what was going on enough to moderate it. 2462](#_Toc354135869)

[However it is also necessary to determine which ones are collapsing through fraudulent construction because propping them up will be a waste of money, they will end up making zombie buildings that will never be safe to live in and will continue to cost money to fix. 2469](#_Toc354135870)

[The problem then is in treating the economy like a black box where some parts remain opaque with no real idea of what is going on in there, the only people who bothered to check deeply into the subprime bond market realized it was going to collapse and shorted the market rather than warning anyone. 2471](#_Toc354135871)

[The problem is whenever there is an Iv-B bubble people tend to say that the situation is new or somehow different from previous bubbles and so it should not collapse, they say this because any boom happens from innovations but this does not mean the mathematics behind it are any different. 2474](#_Toc354135872)

[However sometimes they are deceptively advocating this so their backers can short the market for profit or buy in later more cheaply when companies are weakened. This then can be like Oy predatory disinformation in the Roy animal kingdom where hyenas for example might try to unnerve their prey so they panic and wear themselves out even when they are not really in danger. 2478](#_Toc354135873)

[The belief then that O police will no longer be needed should be watched for as a dangerous sign, as is the idea that I civil fines which are often much lower than the fraudulent profits companies make can substitute to punish criminal behavior. 2485](#_Toc354135874)

[However often investors are watching each other or at least stock movements to try to guess what other investors are thinking. This is like an R herd of gazelles that might watch each other for signs of panic or if one spies food the others might run over to compete for it. 2491](#_Toc354135875)

[This then is how Eugene Fama’s belief that the market is random still allows traders to make money from it. 2496](#_Toc354135876)

[In effect then it is like poker players all assuming the others are V-Bi and honest, however some of them are beginning to exploit this honesty by being personally deceptive. 2499](#_Toc354135877)

[An Iv-B bubble then is particularly dangerous with this self-deception, not only are people lying to each other and promoting a false conventional wisdom but they are also lying to themselves creating a false confidence or panic that can spread to others like a contagion. 2501](#_Toc354135878)

[Many see business as a kind of war, if they for example manage to provide for their family at the risk of going to jail or committing suicide in a collapse then this behavior can be genetically reinforced. 2508](#_Toc354135879)

[Each algorithm then contained some element of chaos that was not accounted for like cracks and these grew exponentially, joined up with cracks from other formulae and then shearing forces from so much growth and later panic tore the mathematical system apart. 2517](#_Toc354135880)

[In effect then these financial algorithms will grow like new life forms, in Roy situations they will be increasingly predatory on what resources they can take from human investors or weaker computer programs. 2521](#_Toc354135881)

[When Roy animals like these are moved to a dense Biv forest, like Roy people migrating to a wealthy Biv society, they are still adapted to seeing Biv as a kind of prey rather than timidly working with it for food. 2525](#_Toc354135882)

[This then leads to more Roy crime in Biv areas like some forest areas being damaged but not destroyed by animals adapting to life in a forest, for example drug trafficking might increase in wealthier areas where before they were more isolated from the Roy ghettoes. 2528](#_Toc354135883)

[This eventually leads to the salesmen believing their own spiel and these false beliefs can infect the whole organization like a contagion so when the collapse comes everyone is surprised by it. 2536](#_Toc354135884)

[This reduces the amount of contagious overconfidence and panic just as it reduces it with investors in a well policed market. 2540](#_Toc354135885)

[They can also attack vagrants and stage riots where demonstrations turn violent to get attention. For example in the start of the GFC in the US Bi communities kept complaining about fraud in subprime lending and tried to get states to police it effectively, however they were often blocked by Federal law keeping it deregulated. 2542](#_Toc354135886)

[This then is a legitimate bidding of some prices up in the I-O market, however if much of this was just deceptive without much gas really being there then this might be an Iv-B boom which would collapse as investors realized the Gb resources were much less than they had thought. 2547](#_Toc354135887)

[This is what happened to horses, once an important part of the economy because they could do more work than the cost of their upkeep. People then like horses may become excluded permanently from employment if the cost of paying them for the value they produce exceeds the cost of their food and lodging, etc. 2553](#_Toc354135888)

[To assume then that looking at the destruction caused by chaotic collapses tells us what it looked like beforehand is false, it is also a circular argument because if there had been proper inspections of all vulnerable areas of the economy then the chaos would have been spotted and prevented. No government regulators would have allowed the subprime fraud to go unchallenged if they had looked into the bonds along with Scimitar Capital or Magnetar and seen what they contained. 2567](#_Toc354135889)

[Sometimes economies can respond to an Iv-B crises with too much transparency, like police responding to a crime wave by stopping and searching each car on the road. The problem is this scares away a lot of Iv and B people who are naturally timid and often paranoid about the value of their own ideas. 2572](#_Toc354135890)

[This also means that potential reservoirs of Iv-B should be monitored as they can work out of these areas, deceptively coming out and then if discovered hiding in there again. This is like R Al Qaeda and the Taliban hiding in Pakistan from the V US army and then coming out secretly to attack them. 2577](#_Toc354135891)

[When overshadowed an economy or area is in effect starved in two ways, firstly in the B roots from not being able to use the resources it has or not being able to get them fast enough to grow quickly to evade this overshadowing. 2592](#_Toc354135892)

[By contrast in an overshadowed third world economy everything tends to move slower, infrastructure is older and more obsolete, energy costs more and so people have to substitute time for it. 2595](#_Toc354135893)

[Iv-B is a revolutionary strategy also used in nature, for example a kind of R grazing animal might make a revolutionary leap to becoming a much faster runner because of a genetic mutation. 2604](#_Toc354135894)

[If these areas are too close to major arteries then all kinds of economic traffic can be suddenly affected. This can be like a viral contagion in an animal’s body that spreads quickly if it gets to major arteries. 2621](#_Toc354135895)

[A ban on all short selling ended some illegality but at the cost of shutting down the honest shorting as well as the dishonest, this kind of shorting was needed at the time to differentiate what was healthy in the economy and what had too much contagion. 2629](#_Toc354135896)

[Leveraging in an Iv-B boom then is similar to deleveraging, those companies that are built deceptively as stable will tend to collapse when deleveraging. 2634](#_Toc354135897)

[Companies have this same problem, a more color balanced business might try to last many decades in building TVs and so needs to be more honest at the expense of fly by night short lived mutating Iv-B businesses that produce shoddy products and then vanish with their profits. 2639](#_Toc354135898)

[This happens with some financial pundits where they expose other crooks and gain some trust and clients that way, investors know they will still get taken sometimes but see them as the best in the negative sum game of the less of many evils. 2647](#_Toc354135899)

[In finance this is where Iv and Oy agents work more with the I-O police to cut a deal and perhaps be bailed out, it can lead to some of the Y-V companies being prosecuted. 2656](#_Toc354135900)

[The problem is also that these collectors and agents sell to the I-O public and defend the prices of their art. If they are also deceptively manipulating the market like a poker game in Iv-B or using arbitrage in V-Bi then this should be disclosed to the public or it may be price fixing. 2665](#_Toc354135901)

[The poorer people as B might prefer to take some money in exchange for a higher chance of dying in the fire, this is accepting chaos and a tipping point of death for a gain in money. V people might have more money and buy their way out faster by looking for these B people and trying to exploit their poverty. 2680](#_Toc354135902)

[For example Biv might accept some Roy people into their area as charity like a kind of immigration because of violence, this is like how advanced economies might accept R people from third world economies if they are in danger. 2683](#_Toc354135903)

[When the economy becomes Roy pessimistic people might do better because they are more used to minimizing costs, also naturally more paranoid people might survive better. 2688](#_Toc354135904)

[These kinds of strategies then show Roy increasing in some areas as resources become scarcer, if a bank for example can make more money by ripping R people off on an overdraft then they might do it more now whereas in wealthier times they might value their customers more as having rights. 2696](#_Toc354135905)

[In this recombination into a new tree this is different to some degree from life evolving in that like a zombie different parts can be stitched together into a whole. So an accountant might end up as a salesman in a new company, Bi union workers as B miners, and so on. 2703](#_Toc354135906)

[Milton Friedman 3182](#_Toc354135907)

[Hyman Minsky 3194](#_Toc354135908)

[Carl Menger 3204](#_Toc354135909)

[Ludwig von Mises 3213](#_Toc354135910)

[Friedrich Hayek 3218](#_Toc354135911)

[Joseph Schumpeter 3219](#_Toc354135912)

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[Eugene Fama 3285](#_Toc354135917)

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[Hot Potatoes 3334](#_Toc354135919)

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**Introduction**

One of the most often asked questions about the Global Financial Crisis, or GFC, was why hardly anyone saw it coming. Like a terrorist attack much of the blame can be laid not just on the various deceptive business practices involved but the inability of the police to stop them getting away with it.

***This book leads on from my first book of Aperiomics which is a general explanation of the theory.***

In this book I refer mainly to the GFC and the history that leads up to it. I try to explain according to the principles in Aperiomics what actually happened, what events contributed to it, how the various policies since then have helped in some ways and made things worse in other ways, and also what else could be done to make the crisis less severe. As of 2011 the world still might slip into another Great Depression, some still insist we are already in one.

There is another reason for urgency in resolving these problems; the rise of computerization, robots, and Artificial Intelligence(AI) threaten to undercut job creation just as the economy is struggling to return to full employment. With the rapidly growing potential of robotics and AI according to Ray Kurzweil to do nearly any job people can do, potentially becoming smarter than humans in the next few decades some people unemployed in 2011 might never work again.

Aperiomics developed from an idea I had in 1989 while in California. I was simultaneously reading in many different branches of science, mathematics, and also trying to write music. All of this reading has been for my own interest in trying to understand how the world works, I had never intended to actually write a book about my ideas and rarely even discussed them with anyone. Because of this unstructured way of learning I was able to read about connections between the different scientific fields whenever it interested me, I then managed to avoid most of the separations between scientific fields that books tend to follow. In this process of thinking about many highly unrelated ideas I started to see a pattern in world events that related to patterns of the music scale and colors.

In other words that world events tend to move like a kind of grand symphony with harmony and discord between people, nations, religions, and beliefs of all kinds, in terms of colors this would be seen like a large tapestry or painting.

Being in the habit of thinking deeply about the world and usually not telling anyone for fear of ridicule this theory was very good for me, it also fitted in quite well with studying music theory at the time. I could investigate the idea thoroughly and in the process do something I enjoyed very much, reading about all kinds of things and looking for the connections between them. So in a sense there was no downside, if the idea didn’t pan out I did a lot of reading I would enjoy anyway. If it did come to be something new then I could publish it when I was sure it was worth other people’s time.

As a process of understanding this theory I then spent the next 20 years reading about everything that could relate to it, this grew to enormous amounts of information because it seemed more and more likely that any interactions between living things could be described by it. For example the mainstream laws of evolution fit quite well into this theory, as well it suggests some additions to it that are not controversial. From there it can be extended to primitive tribal societies which also follow the same rules, all the way up through history to advanced societies like our own.

One of the reasons the theory took so long to write was these connections needed to be defined mathematically to ensure it was a real theory and not just vague relationships between events.

Trying to work out these relationships was quite difficult, for example if history and the global economy can be imagine as a vast symphony in most cases it is a cacophony of sounds and the actual rules it is following tends to be well hidden under so much noise. Another problem is about half of world history is arguably either secret and not recorded or deceptive in that someone has concealed or distorted information for various reasons.

A comprehensive theory then needed to not only explain this flow of events but also explain the various deceptions in history, why they were made, and what mathematical relationships they followed. For example much of history and an economy can be described by using statistics, this is based on the Gaussian Normal Curve which assumes that the variables being analyzed are random. This means they have no relationship to each other, for example a survey of voters in an upcoming election needs to remove bias by an accurate representative sampling of the voting population. It also needs to ensure the people answering the survey don’t know each other or aren’t answering questions because of a common link between them.

A survey on a web site then might not be random because people who vote in a certain way might put out messages on blogs to vote, the result then reflects their efforts and is not really representative of how voters think. Many events, ideas, etc however are dependent variables by nature and because of these links between them statistics is very poor at understanding them, also people often try to deceive surveys as in the website example. Any collected data then might be incomplete or distorted if there are hidden agendas of the people involved so that they prefer to lie. To understand events correctly then Aperiomics needed to take this deception into account and describe it mathematically, showing how it often causes crises in world history.

The name Aperiomics come from the Latin and means a science of opening or revealing.

I take this to refer to in part the hidden or deceptive aspect of knowledge, much of history has been shaped by very secretive people and groups. Understanding what really causes many events means these secretive and often deceptive groups have to be understood as well. This is especially difficult because they usually are so secretive that they themselves don’t really understand what they are doing. This was seen in the buildup to the GFC where much of the financial carnage was done by people who not only didn’t see the crash coming, but didn’t see their own role in it. Most saw little more than their own job and didn’t even understand what other employees were doing.

Because of this opacity in world affairs history has always been a series of crises.

This theory is not about exposing all the secretive things people do, they have a right to privacy when they are not committing crimes or acting in ways that endanger themselves and society. Rather it is often about predicting what these secretive groups are doing from statistical data and preventing a major crisis from getting out of control whether it be financial, a war, a crime wave, etc.

It’s unlikely this book will appeal to many people, in fact the theory itself predicts this.

One of the reasons I think that most of this has never been discovered is there is little incentive in society for understanding how it all fits together. Many of us profit in some way from secrecy, the idea that Big Brother might need to watch over us to keep us safe is abhorrent to most of us. However that is not the point of Aperiomics, rather that the right mix of private and public information is necessary to a stable society. Have too much or too little privacy and the system starts to collapse.

There is also no certainty in Aperiomics unlike in most economic models and political ideologies, instead it claims that certainty is impossible.

Instead we have a mix of transparency in some affairs and opacity in others, and this gives a necessary uncertainty to everything people, animals, and plants experience in our environment. To keep society stable then is impossible, all we can do is work at it and sometimes we do worse and a crisis occurs.

Often this is because the police go in and out of favor, too much policing brings bad consequences likes a police state and too little brings a crime wave and collapse.

The GFC was in many ways from too little policing of criminal activity, loans and investments made fraudulently. However the obvious answer to increase policing misses the main point as to why policing would ever get weakened in the first place. Of course after a crime wave everyone wants the police but when the crime subsides or is hidden below the surface for long enough we start to defund the police and object to many of their restrictions. Usually then a crime wave follows and we rediscover the need for policing only to forget it again over and over.

Aperiomics like music and colors has a highly mathematical nature, we can delve deeply into this to understand how forces seen or unseen work like music in songs, colors in paintings, and these principles working between animals, plants, and humans. Some will want to go more deeply into this, other might enjoy these books by just looking on the surface of things, recognizing the twelve principles of Aperiomics as color codes or musical notes and learning to recognize the symphony or grand tapestry they reveal.

The mark of a good theory can be that ultimately it doesn’t suggest changing anything.

Darwin’s Theory of Evolution for example can be understood and untamed nature observed with this knowledge. Because we know of such things as the survival of the fittest we need not then intervene between the predatory and prey relationships of for example the Lions and the Buffalo. In the same way understanding Aperiomics need not inspire people to do anything at all, in this sense I consider to be a complete theory.

Ideologies such as Capitalism and Communism tend to urge people to action against a perceive enemy in society.

Aperiomics is like evolution, it says that everything is fine the way it is and needs no tinkering from this theory. However if people do see the need to change the interactions between plants, animals, and people, for example to try to ease unemployment and try to prevent another GFC then it indicates some ideas as well. However this is by no means an easy task, just as interfering with nature can have unintended consequences then trying to prevent problems in society can also cause others without clearly understanding what the problem really is.

For example in a natural environment introducing a new predator might fatally upset the balance of the animals that evolved there, this has happened many times in nature often caused by man. Fixing these can be quite difficult. In the same way the complex ecosystems of modern societies can be damaged by the wrong kind of tinkering, for example much of the GFC was arguably caused by relaxing regulations from the Great Depression as well as trying to get banks and parts of the shadow banking system to increase housing ownership in the US. Other parts were caused by countries trying to keep their exports competitive by loaning too much money to the US and Europe and creating a boom in real estate.

It is easy to see in hindsight that these things should have been controlled but the problem was also that the system was so opaque that no one could have easily connected the dots at the time.

Even if it was possible the prevailing prejudice against policing the system properly, called deregulation, made piercing this opacity to see the problems developing impossible.

In this theory then it is pointless to urge more regulation on the various societies, this will work until people again agitate for more freedom from policing until these problems will appear again.

Other crises can of course occur from unforeseen events like natural disasters, these however cannot really be prevented except by having enough reserves as with insurance companies to cover the costs of reconstructions. However as we will see when the system gets out of balance these reserves are drained away, a crisis such as the GFC will then coincide with little money to fix the problem. Like the ecosystem affected by the introduction of a foreign animal or plant the interactions need to be carefully understood free of any allegiance to ideology.

This is a major problem to many people, usually they might have an allegiance to the Left or Right of various kinds and see themselves in a perpetual tug of war to prevent the other side from creating havoc.

It is harder for either side to see the problems that arise if either side does happen to win too often, we do see this sometimes when one political party is in power for too long. Rather than the other side always being blamed, usually societies have problems when the people and police in the middle lose their moderating strength. But even this begs the question, like an ecosystem where the middle of the food chain collapses we usually see this as bad in society but why it happens is what Aperiomics is also about. Not only this but that it should happen inevitably sometimes and so this theory is also about how the system restores itself after one of these collapses.

To be prepared for these inevitable crises is needed not because of the failure of a theory but because people and societies will do it to themselves as often as an external event causes a crisis.

It is not even necessary to understand this aspect of Aperiomics, generally societies regenerate according to these principles by themselves more or less efficiently. In some Third World economies and failed states they simply do not work out how to solve these problems or they don’t have the ability or will to do what is necessary. This however is also natural, for example any ecosystem has some desert areas where plants and animals fail to conquer the environment.

So then people might well ask what is Aperiomics for exactly? My answer to that is I don’t know myself, I think it is something quite remarkable but in 20 years I have only scratched the surface in understanding society well enough to see all its applications. This is what I think it can do:

1. It can simply be used to understand the changes in society with noninterference, much like the Middle Way philosophy of Taoism.

I would urge people interested in Aperiomics to approach it as much as possible from this perspective. Like how pure mathematics often comes up with interesting applications Aperiomics gives you more answers when you see the whole system, not just the parts suited to your own ideology. Try and let go of your narrow world view and see how the whole system works, then you can take up your old ideas later and see how they fit in the whole system. It doesn’t mean anyone need change their point of view, for example if you could explain evolution to Lions and Buffalo they would still do exactly the same thing.

1. It has the potential of limiting the effects and occurrences of economic crises.

In some ways understanding this system might have prevented the GFC completely, but this again begs the question of if the system is sometimes unstable whether anything can stop it going off the rails sometimes. However it may be that if the reasons behind these crises are understood that enough people might listen to prevent them, or at least stop the crises at an early stage. To be honest I don’t know the answer to this, at this point I am just presenting this system for discussion. It may be that after the GFC that people are more open minded than usual to some new ideas.

1. It has the potential to help Third World economies out of poverty.

One of the dilemmas of modern economic theories is why capitalism seems to work so well in more advanced societies and doesn’t help much in poorer ones. Essentially this is a tautology because advanced societies are of course the ones where capitalism works or they would be poor too. The answer to this springs organically from the Aperiomics theory, basically there are two kinds of society in the world. As will be explained later unless people have read my first book there are twelve principles of Aperiomics that roughly represent twelve different kinds of groups in society.

To make them easier to remember they are color coded with twelve colors namely R (Red), Ro (Red-Orange), O (Orange), Oy (Orange Yellow), Y (Yellow), G (Green), Gb (Green Blue), B (Blue), Bi (Blue Indigo), I (Indigo), Iv (Indigo Violet), and V (Violet).

This will seem confusing for a while, think of it like twelve notes of the music scale that after a while become recognizable as different musical tunes. In this system there are two main sub systems called Red-Orange-Yellow or Roy, and Blue-Indigo-Violet or Biv. From here on I will abbreviate these colors by just using their initials, for example R for Red.

These two systems act differently, a Roy system is poor and often crime ridden while a Biv system is relatively wealthy.

For a poor country to become wealthy then they need to go from Roy to Biv, and this involves a R group becoming a B group, an O group becoming an I group, and a Y group a V group.

Like with music these colors act like overtones so they are already quite similar, generally an overtone of a Roy color group has similar people but act differently with more abundant resources.

By analyzing a society in their color code groups the problems holding them back can be determined and aid better targeted to the actual problem. Again however as with interfering in a natural ecosystem this is neither simple or easy, but the system explains quite well why it has failed so often and some economies have remained poor.

1. Aperiomics is arguably a Grand Unified Theory of interactions between livings things whether in nature or between people.

Consequently it unifies various political philosophies and shows how they are naturally antagonistic to each other, often like predator and prey in nature. It also unifies all economic theories which is illustrated here by examining the different explanations for the GFC. This claim is naturally quite bold, I can only back it up by having taken 20 years to show it in its fairly complete form for others to analyze. By reading this book a good idea of how these economic ideas interact with each other in causing a crisis as much as in blaming each other for the problems that come from a crisis. Because it is a GUT, i.e. Grand Unified Theory no particular theory has pride of place or is favored here except unintentionally.

1. It may be appreciated from reading this book why this system has never been discovered before when it becomes apparent that most of the pieces are well known.

I think the reason is that the system itself is extremely complex for only twelve principles in the way they interact with each other. We might say the same thing about music, how only twelve notes in an octave can create so many different kinds of tunes from a classical symphony to a modern pop song. Another reason is that Aperiomics analyzes four secretive groups, R, Oy, B, and Iv as well as two semi secretive groups as kinds of police namely O and I. Most theories only look at the four transparent team colors in society, namely Ro, Y, Bi, and V. In Aperiomics however these team colors interact in a different mathematical way, for example they are more random in their actions and so are better described on a normal curve. The secretive colors however are more chaotic and are better described with fractals and tipping points.

Consequently ideas based on this visible side of societies will be periodically upset by the different mathematics of this hidden side, but in ways just as possible to understand once they are explained here.

This secretive side for example acted like a contagion in the GFC in the financial sector, in many ways this is like how diseases propagate in nature. Just as we need to monitor people and eating places for possible disease we also need to watch a political and economic system for this contagion to keep it healthy. Like most disease though this problem is not usually where we can easily keep watch on it.

1. Some may object that much of this system is known to them and seems like plagiarism, others may object that it seems too unknown.

It is important to remember that this is intended to be a synthesis of a lot of known economic and political theories, there is no intention to claim I discovered something well known in a particular field. However there are enough new ideas to challenge people in these fields, often these ideas are already considered as theories in or out of favor in those fields. For example in economics there might be little known theories that are presented here as part of this GUT as well as mainstream conventional beliefs. Others who see this theory as too new might keep reading and if they are familiar with the fields referred to or are simply well read they should be able to piece together the new ideas with what they already know.

It is worth remembering that as with music Aperiomics is intended to be read by those looking to just understand the surface as much as for composers who want to get into the deeper side of it.

The next part of the book will explain the different colors and what kinds of people, animals, plants, systems, organizations, etc they refer to. It’s not necessary to memorize this too much but it is a good idea to spend some time there first rather than jumping ahead. Like with musical notes someone can get the gist from listening to a lot of music but it is sometimes faster to learn the musical theory if you are going to write or critique music. In the same way a good understanding of the twelve colors will help you because it gets quite heavy early on in this book.

# The twelve colors

People sometimes ask me why these particular colors are used and suggest different names for these principles, also added or subtracting from these twelve.

The answer is not so obvious but will become apparent over time to those that read about different examples of these color codes relating to plants, animals, and people. They seem to represent not just a convenient set of names but the colors or music notes actually seem to mix together like the actual groups do in living things. This is one of the reasons I found the system so compelling at the beginning since I was studying music theory at the time as well as writing a lot of music. For example the twelve principles in a music scale can be C, C#, D, D#, E, F, F#, G, G#, A, A#, B. In this system Red is R, also C in the music scale. Blue is B also G in the music scale. It turns out in music that C and G go together in chords with G as an overtone of C. In this system B is a kind of overtone of R in that they share similar characteristics so this is similar mathematically to music. This conclusion is quite surprising and Aperiomics seems to work much better than it might seem so far, describing the colors can make them see arbitrary but this will become clearer later.

If one for example added Yellow or Y to that, this would be E giving CEG or a major chord. So in a sense interactions between these 3 groups can be like a music chord and when these groups interact millions of times a day all over the world it is like playing or hearing music.

Any 2 or more colors can also interact, some form chords more recognizable than others.

It’s not necessary for students and readers of Aperiomics to go deeply into this side as this will be explained more thoroughly in an upcoming book. It may be helpful to go to the Aperiomics.org website and download a copy of the first Aperiomics book, I try to avoid repeating myself too much as the amount of information to cover is quite extensive.

The next two books will deal with economic theory in depth and how it works in Aperiomics, and then a study on world poverty and ecological problems and how this theory can be applied to solve them.

It’s important to realize that these ideas in Aperiomics are not just being thought up by me in an ad hoc basis but are being generated by the structure of the system itself. So with world poverty for example it is not about my opinion per se but what this system gives as an answer for this, if the theory at any point generated nonsensical answers then the whole of it would be threatened. It may not be right for everyone but the prescriptions are usually quite specific and generally not controversial.

For example to build wealth in a Third World country it is necessary to strengthen domination of the O and I colors, this refers to the police and courts as O and the free market with its civil law structure as I.

Few would say that a strong police and markets were unnecessary but Aperiomics says they are critical for success and their waxing and waning by being unstable can cause many crises even in advanced economies. Much of the GFC as will be shown was caused by their being weakened.

Roy (Red-Orange-Yellow) is like the animal kingdom and Biv (Blue-Indigo-Violet) as the plant kingdom so generally Roy economies work more like animals as a predator and prey crime ridden system held in check by the O police.

Biv systems work like plants which are held together with the trunk of a tree as I or the free market. For example when O as the middle of the Roy food chain in nature collapses the predator and prey relationship can become unstable, there might not be enough Ro-R (Red and Red-Orange) prey and the Y-Oy (Yellow and Orange-Yellow) predators might starve.

A society can become so unstable with a weak and corrupt police that any wealth is stolen or destroyed before it can accumulate to make a transition to a Biv or wealthy society.

I is like the trunk of a tree that keeps everything working together in the free market where nutrients from either end of the tree are exchanged. A plant works in a different system to animals in that different parts of the plant work together more rather than preying on each other. Consequently in this trunk of the tree nutrients are exchanged and if this is done inefficiently the tree’s health suffers, these imbalances can be like an inefficient I market in a Biv society causing recessions and such as the GFC.

To remember the first five colors then is like remembering different animal groups of predator and prey in a food chain.

Then there are 2 colors which represent public and private property, namely G (Green) and Gb (Green Blue), in effect like a fencing off of this animal aspect of society from the plant aspect . For example in some areas you might have a savannah where animals dominate as Roy and Biv plants like grass and trees are weak, the grass can be overeaten or uprooted and the trees knocked down for their leaves. In another area the Biv plants are strong like a forest and the Roy animals are weak, they might be mainly birds, squirrels, insects, etc. Some areas are then Roy and dominated by animals, other areas are Biv and dominated by plants.

In the same way society has two aspects, Roy areas are dominated by G public property and crime, Biv areas are dominated by Gb private property and business transactions.

The idea of Roy animal and Biv plant aspects of society is fairly radical, however these patterns will be demonstrated here in how these Roy and Biv societies operate. The first 5 groups of people in a Roy society are R, Ro, O, Oy, and Y as the animal kingdom and animal aspect of society. They also represent poor societies that act more like the animal kingdom in the sense that there are more predator and prey activities with crime and power determining one’s chances of survival moderated by the O police. O is like the center of the food chain and can be thought of as part predator and part prey because O often eat those R and Ro animals below them as well as being attacked by those Y and Oy predators above them in the food chain.

The other four colors are in two sub groups, team colors and solitary colors.

That means some people use teaming up with others cooperatively as their survival strategy and others act as loners using secrecy and often deception to survive.

R and Oy are both solitary locked in a predator and prey relationship like for example an Oy fox trying to catch R mice and other rodents.

Ro and Y are team colors acting as predator and prey, for example Y might be lions working as a team to attack teams or herds of Ro Buffalo. Lions can sometimes hunt as solitary animals as well as in teams, hyenas can also switch from a solitary to a team strategy for predation. However in this book I usually try to separate the activities of animals to illustrate their interactions more, for example lions are treated as being Y team hunters and hyenas as Oy solitary hunters. Gazelles are regarded as R solitary prey though they can form herds, buffalo are considered to be Ro team animals though a solitary buffalo might survive. The exceptions to these solitary and team behaviors are discussed later in the book, also in my first Aperiomics book.

Just as a painting might be appreciated by seeing the twelve unadulterated colors that go into it, so too in Aperiomics it is easier to see clearer examples of the twelve color codes and to then appreciate they can mix in complex ways harder to see.

The Aperiomics system is relatively simple, animals either work as teams using their numbers to give them strength or as loners relying on camouflage and speed to survive.

There is another fairly major difference here with current economic theory, it often says that competition is the way to improve efficiency in an economy and then cooperative behavior such as cartels and unions cause problems. In Aperiomics there are these two essential kinds of interactions, some survive using cooperation as Ro versus Y in Roy and Bi versus V in Biv and the others use competition as R versus Oy in Roy and B versus Iv in Biv.

Economic problems can ensue when there is too much competition or cooperation in an economy.

In some economic theories this reliance on competition to trump cooperative groups like trade unions and monopolistic groups of companies is seen as leading to more wealth. In Aperiomics however it is seen as a recipe for total collapse and disaster and a major reason for the GFC. It’s important to realize that these colors generate specific answers very early on as to how economic and political problems occur.

For example the Nash Equilibrium only applies in Oy-R and Iv-B interactions because it mainly refers to the actions of individuals, using deception in a Prisoner’s Dilemma does not work in Y-Ro and V-Bi interactions because they are team colors.

A Ro gang might usually discuss its decisions openly and transparently and so trying to be deceptive in a Prisoner’s Dilemma game doesn’t work.

Usually what happens is that some might plea bargain or snitch on others in a random way, this means that there is no equilibrium in the sense of a best strategy but only a normal behavior with deviations. For example if there was one best strategy then the team would no longer be acting randomly but deterministically, however a team by its nature allows its members some variations in what they do without everyone having to do the same thing. When someone is the most conventional in a team then they might find it better to plea bargain in a certain way, however another on the edge of the team might find it best to take a completely different deal without his actions breaking up the team. This will be covered in more detail later in the book.

In nature Oy foxes chase R rodents.

In this Oy-R predator or prey relationship both rely on speed, secrecy, deception, camouflage, etc to survive.

Obviously then the ones that have more of these characteristics have a better chance of survival, for example a predator as Oy that runs faster can catch more prey and R prey that hide better survives longer. In the same way Oy and R people in a Roy society survive with these two colors by being fast, deceptive, secretive etc like for example Oy petty thieves and the R people they target, a faster and quieter Oy petty thief will make more money and a faster and less visible R person might keep more of their money.

Not only do Oy and R people compete with each other but they compete with others like them, Oy thieves for example have to compete with other thieves as well as in trying to outsmart their victims while R people have to hide better than other R to avoid being robbed.

Because they are loners Oy people like Roy animals don’t care about other foxes or petty thieves, they are just as likely to steal from or attack each other.

If an Oy petty thief gets caught by the O or O police then that is only good for the others still at large, it leaves them more prey and the O police may be satisfied with their arrests and stop looking. In the same way R people are loners and tend to not help each other or share information, their competitive advantage with other people is for them to get robbed and for themselves to be spared. This then is the opposite of team behavior where everyone tends to benefit from helping the individual members.

So this Oy versus R interaction is innately fragmenting in society as well as in the animal kingdom, deceiving each other and all those around them.

Consider then their destructive power in a Roy society trying to becoming Biv, they might deceptively destroy so much wealth that the country remains in poverty.

Oy people for example might end up as corrupt officials in a right wing government and R as corrupt in a left wing one. So to the extent they exert power in an economy there will be deception, secrecy, and as will be seen later chaotic spurts of wild growth and collapses.

In Biv something similar happens with Iv-B, or Iv versus B interactions. For example Iv can be like deceptive loan officers trying to trick B workers into bad loans for commissions. B workers were often just as deceptive using liar loans with no truthful documentation to borrow money.

So the loan officers and borrowers like the Oy fox and the R rodents were locked in a game of mutual deception much like poker where each prospered according to how fast, deceptive and secretive they were.

When you have a sector of the economy like this thriving on how dishonest and secretive they can be then it can act like a contagion. In this sense then Iv-B are like overtones of Oy-R, similar in their interactions where Iv agents as loan officers here engaged in predatory lending against deceptive B workers trying to evade being ripped off. The difference is that in Biv societies there are more resources so instead of an involuntary Roy crime where one or both sides lose there is a consensual Biv business transaction where both tend to benefit. However if these interactions are not well policed these secrecy and deception can easily grow like a contagion into fraud.

These Oy petty thieves are sometimes interrupted in their hunting of R people by the O police so the police act as a moderating influence breaking up the dynamic of speed, secrecy, and deception Oy and R use to survive and prosper.

In the animal kingdom this happens with O animals in the middle of the food chain that act as a buffer between the Oy predators such as foxes or hyenas, sometimes they might be attacked by them and at other times they might warn off the R animals that there is an Oy predator nearby. They tend to do this to protect their own territories from rival predators.

As an approximate example imagine in Africa a lone or small group of wild dogs acting as O while a herd of Impala would be Ro and the weaker R prey might be the newly born Impala that hide in long grass as they cannot survive in the herd yet. They must then survive by secrecy and deception.

The Oy predator here might be a lone hyena which can easily beat the lone R baby Impala if it can find it, it might then try to sneak up on the mother when it is feeding the R baby and deceptively stay hidden while watching. So this is like an Oy petty thief casing a house where the R inhabitant is too weak to resist and is waiting for the stronger Ro members of their family or friends to leave. Whichever is most speedy, secretive, and deceptive will tend to win here, either R baby Impalas or Oy Hyenas. However the O wild dogs might be able to fight off the lone Hyena, they can act like the O police with the sounds of this fight to warn other animals in the neighborhood of the Oy predator and try to drive it away.

These O wild dogs would tend to gang up on a smaller number of Oy hyenas to protect themselves, in this way they use Ro teamwork. When the Oy predators are too strong or there are Y team predators such as lions around these O wild dogs might act like Oy and hide or try to bluff the predators into leaving by making a lot of noise giving the appearance of a bigger group.

When these O animals hunt however they might act more like Oy to secretly and deceptively catch their prey, they then have a dual nature of acting as a Ro team or Oy loners according to circumstances.

In effect then O animals tend to act like police moderating the swings of predator and prey in the food chain much like O shepherds do with their R flocks and police do in Roy societies.

The wild dogs then act as Ro in some ways, like a neighborhood watch that warns others of Oy thieves and tries to catch them or drive them off. These Ro people have tended through history to evolve into an O police force, like shepherds in a community and in this way the wild dogs can act like a buffer to stop Oy predators from getting the R prey by stopping them from sneaking up too close.

When the R baby Impala is strong enough it might then join the Ro herd and it can use the numbers cooperating with it to withstand an attack from a Y team of predators like perhaps cheetahs Paradoxically though the Y cheetahs as a pack might do worse than the lone Oy Hyena in catching R prey because they might make more noise or be more visible, it being harder for them to be secretive and deceptive. In this case the Y cheetahs might decide to hunt as Oy loners because when the Ro Impala see them as a pack they might scatter and hide as R.

## Team and solitary behavior then can change according to circumstances, Impala might act as a Ro herd to fight off smaller predators but scatter and hide against larger ones. Hyena might do better as loners like the cheetahs and in other areas hunt as Y teams.

So in Aperiomics there are these rival pairs of predator and prey in Roy, the Oy-R interaction based on speed, secrecy, and deception is like the petty thief versus his weak victims and they are moderated by the police trying to either warn others of their presence, catch them, or chase them away. The Y-Ro interaction is like a pack of Y cheetah battling herds of Ro Impala, these can also be moderated by the middle of the food chain as O wild dogs who try and protect the weaker parts of the Ro herd acting like shepherds for the others. In exchange for this the O wild dogs would catch some of the Impala for themselves, like a shepherd who protects his flock in order to eat some of them.

In the same way the O police protect the weaker Ro-R members of society because they get paid by them to do so, for example in a Western movie the O sheriff might be paid by the Ro-R town to protect them against the Y-Oy cattle rustlers and gangs of outlaws.

In a Biv society I or Indigo represents the free market but also civil law protecting business deals just as O police represent criminal law. This civil law is also regulated by lawyers and courts, it evolved in a similar way to the O police as will be explained later.

These Oy-R contests can become unbalanced quite quickly, for example too many Oy Hyena might scatter and decimate the Impala but they might stand their ground against a few of them. There can also be R animals that rarely try to stand against predators in herds, for example R gazelles might always run away from O wild dogs, Oy hyenas, and Y cheetahs. In Aperiomics Oy-R and Iv-B interactions are chaotic rather than being random, this means they are dependent variables rather than independent ones. For example when an Oy hyena hunts a baby Impala or one scattered from a Ro herd then its actions are not random because it is a solitary hunter. The R prey it hunts is also not acting randomly because it is trying to find a way to hide and run to survive not just trying random ways to do this.

This difference between dependent and independent variables is important in Aperiomics because it defines the team versus solitary color interactions.

As will be seen later this allows the colors to be defined mathematically, generally team colors interact randomly and their actions fit well on a normal curve and solitary colors fit better with chaos and fractals. In practice though most people like animals use a combination of random and chaotic strategies. There can be no others because one is random and independent and the other is chaotic and dependent, there are no other possible alternatives than one or the other or a mix of both.

This allows economic data to be analyzed in some completely new ways while still being compatible with current theory, it also explains why these equations often fail to describe the real economy.

A Ro herd or Y team of predators tend to act randomly because each member can make its own decisions to some degree while still remaining part of the team. For example a Ro herd of Impala or buffalo don’t work out their movements by watching the rest of the herd too closely, they move independently but still try to stay close to the others. Because Y-Ro interactions are random they tend to be more stable and return to normal numbers of predator and prey. Oy-R interactions are chaotic and give rise to booms and busts of the numbers of predator and prey, they also cause booms and busts in an economy such as the GFC.

A smarter Oy fox might decimate R rodents just like a more deceptive R baby Impala might cause Oy solitary Hyenas to starve. Both of these interactions then can be wildly unstable and cause the ecosystems to fluctuate leading to feast or famine for predators, feast as they do well and famine later when they have eaten too much of their prey leaving themselves without enough food.

In the same way Roy societies can be inefficient like this with warring factions of Oy-R and Y-Ro, in both cases these fluctuations are moderated by the O group such as the police and law courts or in some cases a moderate dictator or king.

In the animal kingdom then the O middle of the food chain acts to stabilize it so overall animals don’t overeat and starve as often, this is explained in more details later in the book. In Roy society a strong and fair O police keeps criminals in check and allows people to work more productively without having to constantly be in fear of being attacked or not finding enough victims to survive.

If the environment has a marginal amount of resources the efficiencies from good policing can allow a Biv free market to flourish and lift a third world economy into becoming an emerging or even advanced economy.

Usually in Biv societies the O police are biased towards one side or the other and this creates inefficiency and often a collapse. For example the O police might be corrupt and favor the Oy thieves more in their quest for R victims, this puts the police against the Ro vigilantes and neighborhood watch of society who don’t trust them. This happens with Ro gangs in many US cities where the O police are mistrusted and the gangs often act as police to some degree. This makes it harder for the O police to arrest O criminals such as drug addicts robbing wealthier neighborhoods like a contagion, when they try to arrest them Ro gangs and crowds tend to threaten them and chase them away like they were Oy petty thieves themselves.

If the police favor the Ro side too much then the Oy petty thieves don’t trust the police either and just try to evade them more. This might seem better at first except that Oy thieves usually act as snitches for the police against the more violent Y thieves like the mafia and other gangs. If the O police favor the Ro neighborhood teams too much then then Oy thieves have no incentive to snitch on Y and so the society ends up with Y gangs attacking the Ro neighborhoods which can be worse than the Oy thieves were.

Also when the O police favor the Ro teams too much they tend to protect R people even those who themselves are criminals and so there forms a lawless part of the Ro neighborhood where for example young criminals might pilfer wealthy areas and then retreat to their Ro neighborhoods to be hidden by them. In effect then when the O police become biased then they tend to lose control of either the Y or R criminals in a society. In the same way when the O middle of a Roy food chain becomes too Oy it leads to more R prey hiding from them which makes them starve more. When they become too Ro like as gangs like a large pack of wild dogs then this might chase away the Oy hyenas but then it leaves an opening for the Y predators such as cheetahs to replace them instead of being driven off by them. For example in the food chain the Oy hyena might try to chase away the Y cheetah or even lions, in turn the O wild dogs try to chase off the hyena so each ends up getting a relatively stable amount of prey. Perturbing this balance causes too many prey to be eaten causing starvation later, it can also cause too few prey to be eaten until they overgraze and starve themselves causing starvation for the predators.

Only when the Roy food chain is well balanced can the different animals survive most efficiently. As will be seen later this also applies to Roy and Biv societies where the same kinds of imbalances cause recessions and wars.

Being biased to the left or right wings in politics then creates trouble for the police, when they are too Ro or sympathetic to gangs and neighborhood watch then they viewed as corruptly supporting the R criminals. They might then have trouble raising revenue from right win neighborhoods because they are seen as too soft on R criminals and Ro gangs. When they are too sympathetic to Oy criminals then they might be seen as being harsher on R petty crime and drug addicts in a drug war but this enrages the Ro communities. O police then have the same revenue problems, they generally are strongest and do their job most efficiently when they are neutral between the two sides.

This is a basic exposition of the dynamics in Roy societies, as will be seen later much of this occurred in the GFC, corrupt areas in the financial system acted as predatory lenders while borrowers appeared to be prey but with their liar loans collapsed the financial sectors with defaults. This happened while the O police were weakened from deregulation or often biased in favor of right wing policies.

The criminal law aspect of this was covered more in my first book and the most efficient ways of solving poverty and crime in Roy societies will be covered in an upcoming book. This brief explanation of the dynamics of the five Roy groups is intended to illustrate how they work, when they are explained in much more detail as the causes of the GFC they will become clearer.

However it can be seen that a weak or biased O police is not good for a society or for the animal kingdom when O is the middle of the food chain, the more strong and stable this center is the more the Roy society can save money being lost from crime and the more the animal kingdom can avoid regular periods of starvation and possible extinction. Generally then Aperiomics gives from a mathematical system the answers that make sense, societies plagued by crime, corruption, civil war, gangs, etc tend lose a lot of wealth because of it and for example when UN peacekeepers as O police are brought into a lawless area it can help to restore them. Somalia is a good example of when this policing breaks down giving rise to Y-Ro wars between rival warlords and stealing causing mass starvation by collapsing the economy.

Some might say here that since we know that police are good for a society then what use is it to define these different groups with their colors.

The answer is that some of these dynamics are not so obvious, the Oy-R attacks are highly secretive and deceptive so it can be very hard in an economy to see the havoc they cause as even the R victims have no real incentive to warn others. When the O police become weak there can be a visible Y-Ro surge of crime such as gang warfare but also a relatively invisible Oy-R crime wave like a contagion more likely to collapse a neighborhood or even the economy.

These Oy-R in Roy and Iv-B in Biv interactions caused much of the devastation of the GFC,, the reason that economic theory didn’t see this coming is because they tend to assume that what they see in Y-Ro and V-Bi statistics is all there is and no one has an incentive to distort the facts.

They assume all their data is correct and check this by how well it fits on a normal curve but all this does is ensure this data is Y-Ro and V-Bi randomness leaving out the chaotic data causing booms and busts.

People in Oy-R and Iv-B interactions have an incentive to deceive the O and I police because they profit from this, when the system is ignoring what they are doing as irrelevant then this part of the economy is out of control. For example prior to the GFC the Fed looked at the data in the transparent parts of the economy but ignored the rising amounts of fraud because Alan Greenspan thought this was largely irrelevant compared to the efficiency of the market in providing subprime loans to poor R-B people.

Like the Ro Impala herd mentioned earlier that fails to see and contain the secretive Oy attacks against their weaker R members this can lead to collapse.

In the same way a Roy society that loses O police control of this secretive and deceptive Oy petty thievery can have rampant crime but little shows on official statistics because neither Oy or R have a reason to report it.

The next two colors are G for Green and Gb for Green-Blue. G represents the concept of public property which is like land in the Roy animal kingdom. It can also be public parks, streets, rivers, beaches, oceans, the air, etc in Biv societies. In this G area no one is infringing on private property which is Gb, they can move wherever they want if they can get away with it. Naturally this can cause fights between people just like predator and prey between Roy animals which is why the O police keep some order in this movements on public property.

You can imagine there being a dividing line or fence between the six colors on the left with Roy and G, then six colors on the right with Gb and then Biv. The G color extends to the left with half the full spectrum of twelve colors and surrounds the five Roy animal colors as their habitat.

It also represents land not worth fencing in as Gb private property like mineral deposits too small or poor to mine, soil not good enough to farm, land not desirable to sell for residences, etc. Depending on the economy some of these G areas might become Gb if there is more money or demand, for example with fertilizer some of the G land might be farmed as Gb private property otherwise it might lay unused unless someone is forced to farm it like with Ro collective farms in the former Soviet Union. Slavery can then be a Roy system with Stalin in effect treating many Russians like slaves of the state as did Hitler with the Jews and other occupied people in World War Two.

Generally then the wealthier a society the more worthwhile it becomes to fence off parts of various resources into Gb private property, with this extra wealth people usually prefer to do business consensually as it is usually more profitable in Biv than stealing. Since there is only G and Gb here in the two central colors they are fairly easy to remember, the five colors on the right all work on Gb private property and the five colors on the left on G public property.

Biv (B I V) acts like overtones of Roy (R O Y) and is again 5 colors but instead of acting like the animal kingdom they act more like the plant kingdom.

This can be seen in many parts of Biv society where people work in arrays like roots and branches. For example B workers in a mine or on a farm might act like the roots of a plant working as loners competing for Gb fenced private property resources. Like R people they tend to work against other B workers competitively and not to help them, because of the relative wealth of the Biv society however they tend not to be criminals because it is better to work for money than to risk losing everything by stealing and getting caught.

So B people might go to the edge of the law but not usually over unless they think they can get away with it. For example many got liar loans in the lead up to the GFC because they thought it was free money with house prices seemingly rising forever, if it worked they made a profit and if not they could walk away from the houses after draining the cash from them with refinancing.

Their adversary is the overtone of the petty thief Oy which is the agent or Iv salesman.

These two colors have a similar battle of predator and prey but civilly within the law, they try to use speed, deception and secrecy to get the better of each other but usually so both profit in a Positive Sum Game. For example before the GFC Iv salesmen sold loans to B workers and didn’t really care if B people got ripped off or not, or even if the loan got paid back, however usually both parties thought they were making a profit from the deal.

A Zero Sum Game is where one side wins and another loses.

For example in G and Gb the change from public to private property or vice versa is a Zero Sum Game because the amount of land, goods, services, etc moving from one equals the amount going to the other. A Negative Sum Game occurs in Roy where both sides loses but it is considered a victory to lose the least, for example in a war of attrition such as World War One Britain and its allies won the war even though they lost more than if there had been no war. During the GFC the race was on between companies to dump their securities and lose less than their Oy-R competitors, this was regarded as a good outcome even though both sides lost. Roy animals are often in a Negative Sum Game where both lose energy but one is killed and loses more, the other might get some food but not enough to cover the energy wasted in hunting for food.

The difference is in the relative wealth of Roy and Biv societies. In Roy Oy thieves made money in a Negative Sum Game and the R victims lost, but the Oy thieves also lose because they both tend to destroy the society they are in just to survive. In Biv the Iv salesmen and B workers also try to deceive each other but in a Positive Sum Game where both win, but the idea is to get more of this profit at the expense of the other. For example the Iv salesman tried to get higher commissions by putting up the interest on loans while the B worker tried to get a bigger loan to speculate with, both ended up with a profit at that point.

V versus Bi are like the overtones of Y versus Ro and so they act as team colors with their strategies adjusting because of the abundance of Biv resources. Instead of Y using violence like a kind of mafia or gang the V overtones of Y tend to stay out of Roy criminal activities and stay in the confines of the I civil law.

They use their talent and act like teams or crony capitalists, often this can also involve wars of attrition where those able to pay for a costly legal fight in I court might win even with an inferior case.

In a Biv society or area smarter V teams might build superior products by refining goods where in Roy they would tend to form a Y gang to take things from Ro people by being smarter as well as stronger. This strength component means that many V people are athletes as well, for example team based games such as baseball and football athletes might be played by V, in a poorer Roy society the same strength and team instinct might make them Y thugs. Some Iv athletes might excel at competitive individual sports like tennis or Olympic swimming or running, in a Roy society they might end up using their speed to snatch purses.

Ro people act as a gang like neighborhood watch or vigilantes in Roy societies using their teamwork and cooperation to help each other, in a Biv society they might be in a neighborhood watch that passively watches out for criminals and calls the police rather than trying to catch them. They might also seek out other kinds of teams like trade unions, community support groups, cooperatives, Rotary, etc. In Roy the necessity to commit crimes to survive meant they had to use this teamwork to steal or protect their assets from theft, in Biv with more relative wealth they use this teamwork to get a bigger piece of each deal in a Positive Sum Game.

For example Bi unions might negotiate for a bigger percentage for the profits of a company than V might get though both make a profit, in a Roy society they might become rival gangs trying to rob each other.

In the same way as in Roy with the O criminal police the I civil police represent neutral justice and a moderating influence on the fluctuations between these pairs of colors, Iv-B as the secretive and deceptive pair, and V-Bi the teams openly and transparently opposing each other. These civil police act in the I market place and is usually what economists talk about when they refer to the free market.

It is controlled by civil laws such as with contract law, torts, equity, defamation, product liability, copyright, etc instead of O criminal law which generally refer to who hurts who. In Biv this I civil law refers to slicing up the profits on a deal and so is innately associated with the concept of Gb private property. So in the I market someone might buy a TV and there is a dispute because it breaks while under warranty, this becomes an I civil dispute whereas in Roy it might be someone steals a TV or sells one that is fraudulently misrepresented as working.

In the I dispute there is usually a civil fine or someone must pay in money, goods, or services. In Biv there is a crime that must be punished, often the victim receives no I civil compensation though in some third world economies there might be a payment made to the family if a relative is killed.

In both cases there is a judge and often a jury, the O police might have an O court to work out who is guilty of a crime and to levy a jail sentence, in Biv the I market has an I court which civilly tries to work out who is telling the truth and is liable to pay the victim in the deal. When a Biv society becomes poorer then the I market weakens then people start committing more O crimes.

For a while they might get away with many of these because the society has adapted to being wealthy where most economic crime is counterproductive, for example like an Iv loan officer tricking a B worker into an expensive loan or a B worker tricking him into lending him too much money.

In a Biv society the I regulators or civil police tend to assume that salesmen won’t commit fraud because the small amount of money they would make is dwarfed by the economic loss of going to prison.

In the same way the fraud of a liar loan might cost a B worker much more with lost wages in jail. This is what confused Alan Greenspan in the lead up to the GFC, that subprime lenders would commit crimes of fraud rather than doing honest business which would seem to be more profitable in the long run. Over time as the I police realize that there is an increase of O crime then the O police become more involved, for example in the GFC the Bi public became more enraged at the rip offs from Iv salesmen and demanded more criminal sanctions against them.

The increase in O crime then is a sign an economy is becoming more Roy because of scarcity of resources even though they might still seem abundant.

This has been seen in many economies after the GFC as the financial strain of a near depression has led to more crime and increases in some criminal penalties to deter it.

With a weak I market Bi unions and V management might fight so much over wages that companies start to get hurt by strikes. This is like in the Roy animal kingdom where a weak O middle of the food chain would mean that Y prides of lions could attack Ro herds of buffalo so much that both end up getting hurt.

The lions might get gored sometimes and the buffalo harried so much they are always exhausted in a constant war of attrition where neither said can rest. So these wilder fluctuations in Biv society from a weaker I market can cause a kind of V-Bi and Y-Ro civil war in a society as happened for example with stagflation in the 1970s in the US and Europe. At the same time this weak I market can create stronger Iv-B and Oy-R business that also gets out of control causing a boom and a bust.

Prior to the GFC the growth of Iv-B loans in the secretive shadow banking system created so much deception that many loans defaulted and this like falling dominoes caused defaults and collapses through much of the financial system.

This is because in Iv-B the variables are dependent on each other, when some prices go up then this can push others up in a boom and when they crash in one area this can push others down in a wave of bankruptcies and fire sales.

Much of this happened because of a belief in deregulation which was equivalent to a Roy society being expected to function without policing, it led to an Oy-R crime wave, too much wild Iv-B speculation, and eventual economic collapse.

More will be explained of this in the rest of the book in relation to the GFC, much more of this was covered in my first book and future books will explain more of this in different parts of society. The basic premise of Aperiomics is that all economic, political, etc aspects of societies can be explained, modeled, and to some degree predicted by defining these twelve color groups. This is because the interactions between these groups can be modeled much more precisely and make otherwise inexplicable economic data much easier to understand.

For example interactions between team colors are more random and between solitary colors more chaotic, when chaos and randomness is mixed together it is much harder to understand but when separated like this the effects are clearer.

Most of Wall Street used random or probabilistic models based on the work of Louis Bachelier and Eugene Fama to work out risk but this is only applicable to V-Bi interactions and part of the I market. The chaotic parts of price movements were simply ignored except for some pioneering work done by Benoit Mandelbroit, this chaos then built up secretly in the economy as Iv-B deceptive business until eventually the chaos completely overwhelmed the random workings of the market, all the models then led to extreme losses and the economy nearly collapsed as a result.

Usually this would be avoided by the I and O police, often referred to as I-O. With O between chaotic Oy and random Ro, I between chaotic Iv and random Bi each of these tends to for a compromise between the chaos and randomness in each stopping them from getting out of control. However there was at the time a strong push for weakening the I-O police with deregulation, this caused the Iv-B boom of fraud to grow without being monitored and then crash.

If this can be avoided then the potential gain to an economy can quite high, this kind of collapse can lead to a Biv economy losing so much money it becomes Roy again which has nearly happened in some Western countries from the GFC. For example the Great Depression was a similar situation where weak I-O policing caused an Iv-B bubble to inflate and collapse while there was also V-Bi wars of attrition between unionists and companies. The US and many other countries were reduced to a Roy impoverishment not much different from the conditions in World War One.

## It is however possible that Aperiomics could in principle prevent economic fluctuations like these because in nature they rarely happen, the numbers of predators and prey remain much more stable.

The problem is the I-O police have to remain consistently strong, this is like a strong O middle of the food chain in the animal kingdom and in plants where they have strong I trunks to withstand being pushed over or snapped by external shocks.

However this weakening of the I-O police also happens for a reason and as seen later it may not be possible to prevent this because it is in the interest of too many for it to happen.

As will be seen the complexities of the chaotic Iv-B economic problems of 2008 as well as the 1930s spread out into many different scientific fields, this is because the issue themselves vary in many roots and branches because that is how the chaos spread. It also makes it difficult to write about thoroughly because the subject becomes so complex and it appears sometimes that a new branch is just going off on a tangent.

One advantage of Aperiomics is this complexity becomes more manageable because the parts that are complex as Iv and B in Biv and Oy and R in Roy have typical roles in history, economics, evolution, etc while other parts are more random with a normal or conventional view. Chaotic interactions are very different in their behavior from random ones, however when they are mixed together it can become almost impossible to see these chaotic and random aspects such as with stock price movements, GDP, unemployment and inflation changes, etc.

## Much of this theory then involves determining which aspects of an economy are chaotic and which parts are random, or a mix of both, this aids in predicting what is likely to happen.

Aperiomics and the GFC

A few people did predict the GFC to some degree and I have included their ideas here. I also include other viewpoints from the Austrians that criticized the economic policies before the GFC and could be interpreted as anticipating it. I try to give a fairly comprehensive history of the various crises leading up to the GFC from the point of view of an expanding series of chaotic cracks in the global economy.

I also analyze some of the quants that built and ran large computerized trading computers as these also claim to have caused some of the GFC. There is also some discussions about Ray Kurzweil’s ideas of how rapidly evolving computerization and Artificial Intelligence is affecting our lives, I argue this exponential growth had some effects in the GFC because of the changes to the world economy and also for the role of Artificial intelligence (AI) in the computerized trading programs used.

One of the idea of this book is to trace these smaller crises leading to the GFC from the viewpoint of Aperiomics theory, to show that all these other ideas fit into it.

By tracing how various economic theories contributed to these crises I try to indicate which policies enacted after the GFC have been correct and which ones would cause more problems. It has been clear to most since the GFC that the current policies as of 2011 are not working very well, this can either be because they are not good policies or because the damage was so severe that they can do little to fix it.

One good thing about Aperiomics is that it agrees with about 80% of these policies, it generates them from the theory so this indicates that Aperiomics is indeed unifying these different ideas. It does give some new ideas but these are often already partially supported by some branches of economics and anathema to others Again this is hardly surprising given that so many oppose each other, accusing each other of causing the GFC while they remain blameless.

Nouriel Roubini was one of the first to give an explicit warning on September 7 2006 at a lecture with the IMF. Much of this warning was fairly accurate in retrospect but what was also interesting was that so few had any idea the GFC was coming. This opacity is a symptom in Aperiomics of a system called Iv-B; interactions between I V versus B groups in the Biv system, also to some degree these are overtones of the Oy-R or O Y versus R groups in the Roy systems which represented the more serious financial crimes also occurring.

Often an economy can have a mixture of Roy and Biv systems in it, I refer to this as a marginal society.

By this I mean that some areas have abundant resources which I call Gb or Green-Blue. This means that they are rich enough in resources such as minerals, farmland, grasslands for cattle, etc to be fenced off and make private property and so this leads to a Biv society based on private property and abundance.

In these societies there is enough wealth so that most people don’t see crime as a profitable alternative, rather they are deterred from wrongdoing by an I civil legal system which penalizes people with fines rather than jail. For example someone might own a nice house and car and not want to risk going to jail by shoplifting, for the small profits available from shoplifting they might lose far more financially with a criminal record.

Poor areas of the same society might be Roy, in these areas crime may be more profitable than Biv business so for example in a ghetto people might find that selling drugs or robbery are the best or even only ways to prosperity. It may then be more economical for them to shoplift or rob liquor stores regularly because they might not have a house or car to lose, there may also be so much other crime that the chance of getting caught is small. For example in a Ro-R ghetto the police might rarely come there and so the Oy thief might only have a local Ro gang to contend with.

Such an area might be permanently depressed as Roy because it has insufficient Gb natural resources and so G public property and government services work more efficiently than private businesses.

This Roy crime can also occur in relatively rich Biv areas as they experience a shortage of Gb resources, for example as the GFC grew in strength areas of the banking system became Roy with money becoming so scarce. Much of the system became predatory where instead of a Positive Sum Game in which both sides benefit from a transaction it became a Negative Sum Game where counterparties tried to lose as little money as possible by saddling others with more debts and bad deals.

Much of the financial crisis was caused by this Iv-B system where the deceptive Iv agents of V businesses try to sell to deceptive B workers, like a game of poker this interaction is based on mutual bluffing and lying while usually staying within the I civil laws. For example Iv agents might have exaggerated the benefits of subprime loans or concealed the excess upfront fees, any misrepresentation might have been a civil wrong or tort and would have resulted in I civil fines rather than O criminal jail time. The B workers might have lied on their loan application or have used various lies to evade a pushy salesman such as pretending to not to be able to afford the product being sold.

The Biv system is based on plants where the roots and branches act like conduits for goods and services as well as money flowing in the opposite direction to these.

When a business transaction is done in Biv the money moves in an equal and opposite direction to the goods and services as in physics, a person might sell a car and give it to the buyer and the buyer gives the money to the seller.

The root structure can be seen in Biv economies where minerals, farm products, etc are accumulated from the Gb soil much as the roots of a plant do and are combined together to be sold in various parts of the economy. This then appears to be like roots of a tree, as more products and services are combined together the roots become fewer in number until they connect to the I trunk of the tree which is the free market.

B workers might for example farm milk, eggs, wood, and wheat while miners dig for salt, iron, coal, and aluminum. This is like how the B roots of a tree get various nutrients from the soil. Further up the plant the roots join together more and more, this is like for example milk, eggs, wheat, and salt being combined to be sold as the ingredients for bread in the I Market. Iron, coal, wood, and aluminum might be sold as the components for cookware or the pots and pans might be made and sold in this market.

So just as the roots combine to make larger roots and the nutrients from each root are mixed with those from other roots, these different products of mining and farming are combined into Bi or the upper roots system where it joins onto the trunk of the tree, this is where teamwork predominates instead of the competition of B workers just as B roots compete with each other in a tree.

This Bi area is like the upper root system of a plant and is where the roots connect to the I or I trunk of the tree. It is also where people team up like with trade unions, cooperatives, and guilds. So for example there might be warehouses and cooperatives where these goods from B workers are combined for sale, from the nature of this combining goods and services together tends to come a Bi cooperation between workers instead of B cut throat competition.

Between the Bi and B areas of the economy then there is chaos with B competing against each other and randomness where Bi people cooperate with each other An economy tends to balance this chaos and randomness or competition and cooperation in the most efficient ratio for the situation.

As will be seen some situations need more cooperation and some more competition but neither can completely replace the other without economic problems.

In effect people in Bi areas do better from working together honestly and transparently, supplementing each other’s weaknesses with teamwork, just as goods are combined to offset their weaknesses. For example bread is tastier than eating wheat, milk, eggs, and salt separately and so competition here is less useful than people working out how to cooperate so each compensate for the weaknesses of the others while maximizing their overall utility.

In the same way a market might have milk, wheat, and eggs competing against each other for customers but bread creates a new product by combining them with something that tastes better than each of them. An efficient market then usually needs the ingredients of various goods to compete against each other but also to be able to cooperate together in a product. This is why too much competition usually leads to an Iv-B boom and bust because it breaks down goods and services that are more efficiently done with cooperation, in the same way too much cooperation can lead to economic stagnation.

The I market is like the trunk of a tree because there is the most possible choice there, it might be imagined as like a swap meet or large shopping center with Bi warehouses supplying it with goods from B farmers, miners, etc and with Iv agents buying there or selling wholesale goods from V refiners. The market then has a chaotic competitive group on both sides with Iv agents and B workers, then it has a cooperative random group on both sides with Bi warehouses or cooperatives and V teams of refiners and artists.

The two groups on either side then meet in this neutral I market which is policed by I civil laws, in some cases O police are also needed and so I often refer to this as the I-O market.

People can come to this one location and buy many things, this is like nutrients from the lower part of the plant as B and Bi are sold. Here it is important to have good I-O policing, this means that there are some Roy people around most markets as it is often cheaper to steal goods than buy them so O criminal law police are needed to watch for them.

These Roy people can be Y, Oy, Ro, and R thieves, for example the Biv market might be in a relatively wealthy area but be near a Roy ghetto and so criminals might sometimes come to the market form there.

Y thieves might be a gang that operates openly like a mafia demanding protection money from shopkeepers. Oy thieves might work partially for Y as secretive petty thieves like shoplifters and purse snatchers, they might have to give the lion’s share (Lions are yellow or Y) to the Y mafia to operate. The V refiners are overtones of these Y gangs, in effect as a society becomes more prosperous these Y people find it is more profitable to work as a team refining goods such as making bread than trying to earn money from protection, robbery, or extortion. The Oy shoplifters can become agents as the economy becomes more Biv, they make more money by getting a commission in honest sales from their V employers than stealing and getting a cut of the stolen goods from the Y gangs.

Ro gangs might also demand some protection or rob some weaker Iv agents, they might also attack Oy thieves and Y mafia gangs to protect their neighborhoods if the market is near them. R thieves might operate like Oy as shoplifters with some protection from the Ro gangs. These Ro gangs tend to work together as unionists or in cooperative community advisory groups as the economy becomes more Biv rather than as a quasi police force in a poorer Roy ghetto. R thieves such as drug addicts and people on welfare might get jobs as B workers because when the economy becomes more Biv it is easier to make money with a job in farming, mining, etc than in trying to make money off the streets.

An R beggar or prostitute then is in effect trying to mine or farm G public properties like streets to survive as are Ro gangs, when the economy becomes more Biv and prosperous they become farmers, miners, etc of Gb private property. B and Bi people then are like overtones of R and Ro people except their behavior changes with more Gb resources in the Biv society.

This is also why it is nearly impossible to create a well functioning I market in a poor Roy economy.

G public property is more efficient in a Roy area than Gb private property which can be stolen and crime is often more profitable than business.

All of these Roy interactions have a destructive effect on the Biv economy because it works on a double win or a Positive Sum Game, Roy however works on hurting others in a Negative Sum Game and causing destruction in the Biv economy often benefits them. For example animals might not care if they damage Biv plants around them in a jungle while they are fighting as predator versus prey.

Most animals in Biv forests however become somewhat domesticated like birds and squirrels and cause little damage, in return forests reward them with easier food like fruit, nuts, leaves, seeds, pollen, etc.

So in a Biv society there might be some crime around I markets like shopping centers but it is usually more profitable for people to work rather than steal. However if the O police become too weak it may often be more profitable to steal for example with workers stealing from their jobs more than any civil fine would cost them. A Roy thief might be so poor in their ghetto home that it is worth more to them to steal and perhaps pay small fines before an O prison sentence is finally imposed. With this kind of poverty a Biv market can eventually collapse from losing so many resources.

Roy then can be an Oy-R contagion or Y-Ro gang wars which are like large animals damaging a Biv forest, they can even destroy them and create a desert like a depression or turn the economy into Roy like a savannah or grasslands.

For example in Lebanon many wars have at times reduced the Biv economy to a shambles with Roy wars between religions or invasions from neighboring economies. This is like animals destroying plants, for example elephants tearing down Acacia trees in Africa for leaves, bushes being trampled before they can regrow until all that is left of a Biv forest is grass and small shrubs.

With scarcity of resources causing crime in Roy areas the efficiency of the Biv system is continually damaged until often businesses go bankrupt, protect themselves with alarms and weapons like Biv plants evolving thorns and poisonous leaves, or move outside the Roy areas which is like the forest receding and leaving a grasslands at the mercy of the Roy animals.

In effect then a Biv forest economy dominates the Roy animal of people by feeding them to control their behavior, like animals the people learn to support this Biv system for profit rather than damaging it. In a Roy grasslands economy the Biv businesses are subservient to the Roy population which might rob, vandalize, etc Biv businesses keeping them from growing efficiently enough to tame the Roy people with jobs.

However when there are few natural resources in a Roy are it is difficult for the Biv system to offer enough incentives for people to work and make deals that benefit both parties instead of crime, sometimes though this can be overcome by strong enough I-O police.

This is equivalent to saying that if the animal kingdom has a strong enough O middle of the food chain and the plants have strong enough I trunks then they can make the most efficient use of the resources available. All economic problems as well as crime and wars can be explained in Aperiomics by this model of interactions between plants and animals.

In the I market I civil law is usually enough, this is a collection of laws covering disputes between deals in Biv, for example someone buying something at a shopping center. These laws have many different forms, usually fraud and misrepresentation are illegal and can result in fines, damages, and the confiscation of profits from the deal. This is like an overtone of the O legal system where fraud and misrepresentation are deceit and trickery with Oy or R thieves which might result in fines and jail time. Other I laws include regulating dangerous activities, for example skateboarding in a shopping mall because it might cause an accident with excess speed. In the same way laws on the Biv roads, which are like roots and branches in the way they join up, might have prohibition against dangerous activities like speeding, driving while intoxicated, driving without having learned enough to get a license, following other cars too closely, etc.

These laws are more of a guilty until proven innocent form, though people have not actually caused harm to others it happens often enough that they are fined unless they can prove it was necessary like rushing to hospital. In the Roy system people might be jailed for driving while drunk too often as potentially hurting other people, also dangerous driving might be so egregious that they could be jailed as well.

This I-O policing of the I market is important because a failure here caused many of the problems in the GFC. The I-O market allowed in effect dangerous driving in that trading previously walled off like a speed limit with Glass Steagall was allowed. The result was like people driving faster and more carelessly until there were pile ups everywhere. These smaller crises were for a long time accepted as necessary for an efficient I-O market but our roads work much better by regulating dangerous driving at the expense of slowing some activities down. In a shopping mall stopping skateboarders is a kind of speed limit for safety even though there is no evidence any of them will cause an accident. In banks people might be forbidden to wear masks or motorcycle helmets.

In this sense then an I market functions best when laws forbid certain kinds of secrecy because they often lead to crime.

For example goods might have to be labeled truthfully to prevent fraud growing, masks prevent Oy robbers being anonymous and this tends to keep them away though Y gangs might still rob a bank openly. Surveillance records like video can stop Oy thieves shoplifting by recording the proof of their theft and preventing their using secrecy for profit. Random searches of bags of people in shops can also stop Oy shoplifters. In the same way the I financial market needs to use I-O police to prevent a crisis developing like a crisis of thievery might ruin a mall’s business. If an I market is known to have few O police then it might attract Roy criminals from many other areas just like a forest with few defenses against animals might be overeaten more easily than one with thorns and poisonous leaves to protect itself.

Random searches of a bank’s records can show fraud developing early on, off balance sheet vehicles would have been exposed when they were fraudulent or evading the need for sufficient reserves. Keeping records of transactions in derivatives can trace fraud and also activities that become dangerous like driving while intoxicated with irrational exuberance. Preventing masking of transactions and clear labeling can stop Iv subprime loans from deceiving B workers, also banning no doc loans or at least randomly auditing them could prevent thievery from them as well.

So by tracing what happens in typical policing and applying those ideas to the financial system most of the problems arising from crime and systemically dangerous behavior can be avoided. This is much more efficient than for example binding up banks with red tape and holding excess reserves, often these just affect profitability without making the system safer.

The basic idea of how damaging fluctuations can occur in Aperiomics is that these are caused by the two opposing interactions namely Oy-R in Roy and Iv-B in biv as a contest of loners and Y-Ro in Roy and V-Bi in Biv as a contest between teams.

When these lose contact with their corresponding pair, for example when V-Bi acts independently of Iv-B and Oy-R acts independently of Y-Ro this disconnect in effect tears the system apart.

To avoid this then it is necessary to keep I-O policing strong, but this may be impossible to do in the long run. The I-O interactions are unstable as well, O for example is an unstable alliance between Ro teams of people such as neighborhood watch and Oy as petty thieves. This marriage of convenience occurs mainly because the two outside colors of R and Y are less easy to control and are always trying to get at each other. You might think of Y as being like lions trying to often fruitlessly catch R gazelles because this prey is so fast and hides so well. You can also think of R animals as being like a disease attacking the Y lions like an infection in a wound or a virus.

So this Y-R interaction is highly unstable but the system is always trying to do it, for example the US is currently involved with a Y war on R terror using Y large scale military systems against a secretive and deceptive R enemy called Al Qaeda. Before this it was a similar situation in Vietnam where the R Viet Cong were hard to distinguish from the honest R and Ro peasants and so they could hide from the Y troops.

Periodically then the Roy system goes to war with Y against R, and because they are so dissimilar Y expects to win but often does not, for example with an R virus or parasite attacking Y predators and often killing them. The same happens in Biv systems, V or V is like the elite in capitalism and includes artists, sportsmen, and other talented people. They either see B as a threat like a contagion or a potential opportunity to make profits and the system’s I center breaks down as they try to master each other.

For example V tries to impose copyright on B people who often secretly and deceptively evade this with illegal downloads of software, movies, and music. Trying to stop this is highly frustrating to both V and honest consumers, this is like trying to root out the R Viet Cong from the peasants or Al Qaeda from Afghan villages because this sharing on the internet can be hidden in legitimate packets of data or might be encrypted.

In another example V companies and investors saw an opportunity in lending lots of money from the overseas carry trade to B workers in the lead up to the GFC,. However just like they could not tell the honest B people from the pirates with software and music downloads they could not tell if B people really could afford to pay back the loans because of the liar loans. In this case V businesses used Iv agents to try to vet these loans but their Iv they were so corrupt themselves that they often colluded in bad loans just to make commissions or even altered loan documents to make them look more like better deals.

This then is usually how Roy and Biv systems destabilize, in another example Germany in the 1920s started to be infiltrated by R communist insurgents from Ro communist Russia, these led in the absence of a strong O police to the rise of Y gangs of Nazis. This mismatch of Y versus R led to trying to find these secretive and deceptive insurgents and then extended to other accused enemies of Germany such as some minorities.

These Y Nazis eventually rise to power on the basis they could contain this R menace and this escalating war against R led to them attacking R Russia, losing because of the deceptive R strategies of the Russians always retreating and hiding combined with guerilla like attacks.

This then is the same kind of tactic as R insurgents used in Vietnam and later Afghanistan.

So because of this constant desire for Y-R to fight and V-B to try to outwit each other in business the middle colors tend to wane in influence, the I-O policing becomes weak and the system usually suffers.

Another issue in recent economic history is the idea that I-O regulation is bad for the economy such as with Milton Friedman’s teachings in the US. Usually what this means is that I-O policing is interfering with this constant pressure for Y-R and V-B to get at each other more easily, each tends to think that profits are being lost because of this restrictive I-O regulators.

This pressure acts to destabilize the Roy and Biv systems in a long term way that wears down the I-O police. For example V businesses see no need for regulations because they usually have private policing, they think they can pay to look after themselves and this I-O seems to only cost them money. Their economic model is an overtone of Y gangs and the armies of the Roman Empire, they believed their strength could crush enough of their enemies to pillage them to pay for the cost of the conflicts. This is how most Y Empires operate, V then tries to accumulate enough capital to invest in making profits from B workers to pay for the cost of operating a business. Just as R insurgents try to resist this team strategy by Y soldiers the B workers try to use secrecy and deception to get better deals from the V businesses, for example they used liar loans to profit from the V subprime lenders. Even though R and B people are usually weaker they do not always lose, their ability to act like a contagion and to hide evens up the contest.

The V businesses then agitate for I-O policing to be weakened and often to replace it with their brand of self-policing which is like Oy agents policing themselves. This can become like the situation mentioned in the previous chapter where when the O police become biased towards Oy petty thieves, they become more corrupt and ineffectual and so attacks by Oy thieves, soldiers, etc increase on Ro communities.

These Ro neighborhoods usually react with anger and this distrust of the O police can eventually bring the O police back to a neutral position but after much damage has occurred. For example in the US many black and Hispanic neighborhoods are policed by their Ro gangs, they see police as corrupt and representing the interests of the wealthy over themselves and because of this don’t cooperate with them. This situation can persist if the O police get more of their funding from the Oy and Y parts of society, the police then are more secretive such as with the secret police in some economies.

This bias in the O police also allows for more Y-R interactions, like for example the Y mafia might try to make money loan sharking and selling drugs to weak R people who tend to deceptively avoid payment of the loans and the drugs. Y then tries to get them to pay but because of the Y mafia’s highly visible team way of doing business it causes the R victims to scatter and the Ro community to fight back against them. Y then can often end up losing money because they cannot tell the difference between those that will pay them or not, for example the Y mafia in the US lost control of most of the drug trafficking in black and Hispanic neighborhoods and this is now run by Ro local gangs.

So the Y gangs might then enlist the Oy petty thieves to sell drugs and make loans for them but because Oy is so deceptive they are unreliable and just like with the subprime loans are liable to make deals that enrich themselves and let Y be ripped off. Eventually then Y weakens as it loses money from its battle against R and the strength of the O police returns only to be weakened again later as Y tries again.

They can also be weakened the other way as R tries to get at Y, for example in a right wing dictatorship the R terrorists in the country might be for example Jihadists or Communists. They try to wear out the Y dictators in trying to find the R insurgents and stamp them out like a contagion. Often this fails and these Y dictators usually team up with other economies, in the past for example with the Y teams of the US Republicans such as under Ronald Reagan.

So R communists and more recently jihadists like Al Qaeda tried to take over many countries or create secretive terrorists attacks like a contagion, these are very hard to fight back against except with ruinous expense by Y armies. The alternative for Y teams is in trusting equally secretive and deceptive Oy death squads and warlords as in Afghanistan.

## Eventually this Y-R war and V-B colonialist exploitation of the people that often accompanies it weakens the local I-O policing trying to keep order and maintain an honest local market.

As a byproduct of this weakened state Iv-B and V-Bi parts of the economy become disconnected from each other and while some good business continues between them often the more corrupt kinds of business drives out the honest ones like a form of Gresham’s law. The occupying Y army then might find the economy disintegrating or corruption growing, the weakened I-O police either allow it to continue unchecked or they get attacked when they try to maintain order.

This was seen for example in Iraq where the US tried to prop up the local police but the R insurgents would often assassinate them or bomb their police stations, local Y gangs would often do the same. This then causes the pricing of the Iv-B and V-Bi deals to become disconnected and can cause an Iv-B bubble or contagion along with areas of V-Bi stagnation.

This was also seen in Iraq where the Iv-B black market led to huge price increases on some scarce supplies along with other areas having V-Bi rationing of food stocks and high unemployment. Wheat for example might have two prices, an Iv-B one that fluctuated rapidly on the black market according to supply and demand, perhaps sometimes stealing wheat from the open V-Bi wheat markets and rationing.

This also makes tax collection by the I-O police more difficult and the state tends to accumulate debts as deficits, for example Iv-B secretive and deceptive trades avoid tax while the V-Bi businesses become so stagnant they make few profits to pay tax. This was like the lead up to the GFC where the Iv-B boom in subprime lending created windfall profits for municipal and state governments in the US but this crashed as the bubble burst, other V-Bi businesses became stagnant such as manufacturing businesses losing money and laying off Bi unionists. This led to governments trying to tax this mercurial and deceptive Iv-B economy as the V-Bi areas were making losses, Iv-B responded to this by using more tax havens and often balance sheet fraud.

Iv-B is where Iv agents use V money reserves, which is a storage area of nutrients in a tree, to make loans to B customers. In effect then the V and Bi areas of the economy which save money and resources can be stagnant, they usually lend resources to the Iv and B areas which concentrate on growth and competition but have few reserves themselves.

This is because they are so competitive they tend to cut wages and prices against each other to succeed so few end up with large profits unless they are clearly superior to the others. In a balanced Biv economy these loans to Iv agents might be stock on credit to sell, for example salesmen might get stock they are given to sell on account but they must pay for it or return it.

B workers also get loans to work, for example miners might get backed to look for minerals and farmers might borrow to buy a farm, seed, tractors, etc. Because both Iv and B are competing against each other then the typical story of a salesmen is poverty, for example in the movie Glengarry Glen Ross. Generally the same also occurs with B, for example globally farmers are usually poor compared to people working in cities and often go bankrupt in a drought. B prospectors might rarely make much money, small mining companies for example are notoriously risky investments.

There is a balance then between V and Bi groups who can build reserves of cash by cooperating with each other but are unsuited to growth and speculation, and Iv and B who can chaotically grow and collapse have trouble saving because they don’t tend to form cartels or unions.

An economy gets out of balance when Iv-B transaction become separated from V-Bi parts of the economy, Iv and B try to compete with each other and create booms and ultimately busts because their competitiveness allows for no savings. This is why after so much growth in the 1990s and 2000s in the US after the GFC it seemed like the country had little to show for it. The V-Bi areas become disconnected from this growth and stagnate, because they have no other prospects they loan their savings to Iv-B businesses that boom, draw in more savings, and ultimately collapse wasting most of it.

When I-O policing is weak these Iv-B deals become highly deceptive much like bluffing in poker, this helps to draw more money from V-Bi reserves leading to a fraudulent misallocation of resources. This led to a bubble in real estatefrom all the money being loaned from V-Bi savers including Bi workers in japan loaning to the carry trade.

Without I-O police doing random audits of markets, like cops walking a beat or patrolling randomly in cars, this secretive deception can flourish to the point that the economy will be near collapse before it becomes noticeable. This is because the intense Iv-B competition forces people to use as much of the available resources as possible leaving no savings, for example using high leverage, when an area looks unstable then they tend to move to another area rather than creating a collapse there. The result is a relatively uniform hollowing out of the economy like a house of cards, it is also like finer B roots and Iv branches or fractal shapes such as a Sierpinski Gasket.

Eventually when there is nowhere else to hollow out the instability of the economy becomes more obvious which can lead to a panic, otherwise an external shock in the economy can make some areas partially collapse panicking investors. For example the subprime lenders used up the B workers who could repay loans and signed up more and more people who could barely make a few or even one payment. They would however leave these until last and hollow out all of the better quality borrowers first even if they were not very good. When they reached this limit of the borrowers the Iv lenders became nervous as to the prospects for their businesses, also external shocks such as the winding down of the Japanese carry trade and collapses in manufacturing jobs caused some panic in these businesses as defaults mounted.

When this deceptive situation became more visible this was like finding the roots and branches of a tree were hollowed out by termites and so the whole structure might be unstable. Some branches on trees for example might be so eaten out by termites that they nearly turn to dust when they fall.

Many of the prices of investments in this boom had been chaotically bid up in Iv-B with mutual deception like bluffs in poker, many loans had also been made to B workers in effect bluffing about their ability to repay by Iv salesmen bluffing about the quality of the loans they signed up. Eventually however this Iv-B structure needs to repay its debts to V-Bi parts of the economy, when the boom slows they usually want their money back because the lower returns might no longer outweigh the risk involved.

For example there might be a game of poker where secrecy and deception or bluffing is used in a competition for profit, the players might get staked by V-Bi investors who see the sizes of the pots and the bids as evidence there are a lot of profits to be made. When some players have trouble repaying loans or keep asking for more money the V-Bi investors might become panicked and demand their money back collapsing the game completely.

At this stage then the Iv-B players have to reconnect to the V-Bi investors by establishing real prices for their abilities, this is like after an Iv-B boom levels off or starts to collapse the boom assets have to be priced in a more normal I-O market. When this happens it becomes apparent that many of the prices were just Iv-B speculators bidding against each other with little connection to the real values, this is like in poker where the players might be bidding very highly though all have poor hands.

This price reconnection involves selling the boom assets in the I-O market, usually this is Iv agents having to sell these assets at fire sale prices to Bi people who still have enough reserves to buy some bargains and restore liquidity in the economy.

At the same time there was a more open and transparent V-Bi loan business such as loaning to more conservative companies, banks, and local governments. These were usually so transparent with their accounts that there was little chance for deception but because of this disconnect with the secretive Iv-B business that had hollowed out the economy many had acquired bonds that were opaque and mispriced.

The appearance of transparency in these V-Bi businesses however fooled many investors into not looking at these few opaque areas, they were like the equivalent of loans made to the poker players based on the sizes of the pots and bets they were making. For example many of these companies and banks were holding the highest quality subprime bonds but many of these were riddled with deceptive loans taken out by B workers trying to speculate their way out of financial problems like a poker player.

Seeing these large amounts borrowed made it appear like these workers were wealthy, this is like seeing the large bets of a poker player and assuming he is successful. In the same way Iv salesmen might be lending large amounts of money by fraudulently altering loan documents and hiding upfront fees, this gives a false impression that there are plenty of people wanting this finance and so the market is expanding. A poker player might falsify his accounts of his losses to keep getting V-Bi loans from his backers. The same situation occurred with subprime lenders falsifying their books to attract more capital especially when the market began to collapse.

So when the I-O market tried to reconnect the prices of housing in the real estate bubble the result was a crash because only Iv-B speculators were interested or could afford those prices. There was now more uncertainty in the market because of the secrecy and deception that potentially hid disastrous losses, this opacity then made it hard to demand enough transparency to pay good prices for assets.

The result was like an auction where second hand goods being sold could not be checked to see if they worked or not. Bidders then would factor this uncertainty into what they would pay leading to lower prices, in a well-functioning I-O market the regulators would demand that these goods be checked and guaranteed as this would result in higher prices overall.

In the same way a fire sale of securities that could not be checked as to how reliable their underlying mortgages were, because of falsified loan documents by the Iv salesmen and liar loan documents from the B borrowers, could not be priced according to their proper value.

When both the Iv lenders and B borrowers were competitively lying and deceiving each other the result had to be a highly deceptive bond backed by these loans.

These subprime bonds plummeted in price, nobody wanted them at nearly any price whereas months before they were considered to be as good as cash. Good quality loans to blue chip companies were hard to make because of the contagion from Iv-B affecting all parts of the economy.

Roy systems can develop a disconnect in O with low policing and R and Y trying to attack each other, this was seen for example in 2011 in the US where some cities had to lay off most of their police force resulting in a crime wave. To defend themselves R people had to hide their valuables and flee from Y gangs, sometimes they would also develop a Ro resistance with a neighborhood watch and arming themselves. This then recreates the Y-Ro wars often seen between economies, for example the Y invasion of Ro Iraq by the US.

This lack of policing can also develop into an Oy versus R cold war of mutual secrecy and deception, this was like the Oy CIA versus the R KGB. For example with most of the police laid off there would have been an upsurge in more deceptive theft such as breaking into homes looking for valuables hidden by the R residents. With the weak O policing then there are in effect two wars raging in these cities, a Y-Ro fight between gangs and a neighborhood watch which can also include like gangs like with some black and Hispanic neighborhoods, and an Oy-R war of secrecy where the thieves and the victims try to be secretive and deceptive.

Proxy wars are where Oy works as an agent for a Y Empire, for example the US had the CIA training secret police in many South American countries while the Soviet Union used secretive R terrorists to undermine the Y dictators propped up by the West such as Somoza.

The R communists would try to build enough Ro resistance among the population to topple these dictators in a war of attrition by making the Y armies come after the R terrorists directly.

Because the Y armies are like lions trying to catch R gazelle they are very easy to spot, they often caused so much resentment among the people that they built this stronger Ro resistance in retaliation. This happened in Iraq for example where the R Al Qaeda insurgents used IED road bombs to anger the Y US troops into reprisals on some neighborhoods such as using checkpoints and searches of Iraqi homes. This created enormous resentment against the US and lead to the rise of the Mahdi Army and confrontations such as in Fallujah. Also the US ramped up its Oy special forces to attack these R terrorists deceptively as well, at some stages in Iraq there was an Oy-R and Y-Ro war happening at the same time.

The US and other Western nations became involved in other Oy proxy wars against the R Soviet Union in this Oy-R cold war. Usually the West would prop up a Y or Oy dictator such as Marcos in the Philippines against the R insurgents armed by the Soviet Union. South Vietnam was a client state of the Y French Empire and as they started to lose control from the R insurgency stirred up by North Vietnam the Y United States and other countries tried to maintain control.

In effect the Vietnamese governments were like Oy agents for the West receiving commissions as foreign aid for trying to overcome this R communist influence, in the process many of them became very rich as usually happened with other Oy agents in these proxy wars. Other Oy commissions were in effect made by mercenaries related to the CIA with drug cultivation in many countries aided sometimes by the CIA according to some stories. This is the same problem as in a Biv economy where the V elite have Iv agents that are sometimes untrustworthy and enriching themselves at the expense of V.

A similar situation caused much of the GFC for example, in these proxy wars banks such as BCCI funneled these commissions as bribes and drug profits to Oy attackers of R communist insurgents as well as to Y warlords who would take much of these profits. This was like as mentioned earlier with Oy thieves acting as agents for the Y mafia, when the Oy thieves would steal or make a scam then they would have to pay some of the profits to the Y mafia for protections and to keep the rest. It is also like a Y protection racket where Iv shopkeepers might have to pay money to a local mafia to stay in business while they make profits from B consumers instead of ripping off R people. I these proxy wars then the US often wasted enormous amounts of money in paying off Oy warlords, dictators, mercenaries, etc for very few results and in this Oy secretive and deceptive world the Y Empires would often get tricked themselves. One of the first books to be written about these Oy-R intrigues was Kim by Rudyard Kipling.

Y Empires then often have great expenses and inefficiencies to contend with in maintaining their Empire, this is like in the Roy animal kingdom where Y lions might have to fight Oy predators sometimes and at other times they might share parts of a kill. Another example of this was the Korean War with Y as the US and Ro as the Koreans backed by China.

Often these Y-Ro and Oy-R disconnects persist until the Roy system nears exhaustion and then regenerates with a resurgent I-O, for example after World War One there was a strong desire for an I-O international policing power to prevent future conflicts. This was promoted by Woodrow Wilson at the peace conference in Paris in 1919 to settle the terms of the German Armistice that ended the war. The same desire for an international I-O police grew after World War Two leading to the formation of the United Nations.

These are just some of the connections in Aperiomics that shape events, they are hard to see because so many groups profit from secrecy and deception. The usual result from weak I-O policing is an Iv-B crisis which occurs when the V-Bi open and transparent economy suddenly runs into trouble as the Iv-B deceptive economy underground causes too much chaos and a collapse.

The other alternative is where this chaotic Oy-R struggle takes over completely, instead of a relatively transparent world history marked by secretive and deceptive Oy-R intrigues history becomes itself mostly deceptive. For example this probably happened in much of the Middle Ages as after the V-Bi and Y-Ro Roman Empire fell religion became very strong by using deceptive teachings to terrify the European population.

This was in effect a reign of terror much like occurred later in Communist countries, some were Oy and predatory while others were R . The history of how R Christianity grew in the Roman Empire was as a Y-R struggle, the Christians were like a contagion to the Y Romans who had other gods and so they would try to find them and often execute them. As often occurs in a Y-R or V-B struggle the R Christians won and took over the Empire, much of this is already covered in my first book.

World War One was a Y-Ro war of attrition between rival Empires, this lead to Russia being taken over by the R communists and a reign of terror where history was often falsified or is completely missing. Eventually though the R secretive history of the Soviet Union became public when it collapsed, many of these secret records are now a part of open and transparent Y-Ro history though much is still missing or distorted.

This secretive and deceptive history can also occur on the right, the secretive war the Y Nazis carried out against the R Jews was with using Oy troops like the SS. This deception on the world was eventually exposed as the I-O waxed in strength with the Nuremburg trials and the formation of the United Nations. South America as well as many other countries facing R communist insurgencies also have large gaps in their histories where Oy death squads and dictators fought against these R insurgents and often innocent victims.

## Because each was trying to win the war with secrecy and deception there was no incentive to record these conflicts truthfully, this is why what happened to so many of the missing executed in these conflicts will never be known.

In the same way the GFC as well as the Great Depression represent incomplete and often missing histories which remain a puzzle. In both cases there was rampant fraud and by the nature of this deception as much as possible was not recorded are actively falsified.

For example with so many R liar loans taken out by B workers and other loan documents altered by Iv agents to get them approved it is almost impossible to know the actual state of the economy while these loans were approved. Only by interviewing these Iv agents and B workers could some accuracy be gotten but both could still be O criminally or I civilly liable and so would probably either lie or refuse to discuss it. Most Iv subprime lenders when faced with I-O police enquiries would also tend to lie or use their Iv lawyers to avoid answering. Iv lobbyists who promoted so much deregulation would have little incentive to be honest about what happened, for example there may have been bribes paid.

Advisors to the president under Bill Clinton, George W. Bush, and Barrack Obama typically claim a right to privacy and often provide either a false history in memoirs or refuse to discuss some issues at all. Because of this Oy-R and Iv-B secrecy and deception the truth of this chaotic collapse leading to the GFC will never be known just like with much of the Middle Ages and the history of the Soviet Union. This allows more chaos to flare up again in the future because in the absence of truthful records V-Bi historians and economists tend to interpret chaos in terms of their own color codes leading to a kind of whitewashing of history.

This should give a basic understanding of the color interactions and help to understand some of the events leading up to the GFC. As can be seen it is difficult to isolate economics from so many other aspects of these color imbalances in politics, war, crime, etc.

More color interactions will be explained throughout this book as needed, I try to associate them with actual events so they will be much easier to remember and understand. It is one thing to learn music theory but quite another to appreciate all the variations of music, this can only be done by listening to a lot of it. In the same way it is hard to understand Aperiomics without applying it to actual events and seeing how the colors move like a grand tapestry.

Like music this symphony can be often tragic as well as comic, often events seem to have a kind of structure that leads them to terrible conclusion and it is natural to wonder if this can somehow be prevented. Police are by nature unstable in society, it took a long time for O criminal and I civil laws to evolve and only recently have we had any kinds of international policing such as with the United Nations.

Often they do not form in a society because there is a severe color imbalance, for example a country with 10% of the population with one race and 90% of the other will find it much harder to have an I-O police between them that is neutral. This is because the 90% will pay more of the wages of the police and contribute more of the people in them. If this 10% is weak they might be R and so the police will tend to be ordered to treat them like a contagion. They might then become more Oy and sometimes like death squads as in World War Two against some minorities. If the 10% are seen as wealthy, stronger, and better educated then like with whites in South Africa they might try to maintain power with an Oy police force as well.

With South Africa this strategy eventually failed and the roles were reversed, the I-O police then became more representative of the Ro people and under this perceived persecution or lack of protection many of the whites from South Africa emigrated.

In effect then a Y-Ro or V-Bi imbalance can occur when there are rival teams of people with different numbers, for example blacks in the US claim discrimination against them by the I-O police because there are many more whites than them. The same however can occur with religion, for example many wars were fought in Europe throughout its history where Protestants or Catholics outnumbered their rivals and persecuted them. Islam has often been intolerant of other religions in its countries, as Yugoslavia broke up a pent up discrimination against a minority Bosnian Muslim population led to war even though the two sides were almost identical genetically.

When these imbalances exist then the color codes are much harder or impossible to police in a neutral way, then the systems break down into Oy-R and Y-Ro conflicts in Roy areas and Iv-B and V-Bi business conflicts in Biv areas.

It’s likely that the only reason I-O policing has continued to evolve is because in some areas such as with King John and the Magna Carta there was enough of a color balance for a neutral law to form. There is also a tendency for people and institutions to evolve to allow for more I-O laws, this is like in the Roy animal kingdom where a middle of the food chain waxes and wanes, also in the Biv plant kingdom where the I trunks of various plants tend to grow or decline in size.

We are then evolving to become better I-O policed and so societies will tend to become much more stable over time according to Aperiomics. Against this however has been the different races in the world, different religions, different abilities and intelligence, different landmasses which favored one race over another in its development, etc all of which represent color imbalances. So for example slavery brought blacks into the Americas and over time the I-O police have become more neutral because of racial intermarriage and people finding ways to get along better rather than using their numbers to persecute others. Islam and Christianity had many wars between them but are slowly developing a way to settle their differences in a legal framework.

Many people in the world are at a severe disadvantage because of their climate or natural resources, this led to exploitation from Y Empires but over time these weaker countries are being treated more justly with this international I-O policing.

History then has largely been a process of steady growth in I-O as different parts of the Earth have come together, this is like where animals from one country have been introduced to another leading to mass extinctions until a new balance is restored between predator and prey.

In the same way Biv plants have been moved into new ecosystems causing damage to the original plants, eventually however there will be I-O protections of some ecosystems from foreign plant or animal invaders just like with international I-O policing. Globalization then is like the final chapter in this mixing of the difference humans, animals, and plants in a global economy where it may be possible to create either a stable Biv wealthy society for all with technology or a Roy society if there are not enough resources to go around.

More likely some of these color imbalances will be permanent, some wealthier nations will remain Biv and poorer ones Roy, there will also be color imbalances inside them leading to biased I-O policing. Aperiomics is not about an equilibrium forming either globally or in any economy, the concept is a Y-Ro or V-Bi one where a team like or transparent society tends to form a normal viewpoint and opposition to this is seen as deviant.

In this context race and religion might eventually cease to be issues as everyone becomes in effect part of one of the two opposing teams of Y-V and R-B. However in Oy-R and Iv-B people exploit differences between people for profit just like they do in nature, for example of one race, religion, cult, secret society, graduates from a particular school, etc can form secretive bonds between them for profit they will continue to do so because this will give more of an advantage than a V-Bi and Y-Ro transparent society.

However I-O policing is not about favoring one color code over another or any particular agenda in race or religion, it is in finding a middle way or compromise between opposing factions.

When there are color imbalances then this middle way disappears as one side is strong enough to get its way and doesn’t need to compromise. However over time this I-O policing will continue to wax and wane as some color imbalances are resolved and new ones surface, for example it may be that some races are evolving faster in intelligence and talents or have a higher birthrate than others leading to more imbalances to be dealt with later. This is still occurring with plants and animals where some species are rapidly evolving or exploding in numbers while others are being forced into extinction in nature or from human interventions.

In fact the UN is associated with many international conservation agencies both public and private to police these issues such as with overfishing, customs in countries to prevent the wrong plants and animals from being imported, regulations on genetically engineered crops, setting aside more nature reserves, and so on.

People who try to warn others about an impending crisis usually go unheeded, this is similar to the Greek legend of Cassandra.

When there is an Iv-B crisis in the economy or an Oy-R crisis in a Roy system such as an impending war or crime wave there are usually people who try to warn others about it. However they are rarely listened to, the reasons for this are usually because of the imbalances in the colors. For example in Roy areas of a society the O police often rely on snitches or whistleblowers with Oy petty thieves to catch Y more violent crooks such as the mafia and gangs.

This is a delicate relationship because these Oy snitches need to fear retribution from Y gangs or mafias and so have to have their identity kept secret by the O police, they might also need some witness protection if their identity is exposed or is sufficiently narrowed down so a group might be attacked in a response to the whistleblowing. For example if the Y mafia believes they have a snitch they might remove many people from their team or even hurt or kill them.

Sometimes an Oy snitch might bring down enough of the Y gang with their information so they have nothing to fear. As long as the I-O police are strong and not biased then Oy and Iv snitches tend to stop a contagion spreading too far before someone alerts the police.

However an Iv-B economy implies weak I-O police and a bias towards Iv agents being allowed to self-police, this then removes the incentives for snitches to operate and so this chaos can grow far larger before being detected.

In Biv this process of relying on Oy snitches usually works as Iv often try to warn the I-O regulators of wrongdoing, a good example of this was Harry Markopoulos trying to get the SEC interested in auditing Madoff because he suspected Madoff was running a Ponzi scheme.

The SEC however was arguably at the time a victim of regulatory capture by Iv workers on Wall Street, one argument was that investigators were reluctant to create enemies there because they eventually wanted to work for these same companies they were investigating.

The SEC usually relied on tips but Oy and Iv agents on Wall Street can be very deceptive and often had an agenda for this snitching, for example some were short sellers wanting to bring down a company, others were simply deluded. The O police have the same problem with Oy thieves looking to plea bargain after being caught, they might try to falsely implicate other criminals to reduce their own sentences.

This makes working with snitches a highly uncertain process. A bias or weakening in the I-O police then can drastically affect the growth of Iv and Oy chaos in an economy because these kinds of deceptions can often be growing quickly, for example Bill Clinton deregulated some of the financial sector in the 1990s which caused some of the GFC about ten years later.

If this chaos is caught early then it might cause far less damage, for example if the SEC had investigated the many snitches and rumors about Bernie Madoff properly then the Ponzi scheme would have caused far less damage. Madoff claims he only started the Ponzi scheme around 1991 after losses from the 1987 stock market crash left him with losses. Around the same time Edward Thorp the hedge fund speculator noticed that Madoff had to be running a Ponzi scheme.

In the same way economists like Nouriel Roubini and others who tried to warn about an impending economic collapse were often ignored because there was no I-O regulators strong or neutral enough to listen to whistleblowers. Many believed that the economy could self-regulate even with weakened or nonexistent I-O policing, however Aperiomics predicts that this would lead to an Iv-B bubble and collapse in some areas along with V-Bi stagnation in others.

As the I-O regulators weaken they can also become either biased to Iv or Bi depending on the political strengths of the relative groups, this is because they lack the strength to resist the pressures from Iv and Bi groups in the community.

If Iv becomes stronger then the system becomes vulnerable to a chaotic secretive corruption creating a boom as people previously protected become victims, much like a reduction in policing allows more Oy thieves to prosper. This can appear like a boost for the economy, for example stolen goods being sold seem to increase the GDP such as with extra second hand goods in pawn shops. In the same way stealing equity from home owners with subprime loans caused a rise in GDP with Iv salesmen and lenders spending more money. Starting perhaps with Ronald Reagan there was with deregulation more predation on V-Bi savings in the economy appearing to be a new prosperity.

For a time this can be good for an economy if it is sluggish with too many savings and assets and without enough velocity in deals being done. However eventually Iv-B can use up all these reserves and then this collapses the transparent and apparently V-Bi healthy economy.

This process can often be caused by trying to make Oy agents police themselves as part of a bias of the I-O police towards them.

When a group is highly secretive, competitive, and deceptive then self-policing will just exacerbate these qualities because those most responsible will lose these competitions like in Gresham’s Law.

This then causes Iv and Oy people to lie more about their self-policing and give a false impression that it is working until the V-Bi reserves are used up, then it can collapse.

If the police bias is to the Bi community then Iv agents are more strongly policed and under control making a crisis much more likely to be spotted early, however this strength of the Bi community can cause some stagnation in the economy. A good example of this was the strength of Fannie Mae and Freddie Mac in the US economy in dominating their I-O regulators. Early frauds by subprime lenders were seen by Fannie and Freddie and complained about to the regulators but later as the V Wall Street bankers gained influence the I-O police, such as the SEC and banking regulators, then this allowed more chaos in Iv lenders to become systemic.

As this Bi bias strengthens then a lot of Iv secrecy and deception can be uncovered, this however can make the police and regulators so intrusive that some prefer not to do business at all rather than risk their trade secrets. This can then lead to a stagnant market, for example Oy subprime lenders might find the I-O laws favor the borrower so much that they give up lending and then some B borrowers would miss out on loans they needed. The problem then is that too much Oy predatory lending causing chaotic collapses in the economy while too little causes economic opportunities to be wasted. The way to resolve this is with I-O policing being strong but neutral.

For example Fannie had a very transparent approach to loans and this tended to keep out most subprime lenders who could not do their secretive business like this with B people who were also often deceptive. This was a major issue with subprime lenders in the 1990s such as with Ameriquest where the I-O regulators generally pursued and punished the way they often deceived their B clients.

This subprime business was highly competitive at the time and so those companies that did not push the envelope with these regulations lost market share to those they did even at the risk of angering the I-O regulators.

This is like in the Roy animal kingdom where Oy predators might have to compete with each other to catch R young buffalo from a Ro herd, those that did not try went hungry and had fewer offspring than those who did. Some of these attacks would anger the Ro buffalo and cause some of the Oy predators to be hurt.

The Iv-B contagion started to spread in the subprime financial sector as Bi Fannie’s influence waned. Not all of this Iv subprime lending was bad, Countrywide for example did a lot of good loans earlier on and tried to stay out of this more deceptive lending, however this would have led to their losing too much market share to those with fewer scruples. As will be seen many times throughout the book weaker I-O policing leads to a kind of Gresham’s Law situation where bad companies drive out the good.

Because Iv-B business is so competitive then without enough I-O policing the cheats will have a competitive advantage, this is seen in the Olympics for example where without drug testing steroids can become widely used. It then can lead to a situations where not using steroids gives an athlete no chance of success. In the same way when weak I-O policing allowed fraudulent loan applications by B workers and Iv salesmen altering these to be even more fraudulent then those companies who did not go along with this just lost market share. They could then be either bought out by the less honest businesses or be overshadowed by them.

Iv agents however need some forms of privacy to run their businesses if only to stop competitors stealing their ideas. In the Olympics this cheating is minimized as with most O policing by random inspections, this works because Oy-R and Iv-B are chaotic and deterministic but randomness cannot be avoided indefinitely. For a balanced economy then most problems can be minimized by adding randomness where there is too much chaos and vice versa.

Most people with computers use a similar solution every day, computer crime can be Oy-R secretive and deceptive and computer viruses also spread chaotically. This is however checked by using random passwords that cannot be overcome except by a long process of trying different passwords by trial and error. This slowing down of the chaos then allows the internet to remain relatively free of chaos.

In the lead up to the GFC there was a weakening of I-O and this led to both a bias towards Bi in some areas and in Iv in others, in effect the police and regulators became so weak that they could be biased on both direction losing their consistency. The SEC might prosecute one case and let a similar case go because of political influence or lack of funding.

The Iv bias meant that the SEC for example was too beholden to Iv agents on Wall Street and allowed too much self-policing there. This does not work well, Iv is an overtone of Oy and is like an ecosystem letting foxes police themselves in hunting prey. Often they can clean out the prey, this is often referred to as letting the Oy foxes guard the R henhouse. Oy predators do not tend to regulate their numbers like Y and Ro animals with a more stable birthrate, instead they might have more offspring in good times and then starve when the food becomes scarce.

In the same way Iv and Oy agents in the financial industry are not suited to self-policing because they tend to compete and use up all resources then often going bankrupt. They cannot avoid this because if they are more restrained then others will take their market share with riskier behavior. This works in good times but makes a crash more likely too, this is again like Gresham’s law where the responsible agents are driven out or overshadowed by the irresponsible ones. Only by random audits can this chaos be detected before it becomes systemic.

In a Roy society this is like letting Oy thieves work with little oversight from the O police on the basis that they will self-moderate their crimes, it might be thought that the risk of going to prison would deter these criminals from taking too many risks. What happens though is the more timid Oy thieves miss out on the best goods to steal because the ones who take more risk get more profits, eventually this leads to a police crackdown where more of them get caught as well though the ones with more profits can then use the money to defend themselves better.

This self policing then does not happen in Oy, they also no longer fear being made into snitches by O police and then work more fully for the Y criminals.

In the same way Iv agent self-policing like with traders on Wall Street just allowed them to use their secrecy and deception to get away with more for their V bosses.

It is necessary then for I-O regulators to have snitches to see what laws are being broken, both criminal in Roy and civil in Biv. Making these agents uncertain as to whether others are reporting on their frauds is a powerful deterrent, with self-policing this fear is removed and so they safely use more deception.

I-O police and regulators need to in effect act like health inspectors, to proactively look for Iv-B contagion before it grows too much and causes a financial epidemic as it did in the GFC. Just waiting for snitches alone and for the chaos to become noticeable will guarantee they are always fighting fires rather than preventing them, this is like waiting for people to report fires or seeing flames instead of inspecting buildings for safety or mandating fire extinguishers.

So it is vital for I-O in the financial sector to employ snitches and whistleblowers, to reward and protect them. Those who warn of an impending chaotic crisis are like these whistleblowers, even if they are commentators like Peter Schiff and economics professors like Nouriel Roubini.

Some whistleblowers can have less insider knowledge but act like Greg Palast with as investigative reporters talking to other whistleblowers, if the I-O police are not strong and neutral then these alerts go either unnoticed, are suppressed or corruptly paid off, whistleblowers can be threatened or fail to make a profit on alerting others to this contagion. Because Iv and Oy tend to work on commissions they usually have little money and so removing incentives for profit in telling the truth as well as not protecting them against reprisals from Y-V can lead to this contagion growing for longer unnoticed.

A good sign then of Iv-B out of control is whistleblowers who are being ignored by I-O regulators and police and instead have to give lectures and speeches, write books, put up videos, write blogs, etc.

Often they form secretive groups with other Iv and Oy kinds of people and sometimes R and B as well, for example there can be connections to organizations like Wikileaks.

Other might be anonymous posters of comments in blogs. They usually have two objectives, either to alert the I-O police or push them into action or to bypass them and get the Bi-Ro communities angry enough to make the police do something or act as vigilantes themselves.

Usually this Iv-B deception will become public knowledge and then it must be resolved with the prevailing public beliefs in V-Bi and if necessary for the I-O police to take action. For example in the buildup to the GFC liar loans were commonly used, these deceptions were made by B workers getting loans far larger than they could repay and often being even unable to make one repayment.

When this situation was exposed then it needed to be resolved with the public Bi-Ro perception that most people were honest . Many Iv agents were also deceptive in writing loans with high upfront costs and extra interest, when this was exposed then it had to be resolved with the V public perception of agents as being honest capitalists in the efficient market. It seemed to V-Bi economists that the market could resolve these deceptions by just refusing to do business with dishonest people, bad agents would become unemployable and dishonest people as B applying for loans would get found out eventually.

The truth however was very different, the Iv-B mutual frauds on each other were quite capable of growing undetected until they caused an economic collapse simply because it was not in their interest to tell anyone about it. V used dishonest agents as Iv because they made money from them and because they could plausibly deny they knew what was going on.

Iv agents obviously do not want to expose themselves because they are making profits and those with scruples will lose market share with Gresham’s Law to those less honest.

Bi people benefitted from this because the B deceptive loans enriched their community with construction jobs and people borrowing on their homes to spend on consumer goods. For example if these B workers were making money from being dishonest and spending their profits in the Bi community then Bi was not going to stop this happening. This is like in a Roy area where R drug addicts might steal from other suburbs to buy drugs from Ro gangs, because Ro is benefitting from this they have little incentive to turn these R addicts over to the O police.

B is being deceptive for profit and of course had no reason to tell people they were getting fraudulent loans by lying on the application. If they had more scruples then other less honest B workers would take their place like Gresham’s Law again, because secrecy and deception were profitable for B here then all the money available would end up being taken by someone.

This is like expecting Iv agents to self-police, these B borrowers would also take more risks for profits because with intense competition there was no way for them all to be more responsible as a Bi team. This is the difference then between chaotic secretive colors like Iv-B and random transparent colors like V-Bi, one cannot expect a chaotic group to act like a random one or vice versa because if they did then they would just move to that group. For example those B workers who moved to a more team like Bi community left an opportunity for others to make more profits by becoming B speculators, there might then be defections from the Bi community to take more chaotic risks.

The only ones then who could expose this impending Iv-B collapse were people in the I-O regulatory apparatus, this was their job but because they were weakened no one else was going to do it for them. The same occurs when the O police are weak in a Roy society, it is the reason why police evolved to exist in the first place. Generally in more primitive societies the policing occurs as an equilibrium between the Oy more moderate criminals and the Ro vigilantes who go after them if they steal too much.

Deregulation then is like going back to this older system that the Bi-Ro public will become outraged when Iv-Oy agents go too far, this then tends to moderate both of them.

The problem is this system can work to some degree but also get out of control, for example if the Bi-Ro communities are not strong enough to handle the Iv-Oy thieves or vice versa. Then one or the other might become much weaker in numbers, just as in the GFC where the Iv-Oy agents went too far leading to their losing money later.

So the O neutral police evolved where some of these Oy thieves and Ro community people came to an understanding which gradually became a law, then it was a logical step for both to contribute to paying O police and judges to monitor this understanding for both sides. If I-O police and regulators were not worth it they would not have evolved, economies without them would have had a competitive advantage by saving the money instead.

However because all of the other colors can profit, or think they do, from a weak I-O police in the short term this places them under pressure and can weaken them. The same however happens with all the color codes, pressure from other colors tends to make them weaken and then they regrow and push back. For example Bi communities form unions and cooperatives but this can erode as B workers compete with lower wages, however the Bi communities tend to rebound under this pressure.

The I-O market then is only efficient when this invisible hand of capitalism, which is Iv and B doing business secretively and invisibly to others, is policed when they commit crimes both criminal and civilly.

Adam Smith had no reason to believe that letting criminals go on a crime wave was somehow good for an economy, this reasoning comes mainly from the other colors who profit in the short term from weakening I-O. For most people this is quite obvious, there have been times they wanted to speed or park illegally and get away with it hoping for no police to be around. If everyone gets their wish of course the result is disaster such as people speeding and causing crashes or parking across driveways.

On September 7 2006 Nouriel Roubini tried to alert the IMF to this impending crash but the system by then had no one to listen to whistleblowers. Much of this information was readily available to anyone willing to look, for example about this time some on Wall Street began to realize the subprime mortgage bonds were going to collapse and set about shorting as many as they could afford to.

They did this by carefully examining all the mortgages underlying some subprime bonds much like a broker might do more detailed investigations about a publicly listed company. Because there was only a few investors doing this then if they could have profited as whistleblowers or the I-O police could have done the same by random audits the Iv-B chaos could have been stopped much earlier. This is like with Bernie Madoff’s Ponzi scheme and the SEC, without random audits or rewarding and protecting whistleblowers this chaos can grow dangerously large.

If the I-O regulators were really acting as health inspectors then they would have picked this up much earlier but they were waiting for problems to occur, not to prevent them. A health inspector doesn’t wait for a restaurant patron to complain, they check areas where cockroaches and mice might breed before they become so common that they can no longer hide.

Unfortunately chaos like a contagion or epidemic is much more difficult to stop after it explodes in virulence because it grow exponentially. This was the result of Iv self-regulation, instead of warning the I-O police of this chaos they instead tried to profit from the destruction of the financial system. If they had gone public with this problem then likely they would have been ostracized by other Iv agents trying to profit from it.

This is not surprising, Iv as overtones of Oy act competitively and profit when others are hurt, when people are being defrauded or there is misinformation there are then potential profits to be made. The idea of a competition is for some to win and for them to win there must be losers. Because of this intense competition Iv agents and also B workers tend to have little money because profit margins are being cut by this competition lowering profit margins and wages, they constantly have to remain secretive and deceptive or a competitor will anticipate their moves and perhaps wipe them out.

When these Iv-Oy investors saw this opportunity for shorting subprime bonds they could not have known in this highly secretive and deceptive out of control Iv-B economy what would happen. If they did they would likely have concluded this knowledge of an impending collapse was just deception from some other Iv-B competitors trying to scare off the more timid traders.

For example those that realized a major collapse was coming would want to short the system themselves to the limit but try to stop others from doing the same. So this knowledge of the pending collapse in subprime grew slowly, usually only because some hedge funds needed more money to short the market and so had to tell V investors about it.

When the media becomes Iv-B as well this secrecy and deception extends to them, some for example were publishing stories for hedge funds to promote some stock or to criticize it if it was being shorted. Nowhere in this would a reporter want to be telling the truth, such an expose would be more likely to hurt their profits as I-O police questioned why they didn’t come forward sooner or whether some of their previous stories were deceptive.

Their employment on TV or at a newspaper might be affected if they lost money as a result of this. Whistleblowing reporters then such as Greg Palast have this problem, how to expose Iv-B secretive and deceptive business when the I-O regulators are not interested in prosecuting anyone. The usual method is to write a book and do interviews, this provides some financial incentive and acts like a kind of private policing. However nothing replaces the neutral I-O policing. To rebuild the economy after the GFC then this policing needs to be a priority or it can lead to more booms and busts, more likely people will still be suspicious after the GFC and stay away from areas of the economy not properly regulated.

The more deception is still thriving the more misallocation of resources will continue often subsidized by bailouts that increase public debt. This then is like feeding a patient that is still sick, sometimes it can be feeding the contagion more than the healthy tissue and so he doesn‘t recover. Like with Gresham’s Law any stimulus will tend to go to the more dishonest businesses because they are more efficient at operating under weak I-O policing.

Another aspect which will be discussed later is the timing of this GFC with the retirement of the baby boomers and if the two are related. Trees tend to have a life cycle of early growth then maturity with a fruiting and flowering phase and decay. Sometimes the changes in the colors in Biv can relate to this growth and dying off, for example much of the modern economy may have been built on the baby boomers working to build enough wealth for families.

With an aging of the population and the baby echo generation now trying to buy homes there is suddenly a shortage of capital as the baby boomers must live off their retirement savings for perhaps decades. This represents a drawing down of much of this wealth just as the retirees become less productive. Some may have responded to this shortfall of retirement money by drawing money out of their homes like the proverbial ATM while the baby echo generation may have responded to a lack of high wages from globalization by grabbing at any chance to own a home even with dubious subprime mortgages.

The Iv-B baby echo generation may have hoped to sell their home for more money in the boom and leap frog up to having more equity this way, such a scenario might have occurred in Europe and other Western countries as well and explain why this housing bubble happened worldwide.

In this case then the aging of the population was like the maturing of many small trees which each like a family tree with the B roots like their ancestors and the Iv branches as their children. At some point they would have their fruiting phase where they had children and now these are growing up with their own families like smaller trees alongside their parents just like this would happen in the forest. These older trees make it harder for the younger saplings to grow and so when there are too many older trees from a baby boom they can tend to collapse in a shorter time.

This then might create a competition with others to get ahead in an economy so that possibly the next generation will be worse off than the one retiring. This baby boom generation born after World War Two had less competition from older people and so like small plants with few large trees overshadowing them grew quite rapidly and explains why the US economy did so well after World War Two.

In the 1970s this generation experienced stagflation as they fought for higher wages to build their family trees, from then on the economy accumulated more debt in deficits and household loans to pay for all this.

Now this younger generation is growing up under the shadow of these larger and older trees and finding it difficult to make money with much of the country’s wealth tied up in retirement funds.

More will be said on this later but the same might have happened in the US in the 1920s, the potato famine of 1845 to 1852 caused large numbers of Irish immigrants to come to America and try to build their own family trees. This would have led to a baby boom along with the end of the Civil War causing similar strains in the US economy and leading to the Great Depression.

Much of this contagion in the global economy can then be from older trees being more vulnerable because of a weaker I-O immune system. For example retirement areas might be more vulnerable to Oy con men unless they are policed very well, the combination of weak I-O with deregulation may have caused a financial firestorm that in effect plundered these older trees like a forest trying to find room for newer trees. Many pension funds were defrauded in this way, there may have been a sense that the elderly were less able to defend themselves and so were easier targets.

This contagion can be like those found in trees such as fungus or root rot as well as diseases of the circulatory system of animals as these are also laid out as B roots and Iv branches. A Biv economy then uses these roots and branches as conduits for money as well as goods and services, a contagion that effects these can cause a lot of damage if it breaks these, blocks them, weakens them so they fall and crush others like a domino effect, etc.

For example the subprime mortgages were assembled in a tree like shape connecting first to B workers in the roots who it was presumed were making good money on Gb resources of the economy. In fact however many of these were not doing well with imports cutting their wages, they were getting loans deceptively to try to make money another way. This is typical behavior for B as they use chaotic growth and collapse deceptive to survive while competing against each other.

Then these loans connected to the Bi community which is where the effects of this money flowed through to the general community and created some prosperity. This is not a multiplier effect, that only occurs in Iv and B because roots and branches multiply and expand exponentially like the multiplier effect does.

Instead this is a diffusing randomizing effect where money flows in from the B roots and randomly moves around the community from those with more money to buying goods and services. So eventually the money may become fairly homogenous in Bi because people tend to share and cooperate more rather than compete. This looks good for modern economic theory because the multiplier effect of B getting loans is seen which is chaos, then this money goes into Bi randomly according to a normal curve. This data then fits well with statistics because the mathematics is based on the normal curve and also works best with transparent data.

The result is the appearance of economic data like Value at Risk assessments that fits well on a normal curve, instead of V-Iv where VaR is normally used this is more in the working class community. So far the system is working well, in effect this is like the B roots borrowing nutrients to grow with and then repaying them with more nutrients found, these then diffuse from the different roots into a more general Bi storage area. Misallocation of resources only occurs by the plant making mistakes or some deception occurring between parts of the plant.

The good results in the Bi community make it appear that the B workers as well are making money when often the loan money itself is appearing as dividends. This in turn causes the Biv economic system to pump more money into B loans as a multiplier and into the B community. Here then the Iv agents are making more loans to the B workers both deceiving each other to some degree, this creates a feedback loop between them that tends to grow exponentially and looks good in the GDP.

The Bi community is less easily fooled because the team aspect makes people warn each other about predatory lending and taking on more than they can afford, this is like primitive policing where Ro communities form a balance with Oy thieves by becoming angry if Oy goes too far. When subprime lenders such as Ameriquest went too far the Bi-Ro communities publicized this and warned each other, this caused Ameriquest to donate money to some community projects as well as to rein in its behavior.

The main objective of Iv-Oy lenders however is to get around this Bi-Ro awareness of their tactics to the R-B borrowers, these are like the weak R young on a Ro buffalo herd that Oy predators can sometimes get to without angering the Ro herd. So as the I-O policing weakened these Iv-Oy lenders tried to concentrate more on these R-B borrowers because each side tended to keep the loan secret, the borrowers for example were often loners and secretive themselves.

They would then either not realize they had been tricked into paying high fees or would not tend to tell others about it, because of this secrecy it is harder for the I-O police to help them. This is also like rape where an R woman might be too ashamed to go to the I-O police and so many Oy rapists get away with it. In a poorer community she might go to a Ro gang instead who might mete out justice instead of the police.

The job of I-O police here is to reduce this Oy-R fraud just like in the animal kingdom where the O middle of the food chain tends to moderate Oy predators attacking R prey and crashing the food chain.

The B worker is the prime target of Iv lenders because he is the best chance of a secretive large profit but also because he is happy to tell the Iv salesman what they want to hear. A B worker willing to make a liar loan can be a source for profit and the Oy salesman probably often thought they could really repay the loan. A Bi community person tends to be a team player and is more open in their dealings, this would tend to cause this game of mutual deception to be exposed.

The Iv salesmen often don’t care if the B workers can really repay the loan because they get their commissions regardless. This Iv structure becomes like the branches of a tree and the B workers the roots, for example the salesmen might form more branch offices and some might move up to be sales managers in effect collecting commissions on the sales of lower down salesmen.

B workers tend to form branch structures because of referrals where some might get secret commissions for referring their friends for loans or phoning an Iv salesman if he hears of someone wanting to refinance. By each root and branch profiting then the Biv tree grows like a fractal shape, this however can be very fragile if the sales stop coming or if there are too many defaults. Salesmen and sales managers might get fired for not making sales targets or having fraudulent loan applications exposed, this could make a whole branch office close up like a branch falling off a tree. As people default on loans the referral system from B workers would also tend to fall apart.

## Between Iv and Bi there is the I-O market where mortgages are more carefully scrutinized and policed, Iv agents generally don’t like this much because their lies are more often exposed there, neither does B with their liar loan applications and so they try and do secret business outside it.

In this way the I-O market can be bypassed and might not really know what is going on in much of the economy. This is usually bad for all the colors in the long run and so I-O regulators need to fight this by inserting themselves randomly into these Iv-B deals to discover the mutual fraud often going on.

This can be like a poker game that thrives on the players keeping their hands secret and being deceptive by bluffing, sometimes the game can get corrupted by marked cards or by someone dealing from the bottom of the deck. It is difficult for I-O policing to watch in this game of mutual deception without the players thinking they are disadvantaged by a lack of privacy, the best solution is probably in a regulated casino where these tricks are watched for without ruining the bluffing. It is the same problem with the Iv-B parts of the economy, I-O regulators need to minimize this cheating and fraud without ruining the bluffing aspect of the economy. Poker is usually the preferred game of hedge fund managers so the analogy is particularly apt here.

The more this Iv-B mutual deception is broken up and brought back to the I-O market the healthier the tree economy will be overall but it will also grow slower and collapse less often.

This is not always a good thing, some plants are more Iv-B in their composition than others because they don’t intend to become stable and long lived because of few natural resources. For example plants in the desert might bloom quickly and die when it rains using up the water to quickly make seeds, their decaying humus is often blown away rather than enriching the soil.

This is like the Iv-B economy that sprang up from using the Japanese carry trade of cheap loan money, it aimed to use up this resource as quickly as possible before their Iv competitors got to it even if it risked collapsing the economy.

They usually wanted to quickly form a canopy and fruit as V which is like making windfall profits, live a lavish lifestyle spending money on luxuries, team up with others doing the same thing like a V team as Iv salesmen often aspire to become, some also intended to form a more permanent business. In that case they might have wanted to grow quickly in the fleeting Iv-B opportunity and then somehow stabilize the business to survive future downturns instead of just cashing out and letting the business collapse in a recession. For example Roland Arnall went through many variations of subprime lending before he found a fleeting opportunity with weak I-O policing of some kinds of loans, the company grew quickly and he no doubt had the intention of living the V lifestyle along with others like him. Instead of forming a more sustainable business however the Iv-B subprime sector got caught in the GFC.

Other subprime lenders were more Oy-R where they wanted predatory loans like a feast by Y prides of lions instead of the leaner years of smaller frauds done on elderly blacks in California for example. Like Oy predators suddenly confronted with plenty of R prey most of them tended to overeat and use up these borrowers, then they suddenly ran out of further prey in the GFC and like a starving predator went bankrupt. This then is like the weakening of the O middle of the food chain, when the I-O police weakened in their criminal policing of this subprime fraud it exploded in size like predators overeating.

In this sense then there was nothing wrong with what happened with the GFC, it depends on what kind of economic plants you are trying to grow. In some parts of an environment these Iv-B plants are useful because they grow so fast and use up small resources, when they collapse the resources are often used by others, often they are the only kinds of plants that can survive so they can indicate that resources are becoming scarce in an economy.

For example after the V-Bi stagnation of the 1970s in the US Ronald Reagan promoted deregulation which often just started off this Iv-B boom which in effect showed the economy was too poor for more stable businesses to prosper. These kinds of Iv-B businesses were then an early indicator the US economy was running out of wealth compared to the needs of its aging population, some people then turned to more dishonest ways to make money for a lack of other opportunities.

This was also seen in the 1990s tech boom where Iv-B internet startups act this way, trying to grow quickly with niche ideas and small amounts of capital hoping for a big payoff or to collapse and try with another idea. One of the causes of the GFC was also the exponential growth of computerization and Artificial Intelligence leading to these Iv-B kinds of businesses growing faster, this Iv-B revolution in computers also changed the world economies to expect faster Iv-B innovations than ever before. As computerization swept through the economies of the world in the 90s this exponential growth created Iv-B businesses everywhere which overwhelmed the older more stable trees that could not compete quickly enough, with high leverage it also created more profits as the older economy was hollowed out giving a false appearance of prosperity.

## It also led to a chaotic economy with no real strength to resist collapse from strong enough external events like 9/11, this devastated the US economy mainly through Iv-B panic as many of these new kinds of business worked on low profit margins and did not have the reserves to handle this external shock.

This I-O weakening then also came about because regulators thought this new economy would solve many problems if they just let it alone and didn‘t look too closely at it. The exponential growth was very impressive and seemed to be delivering higher productivity and a revolution in people’s lives, the argument may have been that some fraud was a worthwhile tradeoff for these gains.

Unfortunately this was the wrong idea according to Aperiomics, they should have been aggressively keeping the tech industry honest and while it would then have grown perhaps more slowly it would have had less collapses from contagion. For example it is hard to see how much of the tech bubble that collapsed was actually composed of worthwhile companies and products, those that survived were generally honest but aggressive companies like Microsoft, Apple, Oracle, Sun, etc.

Many of the companies that collapsed were either Oy-R pump and dump schemes where a bad idea was hyped for profit or Iv-B where unsustainable business ideas were promoted because of the opacity of the market. When a business prospectus does not need to rely on factual statements to attract capital it can become like Iv-B bluff and deception much like in a poker game, this is why the I-O police should have been investigating the misrepresentations in the tech industry. Obviously people were excited about the new technologies and the rise of the internet vindicated many of these views, however a bubble and collapse should happen only when people make honest mistakes in evaluating and investing in a business.

This tech bubble then was like an Iv-B bubble and because when it burst there were few bad side effects it gave the false impression that Iv-B bubbles could self-regulate. This can happen to some degree if resources are very abundant and the innovations are very useful, for example the global economy was very strong and the productivity gains from computerization outweighed the losses from fraud and bad decisions in the bubble. However just because the bad effects of an Iv-B bubble happen to have been outweighed by these gains does not mean that an Iv-B bubble is a good thing or should not be regulated in situations where there are no compensating gains.

Also these gains would have been mostly there if the Iv-B bubble had been well regulated for fraud. It is like saying that some cheating in poker is a price to pay for some great poker games being played or some of the players making a lot of money. They do not make money because of the cheating but despite it.

The tech bubble then was from growing chaos that had been building from when jimmy Carter and Ronald Reagan had deregulated much of the US economy, they did this because of the V-Bi economic stagnation of the 1970s. When the computer revolution happened along at the same time by coincidence this gave the impression that deregulation had caused this innovation rather than making it less efficient with wasteful fraud. This chaos then continued to grow until with the GFC the whole financial system was hollowed out with chaos and collapsed.

In effect then the GFC was partially like desert plants in a forest taking over the available resources, using them up and fruiting quickly, the profits going to the management and shareholders leaving the older and more stable business plants to starve. When these Iv-B businesses collapsed they in effect left dead wood and toxic waste instead of a useful humus for other businesses to grow with.

Iv-B businesses are more like vines in that they tend to strangle more stable Biv businesses and use them as support because Iv-B has weak I-O trunks from a lack of I-O market participation and policing.

As they grow they tend to hollow out the rest of the forest like a contagion and increase the weight the more stable Biv economy must bear. Eventually the rest of the forest starts to collapse as the resources have been used up by Iv-B and the dead weight of their infrastructure drags down the older trees.

For example the Iv-B subprime boom took money out of the sustainable US economy as people speculated with capital instead of using it to build stable businesses. When these speculations finally collapsed there was left a financial wreckage not useful for sustainable businesses, subdivisions of houses in areas people didn’t really want to live in, a manufacturing industry that had been let go to foreign competitors because Iv-B speculations seem to be more profitable, and so on.

Now the US and Europe are trying to regenerate this manufacturing base but the derivatives and subprime system are not useful for financing this, investors generally don’t want subprime bonds any more, and derivatives are increasingly traded with computer algorithms by banks and hedge funds that don’t employ many people.

The Roy part of this contagion can be thought of as like R termites that hollow out the Biv economy but avoiding taking so much out of a B root or Iv branch as to collapse it. They are also like Oy predatory animals like birds or lizards that go after these R prey and break open roots and branches causing more damage. This is like a forest where larger animals go into it looking for food and gradually knock it down turning it into grasslands.

The result is a sustained attack on the older financial institutions replacing them with faster mutating Iv-B businesses and rotting them with Oy-R criminal contagion just like a forest being destroyed. However it can appear these changes are a good thing until it leads to a collapse, these new kinds of Iv-B business like the plants are seen as an improvement because they are faster growing than the older plants, this appears like a growing GDP when in fact money is mainly being churned around instead of building an economy.

Because Iv-B is by nature secretive and deceptive it is also too deceptive for most people to see the damage they are causing. Some weeds look like useful plants because they are so hardy and grow quickly, it is only when we see their undesirable effects of ruining a lawn or garden that we realize their bad side.

The crime of the Roy Oy-R interactions is sometimes seen as the price of capitalism in action, this weakness of I-O also explains the lack of prosecutions because either much of the fraud was technically legal or there was too much Iv and Oy influence biasing the police and law courts against prosecuting them. For example regulatory agencies in the US have many people who used to work at V or Iv companies, they often then have a vested interest in deregulating on behalf of these industries and might then go back to work for them later at higher wages.

This can be like bringing Oy thieves into the police as new officers and then they continue their corrupt ways in getting paid off by the Y mafia. They might warn other criminals of impending investigations, get their rivals arrested, derail criminal investigations and trials, then leave the O police and resume a life of crime with rewards for their actions. Situations like this can rarely be avoided but they can be minimized by using Oy snitches, for example Oy thieves might offer information about this mole in the police in exchange for lower sentences or being allowed to commit small crimes without being arrested.

In a Biv economy then these biased I-O regulators can sometimes be exposed by using Iv snitches in different industries and with random audits, for example if there was a reward for information like this then much of this kind of corruption would be exposed by Iv competitors for profit.

It is also hard to reverse this problem of weak I-O policing because the color fluctuations tend to move up in one direction and then down again until the imbalance is resolved. Iv-B tends to move with a velocity or momentum and V-Bi is more stable and positional, once an Iv-B bubble or chaotic situation grows then it can be quite hard to reverse it before it collapses by itself. It can be like for example a microphone feeding back with speakers so that the signal grows until it burns out some of the electronic equipment.

This momentum is another reason warning prior to the GFC failed to have much impact, the economy was moving so fast and with so much inertia that there seemed to be no way to make it slow down without pricking the bubble and causing a smaller economic collapse. The only way to do this is by strengthening the I-O market so more transparent price discovery makes it more obvious that bubble prices are unrealistic, this can bring down the values of stocks and bonds for example. It is also hard to slow this momentum because so much of the Iv-B economy is secretive and deceptive, to slow it down I-O police have to understand it sufficiently well and to not be deceived about it.

This is similar to a disease epidemic where doctors need to estimate accurately how many people are carriers of a disease without showing any symptoms before they can devise an appropriate way to halt its spread. The I-O police are in effect like an immune system and the financial industry prior to the GFC was infected with a contagion that undermined this immune system as well as being able to hide itself and deceive others about it.

This is also why the I-O police need to act like health inspectors and look for signs of contagion, for example checking restaurants for signs of cockroaches and rats in hidden areas. It is not enough to have a regular pattern of checks because they might anticipate these and hide, for example rats might learn to hide when someone checks an area in the same way over and over. Only by changing these inspections randomly can any learned responses be overcome.

The color codes can then fluctuate in a particular pattern as each affects the next color, for example the B roots of the Biv trees in the economy might get exhausted from a lack of Gb resources, this was like B workers in the US in the 1990s starting to have difficulty in getting good jobs because of foreign competition.

## This competition is itself like Iv-B but international in scope, the destructive effects are caused by weak I-O policing allowing dumping of goods, keeping exchange rates too low for a competitive advantage, industrial espionage, governments subsidizing some industries to give them advantage, mercantilist protection of some industries, and so on.

The B workers begin to get into financial trouble but because of weaker I-O policing through deregulation they look for dishonest ways to survive. As the subprime lending grows this influx of money starts to inflate a real estate bubble and so some of these B workers decide to deceive the rest of the tree economy by falsely claiming they can pay back loans.

This is like the roots of a tree in effect borrowing nutrients from the Bi section to keep growing in a desperate attempt to find more nutrients. So far there is nothing wrong with this response, B workers are supposed to be highly competitive and do what is necessary to make money and find resources for the economy. Often other people turn a blind eye to this, for example much of the oceans have been overfished, animals cruelly treated, pesticides overused, and farmland damaged by this intense competition.

We see other examples of this with sweat shops in Asia assembling electronic goods for the advanced economies, B workers compete with each other for low wages and long hours. They willingly endure this secretive and deceptive part of the system to make enough money to survive. Society then expects secrecy and deception from B but within limits, when it gets out of control this dishonesty can undermine the whole economy. This is like the way B roots of a plant need to struggle to find nutrients for a plant to survive even if they hurt other plants, damage brick walls and sidewalks, etc. When they cause too much damage we tend to call them weeds or pests and uproot them, this is like how the I-O police sometimes need to control B workers when they go too far.

We sometimes see this problem in the Roy animal kingdom where R animals such as locusts or mice might grow too quickly like pests and cause damage, people might then have to change the ecosystem by killing off some of them like removing weeds. Usually in nature this happens because the Roy food chain has been disturbed, for example pesticides might be used to grow crops that mice and locusts like to eat.

When these pesticides lose effectiveness like weak I-O policing then a chaotic explosion of R pests can damage the Biv crops. In the same way I-O regulations might be designed to stop these R criminal pests from hurting the Biv economy, when they find a way around it like termites they might damage the system before they are noticed or grow too quickly in numbers to be stopped.

This happened when liar loans were introduced and found a ready market with deceptive B workers who realized they could lie about their income and speculate cheaply in a rising real estate market. Instead of this bottom of the economy being seen as poor and having economic difficulties this lying gave an appearance of the poorer becoming wealthier and caused the US government to try to increase the numbers of these people owning homes. As these loans made the house prices go up few of the B workers were caught out in these lies, these false signals in the subprime market caused a massive investment of loans that was not exposed until house prices could no longer keep rising. It then became apparent that the US poor people could not really pay back these loans and a financial panic helped to cause these subprime lenders to collapse.

So B workers tended to deceive the rest of the economy when things got tough, they borrowed money to try to get through their problems and if they succeeded they repaid the loans. In those cases no one knew how close they came to chaotic collapse, in the same way many B workers such as farmers and miners might struggle to pay their bills, because they try to maintain a good credit rating however the lenders often do not know how close they come to default.

For example when B is going to be late on a loan repayment they might be afraid of ruining their credit rating and they might steal from others, get an extra job, and so on. The lender usually knows nothing of this and so they do not realize how close to the edge these B borrowers might be, the number of defaults does not calculate well on a normal curve according to random events but according to chaotic events and tipping points.

Prior to the GFC this desperation would have been from many factors including losing jobs with higher wages because of Iv-B competition with China and Japan, the economy running out of opportunities to fund retirement of the baby boomers and simultaneously fund housing for the baby echo generation, Iv-B computerization taking away wages from skilled workers as robotics takes over more high paying jobs, weaker I-O regulation allowing them to get away with more liar loans and greed blinding them, more pressure from secretive Hispanic immigration into the US reducing B wages, etc.

In each of these situation B workers have intense competition to contend with which creates more pressure to use secretive and deceptive ways to survive, particularly if I-O policing is weakening or historically weak in some poor areas. It may be then that the US government and subprime lenders did not really understand this opaque B economy, even those in it would have experienced so much dishonesty from other competitors that they might not have known whether the housing bubble was sustainable or not.

Many would have thought of the legal system as biased against them and Iv businesses ripping them off with low wages, poor working conditions, hiring illegal aliens instead of them, buying shoddy goods with dubious warranties, and so on. They would then have felt little sympathy for Iv businesses and when given the opportunity to get a liar loan many might have had little to lose.

These B workers then are like B roots that when they cannot find enough nutrients to satisfy the rest of the tree start to borrow more nutrients back and grow faster as survival can be threatened by a chaotic collapse. For example if the roots get too weak they might not be able to transport nutrients if they find them and so all the investment the plant made in building them is lost.

In the same way if the B workers cannot borrow enough to tide them over in finding new opportunities for work then the economy above them could suffer, as this network of B workers went bankrupt much of the investment in them such as with training, housing prices, furniture, families breaking up, etc was lost and is now after the GFC having to be rebuilt out of this high unemployment. This is like how R prey in the Roy animal kingdom support the whole food chain, if they cannot find enough food then they tend to hide their weakened condition from predators.

Because of this deception the Oy predators might not realize there is a danger to them of running out of food, they might take this weakness as a good sign and overeat even more much like the Iv subprime lenders made even more loans as the B workers lost their traditional sources of income. To stay alive these R prey might try to eat unusual kinds of food and take chances as the alternative is disaster, this is like the B workers refinancing their homes to get more equity and using liar loans to speculate with.

Eventually however the B workers run out of tricks and start to default on their loans in exponentially increasing numbers as more reach tipping points of missing payments, the money had already slowed into these communities as the real estate prices stabilized and this caused many housing related businesses in the B areas to shed workers. These created a multiplier effect causing more unemployment and causing more to default on their loans.

This then caused some chaotic collapses in subprime bonds as the underlying loans defaulted, but also stronger spurts of growth as B people frantically look for other opportunities to survive like roots of a tree frantically looking for minerals and water. Iv agents also redoubled their efforts to made subprime loans to B workers with lower FICO credit ratings, some towards the end were unable to even make the first loan payment. This shows the desperation in B as they clutch at straws hoping that real estate values might rise enough to make a profit on a loan with no deposit and not being able to make a single payment.

Next this leads to a malaise in Bi which is the next color up the Biv tree, this collapse in B will cause the colors to fluctuate all the way up to V. It is also like in the Roy animal kingdom where as the R prey starve from lack of food the Ro herd animals are attacked more by the Y-Oy predators and their numbers start to drop as well. It is also like a plant rotting from the B roots up as it runs out of food.

The Bi community does not experience a chaotic collapse because Bi is random and B is chaotic. There is seen a reduction in money flowing from B workers that causes some Bi neighborhoods to fall apart randomly with some chaos from B.

For example housing defaults cause empty homes to make some neighborhoods like less desirable and depress housing prices there. Bi people however tend to work together as a team more so they might lend money to each other to avoid default and try to keep their community from falling apart from the rising unemployment.

Bi communities have more reserves of savings and because of less competition they did not go for these deceptive liar loans as much. For example in a transparent Bi community it would be hard to explain to their team members why they were buying a home with no money.

These Bi reserves begin to be lost because B workers start to reduce the spending from the real estate profits they made, also the Bi jobs in the construction related industry start to collapse because houses are not selling and loans are not being made as much.

Bi businesses that invested too much capital in this B led subprime boom lose money, go out of business or retrench. For example the profits in housing might have caused more people to buy new electronic goods and so Bi shops selling plasma TVs might have also boomed to some degree. Some of these would also be B businesses, for example some B workers might have tried to speculate in real estate but others would have tried to ride this boom by selling goods into it such as building materials for example. Other Bi businesses would have been more prudent but still have expanded too much to meet this demand.

This creates a downward pressure on Bi wages which have been established by unions and tends to fragment the Bi community into more B as workers lose the ability to collectively bargain for wages.

For example as unemployment rises then the Bi cooperative behavior tends to fall apart into an every man for himself B competitive strategy. This allows Iv employers to get cheaper labor and this allows Iv to sell its goods cheaper in competition against other Iv.

This is like a downward spiral where before Iv-B was pushing up prices of real estate giving profits to both Iv and B people, now it is pushing both down in deflation and those who reduce wages and prices the most will make the most money.

This becomes dangerous for the economy because as the boom deflates this causes Iv-B to work in reverse for profits, much like the way short sellers can make money from a decline in prices. As this creates momentum this can make a crash far worse as it becomes the only way for Iv-B to prosper, in effect by wrecking the system faster. This is also similar to what Marx warned about, Iv capitalists would compete to drop their prices and force wages down causing both to lose money in what becomes at this point an Oy-R Negative Sum Game where the goal is mainly to reduce losses rather than make profits.

Also the Bi community starts suspecting others in the team more since there was so much deception from B, they come to realize the economy is very opaque and that many of their own Bi team may also be deceptive. This process then is like a Biv tree falling apart after rotting or starving in the B roots, this causes many of the roots to break away from where they connect to the plant at Bi.

This is also like in the Roy animal kingdom where the R prey have been decimated by a lack of food and predators, as they reduce in numbers the predators turn more in the Ro herds such as Oy hyenas attacking buffalo. These attacks can only work by getting to the R young and old buffalo as the others are too strong, these predators then have to concentrate on breaking up the Ro herd so they cannot defend each other. Under these attacks the Ro herds might find it is safer to try to survive alone, this might happen more easily with smaller Ro herd animals such as Impala or Zebra.

This Bi community tends to influence the I-O police by becoming angry and having demonstrations, in effect they are using the power of a Ro herd like buffalo pushing back against predators. If the Bi communities become angry enough then they might scare off the Iv agents enough for the I-O police to become more neutral.

For example these Bi protests were a major part of the Occupy Wall Street protests, they worked well at first by making the more timid Iv and Oy agents retreat. However over time they realized these Bi protests were largely ineffective and used their connections to get these protests shut down, moved out of public parks, etc. This is like Ro herds pushing back against Oy predators and scaring them, after a while though this might tire Ro out and the Oy predators are no longer scared.

The Bi-Ro protestors also complained about the I-O regulators saying they were too corrupt or not doing their job, this tends to pull them back from favoring Iv and Oy too much and perhaps prosecuting them more, forcing more Iv to be snitches on the others. For example after the GFC and the Madoff Ponzi scheme the SEC became more responsive to whistleblowers, also paying them more for tips.

However this takes time because Iv has made a lot of money from this deception and can use the legal system and lobbyists to protect itself for a while, when the I-O police have weakened like this it takes a long time for them to grow in strength again. This is like after a crime wave caused by a lack of police, even when the police get more funding and manpower it takes a long time for this crime to get under control. For example a Ro riot might be hard to control even as more police arrive, Oy thieves are secretive and so it takes time for random patrols to catch enough of them to deter the others.

In the same way even with extra funding it will take time for the SEC and other agencies to prosecute enough Iv agents to deter the others sufficiently. Until then the Biv system tries to use the more inefficient Iv-Bi policing where each pushes against the other in the absence of police to find an equilibrium. This is also like Oy predators attacking Ro prey which is also unstable without an O middle of the food chain.

Next the I market tries to strengthen itself but has few resources because of the weakening in the B then the Bi communities. There are fewer goods and services available from these Bi-B areas, others are inefficient because of the chaotic collapses in B and random stagnation in Bi. This I market then starts to weaken and so Iv agents start to find it hard to sell their goods such as subprime loans and also to sell bonds to the now weakened Bi hedge funds. They might be getting B workers and fragmented Bi workers at lower wages but this causes them to have less money to buy goods and so the Iv-B downward spiral grows exponentially and hurts them as well.

So far then this is like a tree that has partially collapsed trying to shore itself up, the bottom areas are weakened and it is at risk of toppling. The lack of money in I causes I-O police to be laid off more, for example this happened in the GFC in the US as local governments could not afford to pay for police.

The I market can become more corrupt as the police become underfunded even more, this can accelerate the Iv-B downward spiral. This was like in the GFC where the amount of fraud to be investigated suddenly grew but the I-O regulators were too underfunded and undermanned even before the GFC. Even as of 2011 many crimes involved in the crash have yet to be investigated properly.

As the GFC chaotic crash worsened then the I-O police found themselves unable to understand what was happening, much like police in a riot unable to control people or impose a curfew. One of these attempts was to temporarily ban short selling even though it was not clear which trades were damaging the financial companies, in effect this was like a curfew on shorting to try to quell the Iv-B panic.

For example secretive AI programs designed by quants were making money from the carnage on the markets often by shorting falling prices and making it worse, because many of these algorithms used were very similar Iv hedge funds had competed against each other using the same kinds of equations to by the same kinds of securities and then were dumping them and shorting them in the same way.

This is another example of Iv-B working in reverse, those who could sell of faster lost less money and were also able to short the market to stem some of their losses. Dumping of so many securities caused the V-Bi concepts of a normal price and the whole concept of arbitrage to fall apart and prices were then determined at the margin, these securities were in effect worth whatever companies could get for them and often had little relation to other trades being done around the same time.

This caused prices to whipsaw up and down as this Iv-B momentum in a crash was like pieces of wreckage ricocheting off each other. Shorting a stock gives an impression of many extra shares being available, for example if there are about a million shares in a stock being traded then shorting the market with an additional million shares would in effect be like dropping the price fifty percent.

The market might however whipsaw back up if the shorts suddenly had to buy back these shares or cover instead of keeping the shorting going, they had to do this after short sales were temporarily banned causing many of them to go bankrupt.

This was like the I-O regulators trying to prick an Iv-B bubble in reverse, as the Iv-B feedback drive prices down with shorting and dumping securities to slow this they banned shorts for a while, this caused many people to lose money at the price of slowing this downward momentum. It was like having a boom in shares or real estate where the I-O regulators might ban certain kinds of speculation to try to slow the bubble and cause it to crash and some speculators to go bankrupt in the process.

This is the problem with an Iv-B economy, it tends to grow exponentially with feedback until it reaches a limit then crashes. Trying to stop this often just causes another crash or throws the momentum into reverse, it is like erecting a wall in front of cars to slow them, it just makes the cars crash. If instead the I-O regulators had announced that all short sales would be watched for predatory behavior and prosecuted then this would have deterred most of the damaging effects of this shorting without causing more crashes.

For example if the records showed some short sellers were trying to break some businesses such as Bear Sterns and Lehman then they might have been prosecuted but others shorting because some companies were overpriced or hiding fraud could have been allowed to continue. The system needed to purge itself of dishonesty and bankrupting short sellers was a sign of Iv-B momentum causing collapses not of trying to save the system properly. As explained later when the Iv-B and V-Bi parts of the economy become disconnected from weak I-O policing they follow a process of tearing it apart.

So far then the problems started with B workers because they could not find enough Gb resources to make profits on, this caused them to become more deceptive and take more chances with loans to overcome their problems. This created a bubble but eventuallyfailed causing B bankruptcies and making the Bi communities fall apart. This caused the I police to become overwhelmed leading to the I-O markets becoming even more disconnected from real prices.

Next the Iv agents start to suffer as more are fired from the lack of business from the B workers who are tapped out, they might be working for lower wages but they can also afford to buy fewer goods and services from Iv and V. Because Iv is highly secretive and competitive they work on small profit margins and a small disruption in businesses can cause them to resort to fraud and deceptive loans like B did or for them to go bankrupt.

This then caused much of the Iv-Oy financial structure built on speculation and subprime lending to quickly collapse or later it was revealed many had resorted like the B workers to fraud to conceal their losses and buy time to turn things around. In some cases this widespread fraud such as using off sheet investment vehicles caused a small boom or bear trap for some investors. Also some Iv-B business tried to quickly go into a V fruiting phase where the V management tried to take out profits by selling shares, embezzling, voting themselves bonuses, etc. This is like a tree or desert plant as it dies from below trying to create seeds to maximize its chances of regrowing, those plants that evolve to do this are more likely to survive than those that die without seeding.

## At this point the Bi community is more suspicious and doesn’t believe the Iv deceptions as much, they were also deceived by B workers and they begin to realize that they have been ripped off with many of their Bi pension fund investments.

This is like in the Roy animal kingdom where the Ro herd becomes more wary of the Oy predators when usually they would be more confident of their ability to defend themselves, the Oy predators then find it harder to catch R young and older members of the herd and also many of these have already been taken. This leaves the rest of the herd being much stronger and more suspicious, the gullible ones having been taken already and so the Oy predators start to starve even more. So far the Y predators are relatively unhurt because they can still feed off the Ro herd because they don’t aim for the weaker R members of the herd but hunt in a Y-Ro war of attrition of team versus team.

At this point a tree probably tends to separate in its objectives, the top part is trying to seed quickly and the bottom to cut off nutrients going up the tree because it might expect that part to wither and die. The tree then has two survival strategies from this lack of resources, those that accomplish these tend to survive more and outgrow those that don’t.

Some trees evolve to seed faster even if they die off, others try to shore up their Bi and B parts of the plant and allow V leaves and Iv branches to shed so they don’t need to waste nutrients on them. In the economy then at this point the Iv and V parts are trying to cash in what they can and use their capital to wait out the coming slump and buy bargains, they might also use this capital as seed money for new businesses as the slump like bad weather in a forest is over.

The Bi communities feel they have been ripped off by the Iv agents and tend to boycott them like shedding branches, they try to save money and reconnect with B workers and resources rather than trying to save the V and Iv parts of the economy which refine resources rather than find them. This then is where weak I-O policing can end up, the trunk of the economic tree in effect starts to break and then an economic slump can be prolonged unless it can be reconnected.

Currently for example in the US and Europe the V-Iv banks and wealthy have capital but are afraid to spend it on the Bi-B parts of the economy still mired in recession, these Bi-B areas are still saving money and whenever they get some business they tend to just save and hoard the money as Keynes foresaw would happen.

The problem is there are two economies each trying to grow a new section rather than reconnecting, the V-Iv areas want to find new B workers and resources as well as Bi workers rather than trying to reconnect to the ones unemployed and damaged by the GFC. They then complain about B workers being unsuitable, Bi not buying enough products, and not working for low enough wages for the new economy V-Iv wants. They have given up on the old B roots and with their seeds and humus want to regrow new ones.

The Bi-B economy however wants to save and hoard enough money while B workers find new resources, they are prepared to forget about the Iv financial agents as they now see them as a contagion rather than useful for regrowth. They in effect want to revamp the financial system, they don’t see much of the old V-Iv economy as good any more for Bi pension fund investments either.

Usually this kind of plant would regrow its own Iv branches and V leaves rather than trying to reconnect its trunk to the old ones. There is then a conflict between these two economies trying to regrow in the same wreckage of the old one and being incompatible with each other, V-Iv needs the Bi-B areas to collapse for their seeds of new businesses to grow and Bi-B needs the V-Iv financial system to wither away to be replaced with a more sustainable one.

This is like in the Roy animal kingdom where after the Roy food chain collapses the Y and Oy predators might look for new Ro-R prey because the old ones are not seen as dependable any more, the Ro-R prey might become permanently wary of the old predators and move away from them. At some point however for the food chain to restabilize the older relationships of predator and prey have to reform as the ecosystem cannot evolve a new set of predator for the prey and new prey to suit the predators.

Even if it could this would take too long and is far less efficient than the animals learning to get along again, it would also tend to cause double the numbers of animals to need to live in the same area causing more starvation.. In the same way instead of reconnecting the V-Iv and Bi-B parts of the economy trying to regrow new halves cannot fit where the old economy existed..

So far then I have covered the collapse of Gb resources which led to chaotic problems for B workers, then the Bi communities became stagnant and then the I market disconnected to a large degree causing V-Iv and Bi-B areas to each be trying to regrow without the other. In some areas though the I trunk as the I-O police and markets continues to function but the Iv agents are still collapsing and threatening to bring down the V team above them.

Because the talents of the Iv agents have become so mutated with secrecy and deception they become less useful to the V elite, they are bringing in less business and cannot seem to adapt to the new market conditions.

For example as the subprime lending market grew the Iv agents learned to hollow out the economy by deceptively lending to B workers, they deceived these workers and often also deceived their V employers by falsifying loan documents.

As the economy collapsed the B workers stopped borrowing and so these Iv agents stopped bringing in business, this causes many of them to get fired unless they can become Oy thieves. For example as the economy crashes the I-O police have their hands too full to monitor subprime fraud and so those Oy salesmen willing to do anything will tend to keep their jobs and save more money for themselves.

They might also be falsifying even more loans and only appearing to be better salesmen, for example in the GFC some of these loans were so fraudulent that B workers couldn’t make a single payment. This would have been where Oy agents defrauded everyone.

This is also like in the Roy animal kingdom where the most desperate and cunning Oy predators might survive better, they might get more R and Ro prey but also sometimes succeed in attacking Y predators as well. For example starving Oy hyena might attack even strong Ro buffalo and also Y lions. So far these Y predators might still be doing ok because they have the team strength to bring down Ro prey, like lions attacking a herd of buffalo that Oy hyena cannot succeed against. At this point then the problems spread to the top of the Biv tree, the V banks and investors take more losses form their own deceptive agents. Many hedge funds found for example that their salesmen had deliberately made bad trades at this time to get big bonuses and leave the firm in trouble.

These Iv agents then start to chaotically collapse if more honest or the more deceptive ones still make money, this is again like Gresham’s law where bad business drives out the good.

This was seen in people losing their jobs as Bear Sterns and Lehman collapsed often because of the bad trades done by some of their Iv agents for bonuses, the process of collapse tends to be staggered because there are many different trees in the economy at different stages of collapse.

Some companies have more V money and can use their teamwork to cooperate with other companies to survive, for example Morgan Stanley, Bank of America, Barclays, and Goldman Sachs cooperated more with each other and the government rather than trying to profit by bringing each other down as Iv-Oy agents would do.

Finally as the V people at the top lose money they try to use their influence in the government to get bailed out, they are randomized like Bi and try to use insurance to protect themselves. They are like the too big to fail part of the business sector and they tend to treat their taxes as partially like insurance premiums so they can draw on bailout money in an Iv-B crisis. This is natural for them because they are cooperative and insurance based by nature, moral hazard is not as much a problem with them because they tend to be too transparent to use insurance fraud.

However Iv agents working for them might have competed with each other too much expecting at the time a Greenspan put where the government would bail them out. In effect then those Iv-Oy companies and employees who did not take more risks assuming these bailouts would have lost market share earlier, for example as Goldman and Morgan Stanley were bailed out some of their Iv traders kept on receiving bonuses and so they benefitted from this moral hazard.

However this was caused by weak I-O policing creating an Iv-B deceptive boom in the first place, the V companies did not aim to use moral hazard because they tend to rely on random aspects of the economy and insurance to protect themselves from risk. For example many of the traders at AIG took too many risks with derivatives not caring whether they hurt the company or their counterparties, some would have taken moral hazard into account in assuming the government would soften any collapse in the economy and so their trades could be more risky.

However the AIG management was being deceived themselves and would not have taken on this extra risk because of possible bailouts, they thought their Iv traders were being more honest. Also one reason the Iv agents were getting more deals was because the Credit Default Swaps they wrote bound the company to pay out money not only if the insured bonds failed but also if they lost this value. AIG management did not realize this danger and they thought they were safe, this however drained away their liquidity.

This then is why moral hazard is a complicated issue, in the GFC the government may have let Lehman fail as a warning to deter others from taking on too much risk on some future crisis. These warnings however would not be effective then because in Iv-B the situation is usually too opaque to know whether moral hazard is even going to be useful, Iv is competing against each other with high momentum and have trouble stopping even when a cliff looms up in front of them. If the Iv agents in the financial industry had known the economy would be so bad that moral hazard would be an issue they would have reduced their risk far earlier. However the situation was so opaque and deceptive no one knew what to believe, it is like trying to rely on what other players say and do in a poker game.

Iv agents constructed a new kind of insurance but when the GFC happened the Credit Default Swaps (CDSs) often didn’t pay off because the counterparties were damaged by the crash. Because Iv works with secrecy and deception Iv-B companies could pose as counterparties for CDSs and collect profits, then when the market starts to falter they quickly fruit to V with the profits and then they can go bankrupt without paying the counterparties.

Random audits by I-O police as well as Iv snitches can reduce this a great deal, for example these insurers could have been randomly checked to see how liquid they really were. If they could not pay out enough in the event of a recession they might have had to advertise this or their management and shareholders could have been liable to I-O criminal and civil fraud charges.

The government as Roy lender of last resort tends to help when resources become scarce, the system begins to become Roy like as deals previously done as a Positive Sum Game where both parties benefit become negative where each tries to stem their losses at the expense of each other.

It becomes like a third world economy where there are not enough resources for Biv business to work without Roy criminals finding it easier to steal for profit.

In a recession the V and Bi communities need to have enough reserves to bail the system out, they tend to act like insurers with their savings and can often buy goods and services more cheaply. This is because Iv-B is so competitive they usually have few savings and need to sell in a recession before they go bankrupt, there is then in a Biv economy regular times of fire sales where those with savings profit.

For example a supermarket might mark down the prices of some stock if it gets closer to an expiration date or is unpopular, V-Bi bargain hunters then might store up these goods. This is like in the I-O market where Iv agents sell off goods cheaply to Bi people with savings and allows the market to reprice goods and services after an Iv-B boom and provide some liquidity to rebuild.

When the recession is very severe as with the GFC resources become very scarce and people might start acting more like Roy predator and prey, the Roy government then needs to provide this liquidity as the system needs to rely on public G money as Gb private money is so scarce. This is why lenders of last resort were needed in the GFC and why so many banks needed to be bailed out or nationalized. As the Biv economy recovers Gb private money will become more efficient again, this then is an indicator as to how Biv the system is becoming. For example in the US a lot of the G bailout money has been repaid but some areas still are only surviving because of G money from the Fed.

In the GFC some V investors such as Warren Buffett had enough private Gb funds to bail out some companies such as Goldman Sachs and the Bank of America. The government also usually provides extra G money for welfare, others have unemployment insurance and savings so the Bi community uses the randomizing effect of insurance to weather the chaotic collapses.

The same occurs in the animal kingdom and Roy societies, as well as in the Roy areas of Biv economies in the GFC, for example the Ro herds provide a buffer in the food chain giving some food to Oy predators after the R animals have been decimated. Y predators also tend to survive longer on these Ro animals so while the Oy predators and R prey might periodically boom in numbers and collapse they need not take down the whole food chain with them.

As the Biv forests in the plant kingdom collapse because of weak B roots and Iv branches some will be able to regenerate because they have stored more resources in their Bi upper root systems and V leaves. For example carrots and turnips might have more storage of nutrients compared to their B roots, plants with these larger central roots can use this to regrow more B roots after a chaotic collapse from a lack of water for example. Some plants like some companies then use different strategies, they might store more nutrients as V-Bi against the possibility of chaotic shocks or they might try and grow faster as Iv-B to regenerate faster even if they do collapse more often. In evolution and revolution then the best mix of these two strategies will give the most successful companies, people, and societies.

In the same way a Roy society might aim to be more Oy-R or Y-Ro just like the Roy animal kingdom. For example an Oy-R society might have more deceptive crime and collapse more often but also regenerate faster because more people have hidden resources to rebuild.

A Y-Ro society might been more transparent but have civil wars where Y dictators battle Ro demonstrators destructively in wars of attrition which waste resources but are more stable. Sometimes an Oy-R society like with animals might collapse and get invaded by a Y-Ro one that has enough resources to take over part of their territory. At other times an Oy-R society might have a boom and invade a stagnant Y-Ro society having a civil war. For example the Congo might have more Oy-R conflicts and get invaded by neighboring and more stable Y-Ro Uganda for resources sometimes.

The Roy fluctuations are similar to the Biv fluctuations just described because Biv colors are overtones of Roy. First the R animals like rodents get overeaten by Oy foxes, this is like the R criminals in the GFC with their liar loans. As these plummet in numbers then Ro animals become the next target, also some of them might feed on R.

For example in the sea the R animals might feed on vegetation only like krill and the Ro teams or schools of fish feed on them. When the R animals get scarce the Ro animals start to die off too. Then those feeding on them starve and so on all the way up the food chain to the Y top that gets affected last.

Normally this fluctuation is buffered by a strong O middle of the food chain, for example as Ro start to die off the O animals eat more of the weakened fish and O can increase in numbers. This allows the Oy animals feeding on Ro and O to stay better fed as do the Y animals above them while the R and Ro animals start to recover in numbers for example with a drought ending or not being hunted as much.

In the Roy part of society then the GFC first had the R deceptive workers with liar loans walk away from their homes. The problem then was partially caused by the attempt to make Roy ghetto and poor areas of the US into Biv without any real change in their resources or wealth. It is often the same problem as with trying to make third world economies into Biv, crime and war can use up the aid and loans leading to their being wasted.

These Roy reactions are different from B workers in Roy areas who might have stayed away from actual criminal violations but might have been civilly liable. Then the Ro community can turn violent as the money dries up in the economy, this might be like a ghetto that has riots from welfare cutbacks and unemployment or more violent street protests.

So in the lead up to the GFC subprime lending added money to these Roy areas temporarily making them act like Biv, some even managed to life themselves up permanently into a more efficient Biv system as violent crime plummeted across the US in the 1990s and 2000s. This then created new stable Biv areas in the US, some unstable Biv that would fall apart to Roy again in the GFC and some areas that remained Roy ghettoes. This is like the edge of a Biv forest

Trying to grow into less hospitable areas, in some areas the forest might grow permanently or collapse permanently back to grasslands. In other areas it might continually fight to grow and fall apart, temporary extra rain might make these areas grow and then they fall apart when the rain returns to normal. In the same way the lead up to the GFC was like extra rain loaned to these areas causing the Biv society to expand more into Roy poor areas, much of this then collapsed with a waste of resources when these loans rain out.

Increasing the amount of housing in the US then ran into the same kind of problem as in lifting poor societies in Africa by lending them money without giving them ways to earn more to repay the loans, also without protecting them against the predatory lending which took money out of the Roy areas.

Ro gangs can also increase in violence along with Ro demonstrations and riots in these Roy or newly Biv areas as the economy falters or these loan moneys run out. The police try to grow in strength to handle this Ro crime and protests, their corrupt bias to Oy subprime lenders and predatory business starts to weaken as the frauds that funded the O police with tax revenue are harder to find and the Ro protests embarrass them.

Oy crimes like altering subprime loan documents to make loans go through become investigated more. Then those Y companies that made money from this fraud in subprime start to go bankrupt like the Y predators such as lions at the top of the food chain suffering, they have often been defrauded by their Oy agents just like the Ro communities now protesting.

Because Oy now has little money and the Y and Ro areas have more savings they are paying more taxes and so the O police start to become more neutral and defend them, Oy has less money for lawyers and bribes to politicians and so the Roy criminal system starts to scapegoat them more. However the real problem was the wild fluctuations in the Oy-R and Y-Ro parts of the economy from weak or biased O policing, much of this was also from a misplaced belief in deregulation.

So to avoid these problems it is critical that the center of both Roy and Biv, O police and I regulators need to remain strong to buffer the fluctuations before they cause too much damage, however as is explained repeatedly in Aperiomics the police are themselves weakened by pressures from other colors.

The problem then is much more complex than blaming one or more groups after these fluctuations lead to crime or economic waste, often this scapegoating is part of the process to protect some and lead to the next fluctuation and more problems.

Sometimes this scapegoating can even occur before the Iv-B crisis, as with Nouriel Roubini’s warnings. He though the coming housing bust could “lead . . . to a systemic problem for the financial system,” triggering a crisis that could cripple or even take down hedge funds and investment banks as well as Fannie Mae and Freddie Mac. Peter Schiff also made similar dire prediction, the problem is when someone predicts a crisis they might be habitual doomsayers or because they understand an Iv-B crisis their prescription is another Iv-B boom. This can be a natural response to the idea of a market crash, it implies that the market was ok before it crashed and so the things that made it crash should have been prevented rather than letting a market get so fragile in the first place.

For example Iv-B plants in nature are where the B roots and Iv branches grow quickly to try and compete against other trees in getting to Gb nutrients and sunlight before them, then they usually try to spread their leaves over their competitors to cut off their sunlight winning the race. Sometimes though there might be an external shock that makes these Iv-B plants break, for example like a storm where the wind breaks the branches or an earthquake that shakes them and uproots some.

These things can always happen in nature, usually in areas where this is possible some plants choose a more balanced strategy of growing more slowly and strongly so they don’t get knocked down or uprooted by external shocks. Only in rare areas are external shocks so unlikely that this more moderate strategy is always worse, for example in some areas of Japan and Chin bamboo plants might grow quickly as Iv-B in competition against each other. If there is too much chance of an earthquake or a typhoon then these long thin plants might get knocked down and so other areas might have more typical trees or even V-Bi grasslands.

In the same way the GFC was a result of growing the financial sector like hothouse flowers as if risk from external shocks was covered, however previous recessions had shown that similar external shocks could be expected to devastate the financial markets, derivatives, and subprime lending. The prudent situation then would have been for more companies to grow more slowly and stably, they would have then been the ones left standing after the GFC. Goldman Sachs was arguably like this, while they also grew quickly they had a superior system of marking all securities to the market each day and so had an early warning system for potential problems.

However there were no large shocks to explain the GFC, 9/11 caused some devastation to the US economy and the ending of the Japanese carry trade in the 200s starved the US for capital. The main problem seems to have been a combination of companies not being able to withstand even a small crisis because they believed they had hedged risk with derivatives that were so opaque no one could really tell if they would protect them or not. As it turned out this opacity hid so much fraud and low reserves that they offered little protection.

Probably then the main cause of the GFC was rising corruption of the financial system from deregulation, this weakened the system so much that the fraudulent derivative protections could not save it.

While some then did see a crisis coming none of them saw all the ramifications of the crisis or would have recommended the various ad hoc solutions used throughout it. This is appropriate though, it is one thing to look at economic data and see it heading towards an unsustainable situation such as with trade deficits and a share market too high for its earnings. Data like this combined with a very opaque Iv-B economy can then induce panic in some people early, some investors for example thought the same thing but used their ideas to either exit the market or short parts of it. Edward Thorp is famous for inventing a winning strategy in Blackjack and for many innovations in arbitrage, he saw problems in the economy before the GFC.

Michael Burry of Scion Capital was mentioned in the book The Big Short by Michael Lewis, he was probably the first to realize subprime bonds could collapse and made money from shorting them. By trying to find investors in shorting these bonds he created the first vehicles to do so and alerted many others including Paulsen and Goldman Sachs to also short subprime bonds. However recognizing the potential for an Iv-B crash

This is then was an Iv-B collapse of a system that grew too much by hollowing out the financial system, when problems appeared like cracks from this weak infrastructure the responses were to move to another area and hollow it out instead of alerting I-O regulators like people would with cracks in a building.

Without these regulators no one thought they should bear the cost of shoring up the system because other competitors would use this opportunity to beat them to other investments or just overload again the areas they had shored up. By the time these cracks appeared to be so alarming they caused people to in effect panic and exit the building rather than trying to fix them, in the financial sector this panic caused fire sales that caused these cracks to widen further and to collapse the whole structure.

This happens because the role of I-O is unique to avoid this buck passing, however many responded to the collapse of the system by blaming the shocks that brought it down and the cost of I-O policing it instead of the shoddy workmanship in building it. This is often seen in third world economies where there are no I-O building inspectors or town planners, people build unsafe structures that collapse with an external shock like floods, storms, or earthquakes.

If someone did try and build properly in these economies then often they could not sell a house for this extra cost, buyers would tend to be deceived by the similarity to other more flimsy homes and this brings the cost down until the stronger homes are no longer built. In the same way without I-O policing banks and hedge funds took on more risk and became more flimsy with intense competition, those that used less leverage like building a house with thicker walls could not compete on price and so lost market share and became overshadowed or taken over. The result is a financial sector that looks efficient but collapses with the next big external shock.

This ensures that when the collapse comes it will affect everything, the competitive pricing spreads chaotically through all parts without I-O policing like a contagion. This is like termites attacking all of a tree, they try and not collapse it by eating the wood evenly but the result is that a large external force like a storm will cause the tree to shatter into many pieces when it falls.

It is also like R grazing animals eating to the limit of what V grass can sustain as they continue to boom in numbers, an external shock like a small drought will cause them to overeat the grass leaving a dustbowl and starvation with a crash in their numbers. Before this happens they will try to not overeat individual plants, this is why grazing animals tend to move around instead of eating each plant until it dies. This booming in the number of R grazing animals is prevented by a stable Roy food chain and O animals like police remaining strong. In effect the GFC was partially caused by these poor R people feeding on the Biv system with liar loans creating a boom that collapsed as they overate. The demand by these R people for loans was seen as an economic opportunity rather than something which would just waste resources.

The effects of the GFC can be understood by trees collapsing and knocking each other down like falling dominoes, some from contagion by Roy animals overeating, some from a glut then a shortage of nutrients such as money loaned to the US coming in large amounts and then stopping, and other effects by the wrong kinds of trees growing in this chaotic environment.

The tree shape is ubiquitous in nature, in animals the nerves and blood vessels are laid out this way and plants use this system almost exclusively. This is partially because the concept of roots and branches joining together like this covers the process of going from a general situation to a particular one or vice versa.

For example an animal uses branching blood vessels to get blood to smaller areas in its body, a plant uses roots like this to get to smaller areas of nutrients. A mine might dig tunnels branching ever smaller to follows veins of minerals which themselves often form in branches hence their name. Sometimes these veins are cut by faults and broken up, this is like chaos breaking roots and branches in a forest or a wound cutting blood vessels in an animal.

Because this covers so many ways things connect to each other it is hard for something flowing like a liquid or any kind of movement to avoid a tree shape, rivers also form tributaries and deltas.

For example a chess program might look through branches of possible moves while its database of previous games can look like a root structure trying to find games where a similar position occurred. A family tree can be imagined as future generations looking like branches bifurcating with new births and breaking with deaths or external shocks such as wars or epidemics causing disasters. The previous generations look like roots leading to the present family which looks like the trunk of a tree.

A file manager such as Windows Explorer looks like roots as you go down into various folders looking for resources as files, this is like B roots of a tree going into the Gb soil looking for nutrients. Mass production can look like roots reaching down into minerals mined in the ground and coming together by being combined as products are assembled from different components.

Specialists in medicine for example can be laid out like branches of a tree. Animals on the other hand don’t appear as roots and branches like a tree because they move to attack each other or escape, however we can look at their reproduction over time and see these roots and branches like the family tree.

Breaking the systems of animals, plants, people, societies, governments, states, etc into Roy and Biv separates different kinds of interactions by their structure and when an animal, plant, person, etc acts as a part of a root or branch this structure necessarily causes people’s behavior to change.

For example with a B miner he depends on sending up ore to roots above him, these roots can be like a chain of people moving and refining this ore steadily until it leads to a market. He also depends on others to send nutrients down to him as food and drinks, these might come from a market and have been refined and moved by other people working in lines like roots and branches as well.

If something happens to this chain like a strike by Bi unionists closing down the movement of ore, a factory making food closing down, a truck moving ore or food breaking down, or even a collapsed mine shaft then he can be cut off from this market and the payment he receives for his work. Usually this system has few reserves for these delays and so the mine might be shut down and B miners laid off until the blockage or break in these roots and branches are resolved, the mine might even go bankrupt from this an not reopen if other mines use this opportunity to take over their market for ore.

So like a chain is only as strong as the weakest link these roots and branches are only as strong as where they might break or be blocked, when this happens whether from a contagion or an external shock then the rest of the chain might lose time and money as well. Just as roots and branches use leverage for profit then these problems can caused magnified or levered losses as well.

These disadvantages however are hard to avoid because roots and branches are very efficient in some ways for competition, also each root for example can work secretively like miners might compete against each other to exhaust a vein of minerals faster and make more profits at the expense of each other. However team work is also efficient at some things and has different disadvantages to roots and branches, some jobs then are more suited to competition and some to cooperation.

Just as some situations means that animals, plants, people, companies, etc use roots and branches are the most efficient way to organize some other situation are not suited for these. In that case people tend to move around randomly in teams rather than forming long lines, for example with a fire near a lake people might either form a line passing buckets of water to the fire or each person might just move separately with their own bucket.

According to the distance to the fire, the strength of the fire, the numbers of buckets, etc one system or the other might work best or there might be a mix of both. Sometimes this can be inefficient if people pick the wrong way to organize using the buckets, they might fight with each other, some might be in the middle of a bucket line and be too slow, etc and so usually some people will start acting like I-O police organizing and fixing these problems.

So one of the main ideas of Aperiomics is by classifying people, animals, and plants into different types such as team players and loners, whether they work in chains like branches or roots or moving separately and randomly like teams different behaviors and outcomes can be classified. It turns out for example people who work in chain like in an Iv branch might have adapted to this system over time because of genetics or education and so they react to others in other branches in fairly predictable ways.

For example their family might be used to these secrecy and intense competition, the children might have to compete strongly in schools to get to the best college later. With so much pressure cheating might easily occur without the teachers acting as I-O to watch for it, otherwise it could spread like a contagion as other students realize they only have a chance to get to college if they cheat too.

However if these children were raised in a V environment like being all of the same race or religion then they might cooperate and help each other with schooling rather than hoping the others will fail to make it easier for them to get to college. Some in V would do better from this cooperation but the best students might stagnate more from the lack of competition, the ability of people getting to college might then become more balanced rather than specialized in cramming for tests.

When all the different structures are laid out with color codes a lot of predictions can be made which match very well to what really happens. Sometimes the results are fairly trite or obvious, at other times they give quite surprising results.

This system claims to cover all situations because it is composed of all alternatives, for example a person might be in a team or be a loner, he might work cooperatively with others or compete, he might be open and honest or secretive and deceptive, he might act more like a predator or prey, and so on.

Many of the problems from the GFC occurred for example by imagining people working in this root and branch structure as it falls apart, for example in the bucket line analogy disruptions along it would quickly affect the amount of water getting to the fire. If a root or branch breaks then people become separate from each other and where business used to flow along a branch like subprime bonds being assembled when this chain breaks the whole assembly process can be interrupted.

This is also like a conveyor belt that might break in a factory and stops the assembly of various products. When this break is like with veins and arteries in a person, if there is a blockage or breakage of an artery blood might be stopped in some part of the body like the leg or it might spill out randomly. If this flow is not quickly restored then those parts along these roots and branches that use up their local reserves of nutrients can die.

In a factory if the assembly line is interrupted for too long then workers might get laid off, then they might lose their homes from not making payments, move to other jobs, etc. If so the assembly line might not restart at all or run at a loss compared to more healthy factories without blockages and interruptions to their momentum.

In this way then problems with using too many roots and branches can occur, if the whole economy has too many of these interconnected then blockages and interruptions in some of them from an external shock might close down the whole system. If this goes on for long enough then parts of the system being idled might move to do other business or run out of savings and go bankrupt.

It is also the nature of Iv-B systems to be hard to diagnose because people have to be inside a root or branch to understand how the flow of goods and services really works, outsiders might be seen as spying competitors and misled or not allowed access. For example if outsiders want to observe how an office works people would naturally start to act differently, they might pretend to work harder or be more knowledgeable than they are.

Someone doing a survey like this might get a completely false picture of a company unless they could observe these workers unawares, then they might see theft, vandalism, laziness, salesmen lying to clients, and so on. In this way V investors totally misunderstood the subprime business because they could not observe the misrepresentations being made by both the Iv salesmen and B borrowers. If they had tried to monitor them then the salesmen would have changed their pitch and the borrowers have been afraid to falsify their incomes. This is different from sales managers monitoring a sale, they might also be deceptive and complain there was not enough deception going on but this would usually be denied to the V management.

Because these roots and branches are so competitive they can change or mutate quite quickly with various innovations or revolutions. They can usually do this in secret because of the nature of the system, for example one salesman might come across a better way to make sales but not tell the others so he can win a sales contest. If he was made a sales manager he might share this idea with salesmen on branches that are under him but not with other branches to remain competitive. For all he knew though the other branches might all be doing the same thing but not telling each other.

These mutating roots and branches of Iv-B can then load the system with so much innovation that it can break in a chaotic collapse like the GFC. For example in the intense Iv-B competitive prior to the GFC there was a veritable alphabet soup of names of derivatives and bonds such as CDOs, CDSs, and so on. These would be Iv-B innovations that would either grow quickly and become viral like a contagion or quickly collapse and then they would mutate into a variation of them to be trialed. When this system finally collapsed most of these were not used again, they instead left a toxic waste of securities that have been slowly liquidated and have not been useful to take apart for new growth.

For example in a Biv forest when trees die or shed leaves and branches these decay and become humus which allows the nutrients to be recycled for new plants. When too many plants are Iv-B they might leave dead wood, poisonous leaves, thorns, etc that were too radical an innovation to decay into a humus that other plants can reuse.

This toxic waste then might be reusable over a long time with some parts or companies like plants might have to slowly evolve to handle this waste. In the same way the Fed had to take on a lot of these mutated securities and as of 2011 is still getting rid of them piece by piece such as in their Maiden Lane holdings.

If collapsed Iv-B businesses cannot quickly regenerate into other businesses then the meager reserves of money in the system get exhausted and there are waves of bankruptcies, for examples auctioneers might be used to selling off plant equipment and office equipment to others starting a business.

If this mutated growth of businesses does not leave useful goods then these new businesses could not use them and it will be completely wasted. For example computer equipment mutates so quickly that as it wears out it is useless and is often exported to third world economies as toxic waste. People then often become sick trying to get anything valuable out of it.

Trying to restore the Iv-B system to work again after a collapse or even sometimes after a disruptions in its momentum can in effect create zombie companies and banks, money and goods are forced through the roots and branches but the system is no longer alive in many places because people have lost too much money or it can no longer respond quickly enough to competition and innovate.

Some products might be built that consumers don’t want, for example after the US government subsidized electric cars the car companies built them with few sales. Many green economy technologies were supported with subsidies like this creating goods that could not survive in the I-O market such as wind power, solar panels, etc. Japan also has the problem of zombie banks and companies after a massive Iv-B real estate bubble burst and caused a two decade long V-Bi stagnation. They chose to prop up this zombie economy with government spending and so their government debt has steadily gone up without resuming much growth except in some export industries.

There might be many inefficiencies in the system where there is not enough money to fix equipment or replace it so it doesn’t work properly. Much of the banking system is like this as of 2011, there are so many securities that no one wants to buy that they cannot be easily liquidated, these banks then have to keep them as assets but then they are weighed down by nonperforming capital.

The mortgage market is also like this in the US, many subprime bonds are composed of mortgages that have defaulted but there is no system to get these mortgages modified so that people might be able to pay off a smaller loan. The result is inefficiency where homes have to be foreclosed on rather than keeping the owner making payments. Some bonds do not even have clear title to the mortgages they are made of, when people stop making their payments they sometimes can sue to have the mortgage removed from their property completely.

Such toxic waste then cannot be easily taken apart to make for well-functioning loan departments nor can it work properly in collecting loan payments, the I-O market does not want to buy them because they are too opaque to work out what these subprime bonds are worth or even if they have title to their mortgages. Banks holding these are often only kept alive with bailouts, these bonds then are the result of so much innovation like mutated life that could not survive.

There is a dilemma then, the economic ideas of both letting the system collapse and self-liquidate and propping it up like a zombie both don’t work well.

The reason for both of these is the Iv-B economic system has in effect died in many places from a lack of Gb resources much like a heart attack or strike in a person might interrupt the blood flow for long enough to have large amounts of tissue die.

The only thing that works efficiently is the I-O market and policing which prices these assets and liquidates them. However because I-O policing had been weakened so much as to cause an Iv-B crisis in the first place it is usually too weak to reassert itself to solve the problem, rival theories of how to proceed are usually tried instead.

This is caused by the nature of Iv-B economics itself, it is highly chaotic and competitive because it is desperately trying to beat competitors and innovate ahead of them on rapidly vanishing resources. Because it is not designed to be stable, it thrives on destabilizing competitors, it creates a kind of economy that is not well suited to the kind of sustainable and stable growth people need to have a good lifestyle.

An Iv-B economy might look good for a while with rapid innovation but these goods and services are often mutants that are not popular, become a passing fad, are quickly made obsolete by a new mutant product, or are designed deceptively to break so like the desert plants that flower quickly and die little is left after they collapse except for toxic waste.

It is even worse because their competition has often damaged more stable Biv trees so much that those businesses have gone, the choice then is to either let the Iv-B businesses collapse and hope they grow like a contagion again with more problems, or try to prop them up as zombies. For example in the US the Iv-B shadow banking system largely ruined the traditional model of banking where they loaned money and held the mortgages themselves, they had an incentive there to make sure the loans were safe.

This old V-Bi model of banking largely disappeared or stagnated in the Iv-B boom, after that collapsed with toxic waste the credit system from before also doesn’t work well as the responsible bank manager system built up over decades was let go. In Iv-B this is often referred to a disruptive innovation where older industries are bankrupted by this competition often to replace it with mutated goods instead like the subprime loans.

This zombie option doesn’t work well because the whole point of Iv-B business is contradicted by a slow moving poorly innovating zombie business like for example the zombie banks propped up after the GFC in the US and Europe. This zombie economy slowly causes more debt to accumulate to the state until the companies and banks either fail and sometimes regrow as healthy trees or leave dead wood and toxic waste where new businesses cannot use enough of the infrastructure of the old ones to grow.

This regrowth is unlikely to occur unless the I-O policing clears out the contagion making the system so sick it only survives as zombie businesses. For example it is like someone on life support from having a disease they cannot fight off alone with their I-O immune system, they in effect become a zombie being kept alive with antibiotics and other drugs too weak to move around and work.

This is similar to where someone has had a heart attack and some tissues have died or a narrowing of the arteries have made their circulation too poor for them to move around and have a job. In the GFC companies fell apart and some areas died off completely, for example much of the shadow banking system went bankrupt in some areas and so it doesn’t connect together into a whole operating system any more. Also other areas are sclerotic with V-Bi stagnation because of the wreckage of the collapsed economy and toxic waste, many flows too slowly for innovation and clearing away these obstacles. They are like a zombie patient where a heart pump is needed to force blood through their veins as their heart is not strong enough.

For example the housing market in the US is so clogged up by foreclosed homes, toxic waste subprime mortgages that have to go through the courts to determine who owns what, slow and resisted initiatives by the government to zombify the mortgage market with subsidies on some mortgage payments, slower movement of workers because they can’t go to others areas for work without selling their homes, high repayments depressing the purchasing of other goods and services leading to more unemployment, and so on.

Strong I-O policing is needed to make the system honest enough for real regrowth to occur instead of more fraud, for example many home owners were deceived into taking on these mortgages and so giving them justice would ease the debt on many of them reviving much of the economy without rewarding moral hazard. Instead of bailing out the banks then the government should have bailed out the homeowners who were deceived, prosecuted the bank management and salesmen involved in fraud along with the B workers using liar loans, this in effect would have pumped money through the Biv economic system and cleared away many of the obstructions.

Instead the government is afraid of helping people with their mortgages because of the risk of moral hazard as people might expect a bailout next time. Also some people might resent others being bailed out with taxpayer dollars, however bailing out those that were defrauded would be a way around this.

The alternative is to let these zombie Iv-B companies fail but at this point the Gb resources they were built on are mostly gone, the Iv-B system has then few Gb resources available to make it grow. Also this liquidation can leave pieces of these mutated businesses not much use for sustainable growth and we see this as the toxic waste that companies try to sell off after the crash.

Examples like houses built in areas only good for speculation might end up written off as ghost towns if no one can live there and get a job for a long time. These are like dead wood, a forest that died and the useful humus either blown away or not usable for new businesses. New business trees have problems in regrowing then because of the dead wood of these old businesses choking off opportunities, for example it is difficult to start a new subdivision and build new homes in a sustainable way when these mutant subdivisions are still rotting away around them.

For example a new manufacturing area might prosper if houses are built near it and workers can commute, instead there are these dead wood subdivisions where they can buy homes and commute for long distances wasting petrol. No one would have built these subdivisions in a sustainable economy because they might be too far from employment, too expensive to maintain with materials used people can no longer afford to replace as they wear out, the empty houses breed crime that causes more waste as people are robbed while at work, and so on.

Eventually of course this dead wood like a dead forest will decay enough to be reused as Gb resources but this can take a long time and in the meantime much of the other infrastructure of the economy is lost like smaller businesses that fed off these Iv-B larger businesses. For example the new Iv-B suburb might have had shops built along with it, these shopkeepers barely survive as the suburb falls apart being too far from jobs and costing the local government too much to police and maintain.

As these shops slowly go bankrupt others are left in malls becoming more empty, then people shop there less until the whole building might be a write off. A similar situation has happened in the Iv-B China boom where the government built many shopping malls like this with no tenants at all, sometimes there are high rises of apartments no one can afford to buy in areas with no work.

There is an assumption that the economy will grow to use these buildings but often the plans are also built on mutual bluff and deception, for example the construction companies have every incentive to be deceptive about the prospects for filling these apartments and malls. Only strong I-O police could check through all this deception to determine if resources were being wasted or not, random audits and snitches could give an accurate snapshot of how the economy is mutating in China.

Even if Nouriel Roubini’s predictions were taken as gospel at the time it would have been enormously difficult to do much about it because of the high momentum of the system, Iv-B was developing chaotically by being unregulated. Only the Iv agents and B workers really knew what was happening as they deceived and bluffed each other and only then with their individual deals.

Actually piecing all this misinformation together into a real understanding of the economy would have been difficult, more likely it would have been a compendium of this misinformation and bluff which is what the media was reporting as fact already. As mentioned earlier if poker games were surveyed according to the bets and bluffs players made it would be nearly impossible to determine what cards were really in the decks.

Also with no real proof of a coming Iv-B collapse having the political ability to do something about it is a problem, as we shall see later the political parties usually form into colors mirroring the actual economic situation so this polarization makes it hard to develop the centrist I-O regulatory apparatus that was necessary. This is like watching a poker game and trying to work out not only what cards people really have but when the bluffing is likely to collapse.

This is a serious problem because even after the GFC investors were still resisting I-O regulations in the US, some new laws such as with Dodd-Frank were partially successful.

The Biv system gets into a color imbalance and to strengthen the I-O police may well not be possible even with a detailed understanding of the problem because people will not elect the politicians that will do this.

People in Iv-B businesses are afraid of slowing its momentum because it might trigger another collapse, they then argue against more policing. V-Bi investors also argue against more I-O policing because it interferes with their war of attrition approach to negotiating, for example they might look forward to an Iv-B crash because they can buy up securities and real estate more cheaply.

This is a difficult situation, the idea of economics is generally to promote a healthy economy and to prevent crises so to say that they are preventable but no one would have the resolve to prevent them is a novel way of looking at the problem. It is much deeper than to say that whistleblowers and doomsayers might be ignored by the mainstream, it means that the system will occasionally structure itself to have a crisis like this and collapse to some degree no matter what some people may warn.

For example the various factions in economics have rival theories, Aperiomics tries to unify these theories into an overall system. However it also predicts that these rival theories will continue to fight and struggle against each other just like in the Roy animal kingdom animals will always be predator and prey to some degree. A strong I-O policing system should prevent crises and would probably get most third world countries out of poverty but this only tends to work if the various factions in the economy will accept a strong and neutral police.

I-O Regulations on the financial system are constantly being eroded because some people can make more money from loopholes in them, even though it can lead to a larger collapse later on. This can occur even though it is generally recognized that these regulations are necessary, for example some Iv and B investors might want to secretly and deceptively game the system.

Because they do it secretively they might be able to profit without alerting too many other people and overusing the loophole, this is like R termites eating branches of a tree. If this parasitic behavior is limited then it will not break any branches and so it does not hurt the tree, in the same way Iv-B people usually want to get around some I-O regulations for a secret profit that the general public should not find out about or they will overuse the loophole.

This is like in a Roy society where some Oy and R criminals secretly steal from others, they might uncover a weakness in home security that allows them to disable some burglar alarms for example. They might do this so rarely that the O police don’t bother to work out what is going on and so this becomes a dependable source of profit for the thieves. If this trick is used too much then it starts to become visible like termites overeating branches and the police should then crack down on it.

Iv-B then is always trying to get around the I-O police with a new secret strategy, when this goes too far and causes an economic collapse as with the GFC they might want to reduce this behavior but not want to ban it completely. For example even though deregulating derivatives caused so many problems the banks still want them to be deregulated to some degree on the basis that they will moderate their behavior in the future. However Iv and Oy cannot effectively police themselves because their competitive and secretive behavior will always push them into going too far.

The I-O police though are not designed to eliminate all O criminal and I civil law infractions but to moderate or domesticate them in exchange for preventing the more serious crimes. For example the O police allow some Oy petty thievery because when they catch them they can use them as snitches to watch for the more violent Y gangs.

This is in effect like an O shepherd that domesticates Oy wolves attacking his R sheep into dogs over time, these pets then warn him of more dangerous predators in exchange for giving them some food. The O police then work by domesticating Oy criminals and using them to control crime, in the same way I police such as the SEC in the US tend to domesticate securities crimes by plea bargaining so Iv agents will snitch on others. This acts as a powerful deterrent because if one is caught then he will likely turn in all the others if he can, without this deterrent this financial contagion can grow unchecked.

The process of strengthening I-O policing after an Iv-B crisis then is more complex than just passing stronger laws, there will be strong resistance to this from other colors even though it will help to stabilize the system. Some will still want to commit petty securities fraud or exploit some loopholes and the I-O police should allow this in exchange for their snitching on more serious infractions.

This is why then some derivatives will still be lightly regulated, in exchange for their getting away with some fraud these financial predators will moderate their more serious crimes and this leads to a more stable economy. If Oy and Iv don’t get away with anything then they will either resist all the new regulations or have no incentive to snitch on each other.

This explains one of the most frustrating aspects of the aftermath of the GFC, why it has been so difficult to strengthen these regulations even though their weakening was involved in the GFC happening.

As of 2011 it is still not clear if the GFC is over or whether it will, turn into a lost decade like with Japan. There are often complaints by economists and the public that the deregulation that spawned the fraud leading to the GFC is still in place, also that so few have been prosecuted for their role in the GFC.

Many believe the global economy is still in serious trouble and could collapse into a second Great Depression if their pet theories are not followed to the letter. It gives an impression then that the correct path is like walking a tightrope with disaster on both sides and no real assurance the tightrope leads to safety.

With this possibly impeding crisis the challenge is somehow to fix the economy without precipitating a crisis anyway. For example raising interest rates, not using enough Keynesian stimulus, not allowing parts of the economy to liquidate themselves, not providing enough liquidity to the financial sector, not supporting economies like Greece that have borrowed too much from European banks, etc have all been regarded as critical in getting exactly right to avoid another crisis.

In Aperiomics the only way to navigate these problems with a minimum of uncertainty is to discover what the actual situation is, this involves making some secretive and deceptive Iv-B areas of the economy more transparent with random audits.

This has to occur often and comprehensively enough to get a realistic picture of the global economy with all the problem areas. It also has to be done without companies and people giving up too much privacy, otherwise they will tend to be deceptive instead of providing truthful information.

Another problem is this kind of auditing can discover information that is valuable to investors, for example if companies and banks are hiding toxic assets then they might be shorted. Also if some with corrupt association to these I-O police get this information first they can make windfall profits from insider trading.

However I-O police manage to solve these problems every day, they randomly walk the beats and patrol with cars in ways that do not infringe too much on people’s privacy and this keeps crime down to low levels. Public companies should be able to be randomly audited in this way, they are already subject to this by various tax departments without affecting their business strategies.

These businesses then need not be completely transparent any more than police need people to leave their curtains and doors open so they can be checked for signs of criminal activity. I-O regulators can then see if there are I civil or O criminal laws being broken, also they can get a sufficiently detailed map of the economy to see what problems are likely to occur in the future. This is similar to what is already done by compiling economic data, however it is not the same because it does not consistently include Iv-B secretive and deceptive data.

To compile Iv and B data it is necessary to follow the roots and branches much as police might follow a trail of money looking for terrorist or criminal ties already. For example the subprime bonds could have easily been vetted by auditing random B workers and their liar loans to see if there were discrepancies and if any fraud had occurred, then the Bi related community to see how this money from these loans is affecting that community.

In effect this is what Michael Burry of Scion Capital did when he discovered that the subprime mortgage system was going to collapse and take down much of Wall Street with it. His story was covered in The Big Short by Michael Lewis but if one investor could uncover all of this then clearly the conventional V-Bi data collection is not working. Burry acted like a health inspector looking for signs of contagion, when he found it he tried to uncover enough to see if there was a potential for profit and ultimately invested billions in shorting it.

For example he looked at many subprime bonds and the actual mortgages in them to see whether they were likely to default or not, something that the credit rating agencies who were supposed to be I police themselves were not doing. This is the difference between following these roots and branches looking for problems and waiting for these problems to surface or for whistleblowers to complain about a problem. Many others eventually saw this subprime contagion growing but it was not their job to police it, instead they kept this information secret to maximize their profits from it.

In the same way the I-O police should have followed these subprime bonds from end to end, all the way down to the B workers with their liar loans to check their chances of default. Then they should have checked where these bonds ended up, often with banks using them instead of liquid reserves. By taking random audits of various bonds it would have become clear that these were dependent variables and that B workers defaulting on liar loans could cause some banks to have a liquidity crisis. This is much like checking a tree for termites, picking random roots and branches and drilling into them to look for signs of them.

By randomly selecting and mapping out these roots and branches many of the Iv-B problems would have been exposed much earlier with minimal interruption to the privacy of those doing business. Liar loans could have then been policed better by warning people they could be committing I civil and O criminal fraud, also by uncovering some salesmen altering loan documents and prosecuting them this could have also lowered the numbers of subprime bonds defaulting.

The chaotic contagion throughout the Biv economic systems would have been seen and the need for I-O policing made obvious. Like with health inspectors it is necessary to proactively inspect random areas of the Biv economy to counteract chaotic growth in secretive areas. This is similar to random patrols that police do which stop patterns of crime from forming.

Once this mapping is done policing and shoring up some of the affected parts of the economy can stop collapses happening just like a contagion can be quarantined, but exposing these problems might also create some panics which will then precipitate some crises. However usually this is not a systemic problem, frauds in companies are regularly exposed such as Worldcom and Enron.

It is important however not to confuse cause with effect, in some ways weak I-O policing causes contagion and recessions by allowing fraud and misallocation of resources in booms and busts. However pressures on the I-O police in the economy cause them to weaken, for example Enron actively worked to deregulate the markets it exploited.

The best way to resolve causing panics from exposing fraud is still with policing because while it exposes some problems this will also reassure investors and customers that fraud is being looked for and that other businesses are more likely to be safe. After the GFC there has been a fear of looking at companies too closely for fear of causing a panic or of not liking what is found.

However this can be avoided by targeting industries one at a time much as tax departments do, the problems randomly found with audits will cause the others to try and resolve their deceptions giving them time before they are likely to be audited. Not only does this make investors feel more secure but the stronger I-O police cause I-O markets to function more efficiently as this forces securities not valued correctly in companies to be sold or revalued creating liquidity. Also companies with strong I-O are like trees with strong trunks and in the Roy animal kingdom with a strong middle of the food chain, they are always more stable and so the chance of a financial collapse will lessen.

Much of this did in fact happen before the GFC with subprime frauds lending being exposed by regulatory agencies, the problem was the full extent of the problem was not understood because it was not mapped out throughout the economy. The other problem was these agencies were not actively looking for problems but relying on complaints and whistleblowers which were always far behind the actual state of the contagion. In effect it is like waiting for complaints of people seeing cockroaches and rats in restaurants instead of actively looking for them.

Like with health inspectors I-O economic police cannot just look where it is convenient, wherever the economy is opaque can be a breeding ground for this contagion just like policing needs to patrol in all areas randomly.

For example wherever economic data was unavailable this should have been treated as a possible haven for chaotic contagion and been audited randomly. Even well-trusted economic data can sometimes be deceptive, this can also be checked by random audits.

In the US a schooling initiative called No Child left behind was trialed where regular tests were done to look for poor performances of teachers and students. However in many cases these tests were gamed by teachers trying to avoid being fired, by randomly checking the performance of students and teachers in classrooms deception can be reduced before cheating becomes a contagion. For example once some teachers realize others are cheating to improve their student scores they might decide to do the same so as not to look bad by comparison, this spreads the contagion of cheating as with the use of steroids in the Olympics.

Money tends to flow along these roots and branches in an economy like a fluid just like blood flows along veins and arteries, it generally flows in an equal and opposite direction from goods and services unless it is a loan.

Even loan money however tends to bounce back to its original position along with some accumulated money as interest, for example a bank might loan money to a company and eventually this money returns. A deal then in Biv represents ideally an equal and opposite reaction like in physics where money moves in one direction and goods and services in the other, a loan is like money bouncing off a company and rebounding to the originating bank and so also moves as an equal and opposite reaction when it is repaid.

In a Biv economy each transaction can be a positive, zero, or Negative Sum Game. Usually it is assumed that a Biv transaction is a Positive Sum Game which means that each side of a transaction make a profit from it though one side may profit more than the other. A transaction might be a Zero Sum Game in G and Gb which means that one side wins and the other side loses an equal amount, a Negative Sum Game is usually in Roy and is where both sides lose but one side usually loses more than the other.

Often these Negative Sum Game transaction are the lesser of two evils, for example a war might be fought where one side wins but both sides lose more than if there had been peace, in the GFC many companies made losses on deals trying to get liquid but some lost more than others. For example as the market crashed in the GFC many tried to dump securities for less than they had paid and those who made a smaller loss in effect won the Negative Sum Game.

Generally the interest on a loan is like rent on the money, someone might also rent a car and receive money as another kind of transaction. Rent then is also an equal and opposite reaction as in physics, a person gets value from renting and pays an equal value in money back for this.

In Aperiomics money can be in various phases like water is a liquid, ice is a solid, and steam is a gas. Money then acts like a solid in the form of debt, as a liquid in the form of generally liquid money, and as a gas in terms of money in a bubble or an overheated economy. A solid is where the atoms cannot move around from one place to another, debt is like this in the sense that a bank might loan money on a house and then this money only slowly return with repayments.

A liquid can move but is relative incompressible, here liquid money can move in transactions but it generally doesn’t affect prices as it does. For example someone might buy a house and there is frozen money loaned to the owner as a mortgage on the house. This owner might earn a wage and buy groceries and this movement of money doesn’t make the groceries change price. If these groceries were very rare then the demand for them on payday might be great as many workers went to buy them forcing the price up. If this money causes prices to move then it is like a gas and it can for example inflate a bubble by distorting prices around it.

For example in a stagnant economy like the US after the GFC money is mainly frozen in that many people have debts which slow them down, as these get paid off the economy will move to a more liquid money state which is where the I-O market is functioning properly. In a bubble economy money can move very quickly and its momentum causes prices to change, for example when it flowed into housing this steam money forced prices to go up around it.

When the real estate bubble burst in the GFC this is like a real bubble bursting where energy is lost and the steam money reverts to a liquid, when it does the prices of the houses dropped because they were no longer distorted by the momentum of this money. Much of this money also became trapped as solid money because some houses had more debts than they were worth. Like with ice this money could not move as the house could not be sold for this money, the debt was in effect frozen.

In a V-Bi economy money is more stagnant, it moves with little energy like a slow flowing river or a swamp. Because of this frozen money or debts might take a long time to pay off and the chilling effects of this frozen debt make the economy sluggish. This tends to retard the movement of liquid money and makes it harder for a speculative bubble to form even in small areas of the economy. Money can also become frozen when the I-O police order that it cannot be moved, like when it is suspected to be from a crime a bank might freeze the accounts of a person.

In an Iv-B economy this money moves in B roots and Iv branches, this then is like water moving through hydraulic pipes. This concentrates the flow of money and is like it moving in a faster flowing river and its tributaries whereas a V-Bi economy is more like water moving through a swamp. As in hydraulics water moving in pipes can increase its leverage and so this can model the use of leverage in speculation.

For example money might move around various businesses in an I-O market where wages are paid and people buy things. Generally this money might be liquid because its movement doesn’t affect prices much.

However a typical market might use all three phases as frozen liquid and gas. For example an Iv agent might use frozen money to buy stock and then tries to make money act as a gas in the sense that the prices of his stock might go up and down a lot based on the demand for it. If 90% of the money in the stock is this frozen debt then a doubling of the stock price might occur when the goods are hot so to speak and the agent would make ten times his outlay from this leverage.

As his stock becomes more popular there is more demand or more pressure from buyers for it, this pressure is like pressure on the Iv agent to sell the stock. When this is elastic demand then this pressure causes the stock price to rise which is another way of saying that it take more money to buy a given amount of the stock. This can be modeled as money moving up these Iv branches and make them bulge outwards, the bulging represents that the money is influencing the price of the stock.

Some frozen money is used by the Iv agent as debt for leverage as mentioned, these pipes then contain this frozen money like ice which reduces the volume of liquid the pipes can hold. Because 90% of the pipe is taken up by solid money then this makes a given amount of liquid pressure or demand for the goods make the agent’s profit go up 10 times more than it usually would without leverage.

When this money moves with higher energy as more demand then it can become a gas or steam, then this pressure on prices can increase so that more and more steam fits into the pipes making them bugle outward even more like a bubble shape. This steam pressure pushing against the stock the agent has is like the cost of buying the stock goes up even more. If this demand lessens perhaps because of a panic or other stock becomes available then this pressure of money or demand will lessen and the pipes will return to their usual shape as the stock price drops down again.

These B roots and Iv branches move money around an economy, for example instead of money just moving randomly it is usually highly directed. A wage earner might receive money in a regular stream into his bank account, it might appear to be pumped into there once a week. Pumps then move water around and a Biv economy in effect has pumping mechanisms that make money move around in a cycle like a pump.

This pump has valves, for example the pressure to move money from an employer to his workers causes the wages to be distributed but the bank should not accidentally move the money back to the employer without permission. From his account the worker might make purchases and loan repayments and this money also moves like a directed stream to shops and banks, if these are periodic payments then this money might also move like it is being pumped.

## There are two kinds of money pumps, one where the money might move in a constant stream and others where there might be a time between pulses of money being sent.

An Iv-B economy is prone to booms and busts, this is like an economy where there are many roots and branches like pipes which make money move at high pressure. When this money moves with higher energy its starts to act like a gas deforming the pipe shapes which is like deforming the prices of goods and services around it.

For example a business with high momentum might start to pay more for food, office supplies, software, etc because it would need them to be available at shorter notice. When an area bulges like this it is a bubble, for example with real estate prices. At the time subprime lenders needed to move money quickly because so much of it was available, as they grew exponentially in size this distorted the real estate prices around these loans like the Iv-B roots and branches bulging with money.

These pipes are like a boiler room and sometimes the pipes can burst when they bulge too much like an aneurysm in blood vessels, when the economy fell apart in the GFC it was in part because the high pressure of this liquid and steam money in the pipes caused them to fall apart. Some money can then be lost, for example as the subprime lending market fell apart loans became more wasteful and more fraudulent commissions were paid which is like money spewing out of a broken pipe.

Because these pipes are like roots and branches this is similar to the idea of a Biv economy being like a tree where the roots and branches might break from an external shock like a storm or earthquake. In the same way an external shock might make these streams of money lose connections with each other, it is then like water or steam pipes bursting. In the same way of a tree is wounded or has broken branches it might lose sap like a broken pipe, the tree like blood vessels in an animal might also lose blood when they are cut or burst from too much pressure. More will be explained about this later.

Money then can move in roots and branches like pipes in an economy, it can also be held in larger pools like storage. A bank for example might be like a large storage tank of liquidity and small pipes as roots and branches might move this money to other parts of the economy. The two main kinds of this money movement are similar to the Heisenberg Uncertainty Principle of time and energy, or position and momentum, this is why there is a fundamental uncertainty in economics.

In Aperiomics this uncertainty can be reduced to a minimum with a well policed I-O market, the minimum uncertainty can be reduced to is referred to as h as with physics. So for example in analyzing the stock market there is an uncertainty as to how the shares will move, reducing this to a minimum in a situation would be h. A share trader might use algorithms to try to predict share movements, in Aperiomics the limit of the certainty in which they can do this would be called h.

Iv-B is energy or momentum related and V-Bi is time or position related, in Iv-B pipes for example liquidity can move with high energy or momentum. In V-Bi storage tanks or pools money can sit in one position for a longer time. This gives energy versus time or momentum versus the position of this money, it can also refer to any goods and services.

For example an office equipment business might be Iv-B and compete by fast delivery or being able to get through obstacles for fast delivery like Fedex might claim. Workers might be Iv-B by getting paid according to the work they do so working faster as a miner might make someone more money. An Iv salesman might make more money by being more pushy as a closer or seeing more clients in a day.

V-Bi goods and services rely on time and position for profit so for example a car dealer might make his money from having a very good position so many clients see his business. If these people drive too fast past his dealership as Iv-B then this might hurt his business, for example slower traffic or a traffic light out the front might make more people see his cars. Having a lot of cars in stock would mean people can spend a lot of time looking them over like people in a supermarket instead of being hurried, this can make people buy more.

A Bi supermarket cooperates more with its customers by giving them plenty of time, making the features of products transparent, and having a prominent position convenient for them. Near them an Iv discount store might make its money by competitive pricing, low margins, pushy salesmen, deceptive advertising, and so on.

So Iv-B is a competition of secrecy and deception like a poker game where people win by having higher energy and momentum, doing deals quickly and keeping a given financial position for a shorter time. When Iv shops like this advertise the ads are usually high energy and pressure to buy urgently or miss out, when Bi shops advertise they stress a friendly cooperative environment and no pressure to buy. Some shops might ideally combine the two in an I-O market, for example a department store might have some Iv bargains with somewhat deceptive benefits along with slower moving more transparent goods.

Games are also based on energy or time, for example a poker game might heat up as people bid and bluff more as well as the hands being played more quickly. Chess is a more open and transparent game and so is usually played more slowly and in a positional way.

Time and energy then relate to game theory in economics, for example the prisoner’s Dilemma works because the criminals have a limited time to decide and because they can be deceived. There is a momentum to plea bargain quickly and if they do not make a deal they might be penalized for it, in effect it is like a department store advertising time limited bargains.

There is also a time component to this when the same kinds of plea bargains occur many times such as with a Ro or Y gang. They might see over time who snitches on the others and can punish them for it later, this makes it more transparent and take away the time urgency so it becomes a high time and low energy situation.

In the same way an Iv-B economy might heat up and become a steam money economy when deals move with higher momentum or demand, are concluded more quickly, money moves faster in a competition to get to a bargain first, share prices might fluctuate more rapidly with higher velocity, and so on. Like with the prisoner’s dilemma in Iv-B those who take too long tend to miss out on profits.

A V-Bi economy has high time and low energy, this is where money moves more sluggishly or is frozen as debt. A solid has less energy than a liquid which has less energy than a gas. The high amount of time available means that it can take longer to do things without losing money, there is less urgency in closing a deal because there is less momentum or demand and also because a better deal might come along instead.

An I-O market represents a compromise between the high energy strategy of the Iv agent and the high time strategy of the Bi community. The Iv agent is always trying to hurry up a sale, he wants to stimulate desire and demand for his stock because he makes more money from this higher energy. The Bi people however use time as their strategy, they wait for the market to cool down so they can buy more cheaply, they take their time in case a better deal comes along, and so on.

The compromise between the two represent a deal, if the Iv agent does better then there is more energy and if the Bi buyers do better there is more time. In Biv this is a Positive Sum Game where both sides benefit but a side might get more energy or time as a profit. If one side loses as much as the other side wins then it can be a G-Gb Zero Sum Game deal.

This is because the divide between G public property and Gb private property determines the worth of goods, if they are worth more than this line then they have value in a Biv society and if not then they have no value except as public property. So someone selling goods like this, for example they might find a marginally useful piece of rock for a garden ornament and might manage to get something for it if Gb but nothing if it is G and no good for private ownership. If they can’t sell it they might throw it away and becomes public property again.

This then represents a clear dividing line between value and no value. It is a Zero Sum Game because the person who finds it gets it from G public property and pays nothing except for his time and energy in finding it. He might then get a price for the rock that means he makes a profit on the time and energy spent or a loss which is a Zero Sum Game for him.

In Roy a Negative Sum Game is where both sides lose but one side makes a profit relative to the other or compared to no deal in time or energy.

For example an Oy predator might chase an R prey, both waste energy in running but if the Oy predator wins he gets energy back from the R prey by eating it, he loses less energy than if he had failed. If the R prey wins it wastes energy running but is better off than if it had been eaten, it can get this energy back by eating more V grass.

With Y predators chasing Ro herds this is still a Negative Sum Game but one of time, a Y predator might waste time fruitlessly stalking a herd and if Y succeeds this time loss might be vindicated. A Ro herd might try to wait out the Y predators by staying in a tight formation and away from grazing or waterholes, this waste of time might be vindicated by their survival.

O animals combine time and energy as their strategy in an uncertain way also represented by h as a minimum. For example they might sometimes attack or run away with high speed or energy and at other times wait for long periods to catch prey or evade capture.

In the GFC much of the financial sector turned Roy in a Negative Sum Game and so while companies lost money they often lost less than if they had waited, this then was an Oy-R trading situation. It is like Iv-B where people need to move quickly for bargain, in Oy-R they need to move quickly to stem their losses.

Other parts of the market were Y-Ro which is like the V-Bi banks that profited by keeping pools of liquidity for long periods and being able to wait for profitable business. In the GFC this became Y-Ro and these banks were losing money because no one could use their money because they had no good security. These banks then had to waste time and hope for good deals to come along which might offset the losses from this waiting game. For example many banks got stuck with toxic subprime bonds which they have to wastefully hold for a long time rather than sell quickly into a bad market. They lose with both strategies because they end up with less than what they paid for the bonds.

Companies in the I market make profits in Positive Sum Games where both sides benefit, for example an I middleman might work between an Iv agent and a Bi customer perhaps by providing stalls in a swap meet, being a market maker in stocks, or operating shops in a mall. In a Roy situation such as the GFC these markets became Negative Sum Games where they lost as well, for example a swap meet might struggle to stay in business as buyers and sellers try to rip each other off to minimize their losses and so they might need to use the O police more.

A market maker might own some shares to maintain liquidity in a market and in the GFC they might have lost money as both sides tried to minimize their losses by acting like predators against them. An I mall might become more empty in a recession and the owner loses money over time.

As the Iv-B economy grew in its energy and momentum prior to the GFC the bubble in real estate increased and more money acted like steam distorting prices. When this bubble burst the system became Roy for a while and so buyers and sellers became more like predator and prey with buyers trying to find bargains that sellers lost money on.

When the boom was Iv-B this momentum was often smoother as the prices tended to move higher in one direction, when the bubble collapsed the prices tended to move lower in one direction with a similar momentum. When the Iv-B boom grew prices went up with this strong momentum until they in effect hit a ceiling that resisted this upward pressure on prices, for example credit became too hard to get at those prices or customers started to dry up. When the market hits this wall like a car going too fast and hitting a brick wall it shatters.

This can be like when the Iv-B market chaotically reaches a tipping point and then prices are in free fall, like an Iv-B plant growing too fast might hit a ledge above it which breaks it and making it tip over and fall. When the prices reach a floor, like the broken tree branches hitting the floor, this is in effect like an impact which stops this downward momentum causing more destruction. There are then two limits to Iv-B growth causing chaotic damage , one is a ceiling and the other a floor.

When the Iv-B boom is growing there can be this upward momentum but there is also a high velocity trading of deals which is like atoms bouncing off each other quickly in a hot gas getting hotter, a deal in Iv-B is a Positive Sum Game which means with each deal both sides gain some energy.

When this Iv-B bubble hits the ceiling it can rupture the roots and branches carrying this money, goods, and services which makes them escape randomly to some degree causing the system to lose energy and momentum. This is like the Iv-B tree growing too fast and then shattering against a ceiling, the branches and roots might break from the shock and sap is lost. While in a tree the motion is much slower and the chance of shattering less the process is the same.

When the Iv-B system gets this downward momentum then these deals can become Oy-R in a Negative Sum Game where the speculators try to minimize their losses. Because the system has been shattered by hitting the ceiling these Oy-R deals also tend to tear the system apart more with many bankruptcies, some hope to recover if the decline in prices slows gently enough while others are trying to short the market.

When it hits the floor this is the limit of the price drops, the downward momentum is halted with more shattering of the roots and branches and there may be a dead cat bounce of some revival but usually the market stays at this low level with some damage.

Now that the Iv-B momentum has been shattered by hitting the ceiling of the boom and the Oy-R momentum shattered by hitting the floor of the collapse there is little energy left and so the system cools to become more V-Bi with Positive Sum Game deals and Y-Ro Negative Sum Game predation. The market then stagnates until this damage heals and some green shoots of growth can begin to revive it. This has been the situation since after the GFC as of 2011.

When the demand for the boom goods cooled, in this case for US real estate and the advantage shifted to those with more Y-Ro savings who could take their time to get the best bargains. In the boom those that took too long missed out and lost money, in the bust those who could not afford wait lost money because they had to sell quickly.

Just as the speculators in the Iv-B boom tried to hide from and deceive I-O policing they also tended to hide from and deceive it in the Oy-R crash because they were trying to rip each other off with more fraud to minimize their losses. In the Iv-B bubble there were V-Bi parts of the economy that resisted I-O policing as well, resistance is a delaying tactic where they use their time advantage and wasting the energy of the police to make profits.

For example a V-Bi bank might have overcharged some customers or used Iv agents deceptively, when it is investigated it might use delaying tactics to make it seem too long and frustrating for the police such as the SEC to pursue. Bi unions might use similar tactics in resisting a company with strikes and slowdowns to demand higher wages, if the I-O police try to move them out of a factory then they might try to stay in that position to break the momentum of the company’s operations.

When the Iv-B boom collapses these V-Bi businesses and unions can turn predatory as Y-Ro and also try to frustrate the police, for example the V banks become like Y predators and use their liquidity to buy up distressed companies cheaply. Bank of America did this with Merrill Lynch and Countrywide, Morgan Stanley did this with Bear Sterns, Barclays did this with part of Lehman.

In the Great Depression Bi unions turned Ro and violently attacked some businesses to keep their jobs and to get pay rises, both then resist the I-O police because in this Roy situation of scarce resources they can throw their weight around for profit and often to minimize their losses from earlier. The economy can then change from Iv-B to V-Bi, or Oy-R to Y-Ro rather than prices being reconciled more efficiently in the I-O market. This V-Bi and Y-Ro economy can become stagnant as growing businesses are dismembered, eventually this will cause discontent and a revival of the Iv-B boom economy and the cycle starts again. The only way to avoid this cycle of booms and busts punctuated by stagnation is with strong I-O policing and markets.

A perfectly functioning I-O market is where time and energy is well balanced, prices here have a minimum uncertainty of h because people have the best situation to determine exactly what goods and services are worth. For example in real estate a strong I-O market might mean that a price for a house can be determined with little uncertainty so h is very small.

In an Iv-B boom the price might change with high energy or momentum and so there is more uncertainty about the value of a house the longer the time someone takes to make up their mind. For example if they took a week to arrange their finance then in a boom the price might have gone up in that time or the house they wanted might have been sold to someone else, if they took a day then the price they would pay would be more certain.

If the market was more V-Bi then prices of houses would be very stagnant and hardly moving because of low momentum, someone could take a long time to decide and the price would be unlikely to change much. However in such a market the momentum is more uncertain so it is much harder to tell whether the prices of houses are going up or down.

In both cases though as long as the market was well policed and not corrupt the value of h or the uncertainty of the price of a deal might be about the same, in effect the buyers and sellers can each reduce this uncertainty to a minimum. This is because when the momentum of price changes is high a faster decision in buying will give a similar uncertainty in getting the house as when the momentum is low and the person takes a longer time to make a decision.

For example say a buyer wants to have a 90% certainty in getting a particular house, in a boom he might have to make up his mind in an hour but in a stagnant market he might have a week and still have a 90% chance of getting the house. Say he wants to estimate with a 90% certainty whether the momentum of the market is going up or down, if it is going up he wants to buy and if it is going down he does not. In a high energy market the momentum is clearer and it takes less time to work it out to a 90% certainty, in a low momentum market it takes him longer to work this out.

These then would tend to have a constant like h or Planck’s constant which would define the limits of certainty in analyzing economic situations. In effect though this could probably not be worked out to any more than a very rough value changing all the time, it might be possible to get more accurate values of h in a particular commodity such as for example gold or oil.

This value of h would be defined in terms of energy and time, for example in real estate it might be in dollars per day. An Iv-B market going up might increase by a thousand dollars a day for example, in a V-Bi market it might go up a thousand dollars a month which might be roughly $33 a day. This can also be seen on the share market with turnover of a stock, for example a million IBM shares might change hands in a day indicating a certain amount of momentum compared to another number of shares that do not change hands so they maintain the same position.

This gives a value of h which can be calculated as momentum compared to position, if the share price is energy then this might be accompanied by a price rise as an increase in Iv-B energy in a bubble in a given V-Bi time period of a day. Bi pension funds and V investor might tend to hold these IBM shares for a longer time rather than trade them, V-Bi then is more positional. Iv-B investors such as some hedge funds using leverage and high frequency traders might only keep shares for a short period of time and sell quickly, they use arbitrage to try to detect momentum in stocks.

For example if a share happens to go up too much compared to similar shares then this can be like its momentum hitting a ceiling and so this momentum should reverse and the stock price fall. In arbitrage this momentum is estimated and how fast the arbitrage opportunity is detected and exploited can determine the profits made.

Because Iv-B moves according to energy or momentum and V-Bi moves according to time or position then h can be used as in physics to define this uncertainty limit in many other things as well as economics and markets. More of these other applications of Aperiomics are described in my first book but for example in a Roy society there might be a civil war raging, there can be a Y dictator battling Ro demonstrators and their Oy secret police are targeting R terrorists.

This then is a Y-Ro and Oy-R disconnect because there might be no strong O police in the center giving justice for everyone. In war there is a fog of uncertainty but both sides try to minimize this as they use time and energy to their advantage. For example an army might measure casualties per day or the number of bullets per day as a metric for how the war is progressing though these can be uncertain because of Oy-R deception. The momentum of a war might be calculated by the amount of territory gained or lost per day. More of this will be explained in an upcoming book.

This uncertainty in I-O markets is restricted because the discovery of accurate pricing between Iv and Bi is limited by what can be seen with the secrecy of Iv and their high energy low time trading and the transparency of Bi who tend to buy for a long term high time low energy strategy. So for example Iv agents tend to operate more secretively and deceptively which increases uncertainty but Bi buyers tend to wait for longer and examine many different deals which also increases uncertainty. A particular deal might seem certain until a deception by the Iv agent is exposed or the Bi buyers wait for so long a better deal turns up from a rival Iv agent.

In high frequency Iv-B share trading where bargains might exist only for a fraction of a second those with faster computers closer to the stock exchange might get to them first, this reduces uncertainty down to where the speed of light along wires to a stock exchange might determine who makes a profit.

In this case then h is limited by the time it takes to find a deal by light getting to the trader’s computer, the time the computer takes to process an algorithm and make a trading decision, and the time it take for the order to be received by the I-O exchange. This then is a high momentum low position situation where the trader might rarely hold stocks for a long time.

When an Iv-B market gets too overheated this causes the bubble prices of goods and services, securities, real estate, etc to become highly unrealistic if people had enough time to think about the situation. For example in retrospect the bubble prior to the GFC was dangerous but often financial traders had no time to think much about it, the momentum of prices was so strong it was hard to disengage themselves from it.

This high energy can cause a market meltdown when it hits the ceiling or from an external shock, the momentum expends itself more like branches falling off a tree or a cars flying off a collapsing freeway in an earthquake. This process of a high energy meltdown will be explained in more detail later.

Low energy areas in an economy are like V-Bi where with a longer time to do business they are like solids or thick liquids, money moves either slowly or is fixed as debt like a solid. These areas might also lend out their savings to Iv-B areas of the economy much like the Iv branches a B roots of a tree borrow nutrients from the V leaves and Bi upper root system so they can grow faster.

For example Bi pension funds might be intended to be a safe long term investment for Bi unionists, the stagnation in the V-Bi older industries however might make the returns from investments low or even dangerous if businesses are going broke. Prior to the GFC the US was losing a lot of manufacturing jobs so this sector became highly stagnant or decaying, investments in these kinds of business might have low dividends or even losses if they closed their doors.

This creates a temptation to loan this money into the Iv-B bubble with higher returns and where the risk is hidden and deceptive. This is similar to the I-O market where Iv agents sold subprime bonds with deceptive amounts of risk to Bi pension funds because of the higher yield.

It also seemed to be safe because these Bi funds were often buying bonds based on B and Bi people buying homes and so it deceptively seemed to be an investment in their own communities.

However stronger I-O policing like in most markets would have exposed the real risk in these subprime bonds and prevented these Bi pension funds from losing so much money on them.

High energy areas where money moves much faster are usually associated with the exponential growth of innovations such as computing, the internet, derivatives, computerized trading, arbitrage, subprime bonds, Credit Default Swaps, etc and can move to the gaseous money phase with a bubble.

For example prior to the GFC the US economy had experienced the tech bubble which while it had partially burst had continued to improve productivity and innovation in businesses. Computerized exchanges experienced exponential increases in trading along with the rise of stronger computing power, exponentially more physicists and mathematicians becoming quants designed trading programs, more loans were decided by computer programs than human managers, the internet became a medium for more financial roots and branches to spread, more people made electronic payments of bills than using paper money, and so on.

This then caused an Iv-B area in the economy to grow exponentially underpinned by these scientific innovations, in some ways the real estate and subprime boom was fuelled by increasing productivity and scientific discoveries much as in the boom in the 1920s prior to the Great Depression.

At that time increasing productivity came from the use of mass production such as in making cars, the increasing use of cars, and so on. When Iv-B scientific innovation forms a bubble then it can often collapse causing more devastation because the older businesses have gone bankrupt because of these newer industries but when the bubble bursts much of this new infrastructure also collapses.

These V-Bi areas of the economy such as manufacturing were stagnant by comparison to this new Iv-B economy and so they loaned their money into the Iv-B bubble. When an economy is disconnected it has these separate Iv-B and V-Bi areas, there is an average temperature or energy in it reflected in the overall GDP numbers but some areas are hot as Iv-B while others areas are cool as V-Bi.

This is also like in the Roy animal kingdom where Oy predators like hyenas and R prey like gazelles move quickly with high energy while they boom in numbers and sometimes bust leaving both of them starving. Y lions and Ro buffalo might move more slowly because their survival strategy is in taking their time and being more careful, moving randomly and having offspring at a slower rate. O animals like a shepherd try to balance this energy and time strategy and make the food chain more stable just as an I-O market can make an economy more stable by trying to balance energy and time in prices of goods and services.

A shepherd also balances time and energy like the O police do, Oy predators like foxes might try to use their speed and deception to quickly get past him and grab one of his Ro sheep. Some R sheep might try to move quickly away from the foxes but the sheep tend to move with less energy and more time as a flock, the O shepherd then has some time to drive away the fox. Other Y predators like wolves might move more slowly and take their time to stalk the herd and attack in force rather than deceptively.

In the same way the O police balance energy and time in policing a Roy economy. Oy petty thieves use their speed and high energy to rob R people, when they do this successfully there can be an increasing momentum of crime called a crime wave. R people try to evade these Oy thieves and some such as addicts are thieves themselves.

Their speed and energy is counterbalanced by the Y mafia like gangs who take their time in planning crimes and stalking their prey. Ro neighborhoods prepare themselves slowly and methodically to defend a position with vigilantes, gangs, and neighborhood watch against these fast moving high energy thieves. The O police then try to balance the high energy of the Oy thieves with the patience and time of the Ro vigilantes.

In the Biv plant kingdom there are Iv-B plants that grow with momentum and die more quickly, V-Bi plants like grass might grow more slowly and are stunted in size but they can last much longer in adverse conditions like a drought. Other plants are more stable as a balance between energy and time.

When the economy is booming it is becoming overheated and there are more bubbles forming. This can be like as water is heated, eventually it develops many small bubbles because the water is so hot everywhere. In the same way an overheated economy has so much energy and demand in it, money moves so quickly to grab bargain that it doesn’t take as much for bubbles to form and prices to grow quickly in many areas at once.

For example prior to the GFC there was a boom in art, real estate, share prices, and other collectibles. These bubbles need not be related, investors become used to moving quickly to grab bargains causing each bubble to form while other areas might be much colder and prices are more stable. For example in the real estate bubble the price of some foodstuffs might have been stable while at other times some commodities such as oil, wheat, cotton, etc also became bubbles for little economic reason except that hot money moved quickly if it saw the possibility of a boom.

A crowd can also experience this momentum making them move too quickly so some get trampled. For example when there is a demand to get into a theatre for a good show there is a strong pressure and momentum of people pushing their way in, if the theatre catches on fire then this smooth momentum will break into chaotic pushing and shoving as people get out any way they can. This is also like not having speed limits on a freeway to control this momentum, the pushing of cars from behind can cause some to lose control make a pileup like a market collapse.

A market meltdown can have a fire sale where the momentum of some sales push other sales to change their price quickly much like a mob of buyers pushing each other at a sale. This can be like a building falling apart in an earthquake where the pieces ricochet off each other as they fall. Often it is this momentum breaking up that causes so much of the financial damage, along with the associated panic which itself is momentum without order.

When money acts like a gas it exerts pressure on the assets around it as well as the walls of the roots and branches as mentioned earlier, this pressure can be caused by high pressure or high velocity. For example with an Iv-B economy there can be high velocity of money and like in a carburetor with the Bernoulli Principle this velocity lowers pressure and tend to make money gaseous like water vapor rather than steam.

This kind of money can move more quickly to grab a bargain but there is less pressure to buy, for example in a real estate bubble investors might try to get bargains by moving very quickly but if the prices go up too much then they might not feel under pressure to buy.

This is a common situation in a bubble, there might be a lot of demand or pressure from other investors and this high energy pushes up prices very quickly so those trying to get bargain with high speed might miss out.

They face a dilemma though because they might think this high demand for real estate is unwise and yet it might force up prices much more than they would make chasing bargains with their fast money.

In effect then Iv is high energy and low time but these are not exactly the same thing, someone might profit in a boom with high energy or momentum and others from low time or buying quickly. For example on the share market a computerized trading program might look for momentum in stocks as high energy while another program does high frequency trading trying to use speed for profit.

When a price of an asset goes up it is like the value of money relative to that asset goes down, this is seen for example with gold which goes up partially because of a belief that money is being worth less because of quantitative easing and the fear of inflation. In a real estate boom a house is worth more because money becomes worth less over time in the kind of house it can buy.

This inflation or decrease in the value of money can be local or generalized, if local it is Iv-B like a bubble where prices rise in some areas and stay stable or fall elsewhere. This is because the energy and momentum are concentrated in smaller areas by being fed by these roots and branches.

General inflation or deflation is V-Bi as random price rises diffusing through the whole economy such as occurred in stagflation in the 1970s. When the US economy had its I-O policing weakened there began to be more Iv-B bubbles in some areas, this started the Great Moderation where the V-Bi economy had low inflation and localized bubbles of Iv-B inflation occurred in some stocks, real estate, commodities, etc instead.

Iv-B Money can move with high pressure or momentum and slow velocity as well as with great velocity and low pressure, this can be from using a different amount of leverage. For example in the last stages of the boom before the GFC companies were using ever higher amounts of leverage to compensate for the boom starting to run out of steam.

This allowed money to move faster like the vapor money mentioned even with low pressure, it was looking for bargains but was starting to baulk at the high prices as they hit the ceiling and began to recoil. This is like a mob where people are pushing from the back but those in the front are beginning to slow, this creates a compression in the middle of the crowd that can rupture in the sense of hurting people from this pressure.

It can also rupture the roots and branches, for example as the subprime lenders increased their momentum in making more subprime loans of more toxic quality the number of sales of these bonds decreased, they were in effect clogging up the pipes though there was intense pressure to move these bonds along to be sold. Some bonds then in effect became deposited in these B roots and Iv branches like the equivalent of cholesterol in the arteries making it more likely this pressure would rupture these pipes.

For example Merrill Lynch started accumulating large numbers of subprime bonds as it found them harder to sell, Fannie Mae decided that the yield on these kinds of bonds was so good that it decided to keep more of them rather than trying to sell them, Goldman Sachs tried harder than anyone to get rid of all its toxic waste but was still caught with some of it in the GFC.

Earlier in the boom there was more energy in Iv-B but less leverage mainly because this leverage wasn’t needed as much, for example the real estate boom had lower prices in say 2004 but there was more demand for houses then.

People were being pressured to get into the market rather than aiming to move quickly to grab a bargain. This is also like in the Roy animal kingdom where an Oy predator might depend on its momentum to force its way through the underbrush, another kind of Oy predator might be much lighter and have less momentum but be able to go faster to catch its prey. In the same way some R prey might have more momentum and be able to keep going even as an Oy predator grabs them from behind, others might be lighter but faster.

An Iv-B boom can resemble a boiler room with steam and vapor going through pipes like these roots and branches, stocks are often sold by using boiler room style tactics. This can refer to the high pressure selling but the term originally came from these sales organizations being found hidden in unusual places such as a boiler room.

In these boiler rooms the tactics in selling shares are mainly deceptive high pressure selling as high energy and low time forcing people to make decisions. In this case stocks being sold deceptively force themselves like steam into areas with high pressure like hot water in pipes increasing in pressure as it turns to steam. With weak I-O policing these scams have many variations, some for example have shares that are thinly traded and so the company can create a momentum in the stock themselves which creates a deceptive impression that it is appreciating in value.

They can also use laddering which is where two companies might buy and sell shares for higher and higher prices making them also seem to be appreciating in value. Sometimes the stock is completely fraudulent and the company doesn’t do what it says in the prospectus. Often the Y mafia is behind these boiler rooms using deceptive Oy agents trying to dodge the O police looking for R prey to buy the stocks.

Initially in an Iv-B boom the high velocity of money can still be a liquid, there is demand for the booming goods and services but this is not making the prices go up much. Then as the bubble heats up this can become steam money which distorts the prices around the businesses involved, they start spending more money to keep their business running quickly and with high momentum and prices go up like steam expanding.

As money starts to become scarce this steam becomes more like vapor because though hot there is not much money around and so less money must do more with high leverage. This starts to have an uncertain momentum and so companies start looking for bargains more than barging in and buying whatever they can. This is close to hitting the ceiling when the momentum is lost completely and can reverse, the vapor starts to cool and the pressure to buy starts to collapse which brings prices down.

It can also leave an edifice of frozen money as debt which now has little chance of liquidity being able to move it in sales, this is like a precipitate coming out of a solution or like ice money floating like ice bergs in this liquid money and the Iv-B economy is then insolvent in that this frozen money of debt can no longer be dissolved and repaid by selling assets.

## If too much energy is lost the economy becomes stagnant like a V-Bi swamp, it can resemble mountains of ice as debt with some liquid money trickling through like water through a swamp.

This ice money will need a lot of energy to warm it up enough to make it liquid again, in effect a new momentum of business needs to build up which makes prices rise enough so the debt is liquidated. For this to happen more B roots and Iv branches need to grow or the old ones need to be repaired, this is like cutting channels through the ice money so liquidity can flow and heat up the ice more quickly.

Sometimes these channels are blocked with debt, for example people might have credit card and student loan debts which hold them down and these may clear more quickly as people get jobs, other may have larger debts which like larger pieces of ice start to melt like some cheaper homes start to sell even at a loss which is manageable and so the banks get this frozen money back as liquidity because there was enough energy or demand to move the houses in sales.

This seems to be the situation in the US as of 2011, the hardest hit areas are reducing their frozen debts and increasing their liquid savings, this allows them to move around with more energy. Housing made many people insolvent with debt but they could usually walk away from the homes if their liquid money value was too low compared to the frozen money debt.

Houses like this are often referred to as being underwater, in Aperiomics they are more like icebergs. Some people are holding onto their homes even with negative equity because the payments are like rent, as these rise in value this debt will become more liquid allowing the homes to be sold or refinanced.

Much of the problem in the US and Europe is from the economy still being separated into V-Bi and Iv-B areas, the V-Bi parts have expanded from just being a stagnant older economy decimated by cheaper imports into former Iv-B areas that lost their energy and which are now frozen in debt. However much of the energy of the boom escaped intact and this money is highly liquid in US treasuries or chases different bubbles such as recently in oil, gold, food commodities, etc.

There are also effects from this steam money and vapor money forcing incompressible liquid money like a hydraulic fluid though the system, this can creates waves like tsunamis as seen in the GFC where flows of money panicking for a safe harbor fled from investments and in the process caused much more damage. Much of this pressure was caused by this high energy in some areas trying to maintain its momentum by moving in any direction because they needed to keep trading to keep up with the market chaos, for example as banks lost money they might move some of it to safe harbors but they also tried to keep trading by shorting the market or looking for another bubble.

A good example of this at the time was the blogger Macro Man where he showed hundreds of different kinds of graphs moving chaotically where money was fleeing bad investments. However it also showed money was trying to take advantage of this chaos by riding these tsunamis and trying to guess where this momentum might make some prices going up or to find a way to short them as they cratered.

Because nearly any kind of transaction could be the basis for a derivative the chaos was in effect causing turbulence throughout the global economy, often this was causing a lot of damage by the momentum of this money. Eventually the kinetic energy of this Iv-B money subsided like tsunamis running out of energy, this however left a V-Bi stagnant market like a devastated country after having been hit by a tsunami. Because derivatives allowed this momentum to go through nearly any kind of transaction the destruction hit in nearly every way like these waves washing through every building in a city.

The chaos in these B roots and Iv branches can be illustrated by imagining tubes connected to each other in a roots and branches pattern with frozen deposits as debt which are at times melted by the energy of the liquid money. This is debt being paid off, and bubbling areas with higher energy as money steam and vapor are where the economy has more energy and innovation or a new speculative bubble is forming.

Imagine also that these roots and branches are laid horizontally and flat so that the money liquid flows through them making deals with some pressure and also creating wave. These waves can sometimes be random movements from V-Bi such as loans being made and repaid or insurance being paid out, at other times these waves get amplified by the narrow conduits of Iv branches and B roots to give larger waves like tsunamis of pressure. This need not be destructive, for example waves of money forced itself into the US real estate boom and for a long time this could have deflated without much damage.

These roots and branches then can concentrate a wave of momentum with water or money just like a tsunami hitting a river mouth or roadway might send a larger wall of water along it. For example a collapse of a subprime lender might have sent shock waves through the financial system, this would have created some random wave movement in V-Bi as the randomized deep pools of liquidity absorbs these shocks by taking some losses.

If the lender is small then these shocks would be absorbed by insurance such as Credit Default Swaps and banks losing money might not be made insolvent if they have large reserves and are making profits elsewhere. This is like as mentioned earlier where the pipes of water are connected to pools and storage tanks which can absorb the pressures in these pipes and equalize them making the system more stable.

This is how insurance works and how Credit Default Swaps were supposed to work, but because they were chaotic as well they only amplified the collapse. This is because CDSs were written competitively and deceptively with weak I-O policing so few of these companies had enough liquidity, like having a large enough storage tank, to absorb the shocks from defaults and collapses.

If the roots and branches have plenty of liquidity then these waves will race through them like a tsunami in deep water and be hardly noticed, this is like in some of the chaotic shocks before the GFC where the market plunged then rose but most traders such as quants with their Iv hedge funds survived ok with their lines of credit. Some might have lost money because frozen debt was exposed like a wave coming to shallow water or a sand bar, this causes a wave to rise up and its momentum becomes destructive. Anyone call feel waves like this at the beach, further out in deeper water these waves appear to have little energy but close to shore they can buffet people more strongly.

In the same way these tsunami like waves affected companies far more when they had little or no liquidity. When there were too many waves the available lines of credit were overwhelmed and more suffered the destructive effects of these waves as they raised and lowered prices chaotically. In some cases this caused margin calls and forced traders to have to sell into the market at whatever they could get often bankrupting their companies, if they could have held on with enough liquidity though the market might have recovered after these shocks and they might not have lost money.

This is what had happened with previous crises and it made Iv-B traders overconfident, because they were so secretive and deceptive towards each other like poker players no one really knew how much liquidity there really was in the system. This is like poker players as they bluff, it appears that all of them have more money to back their bids than they really do.

Because Iv-B will grow exponentially until it hits a ceiling and then it tends to go into reverse this liquidity became stretched because too much leverage was being used, when these tsunami like shocks went through the market there was no longer the liquidity to protect it and so companies went down like dominoes falling on each other. A wave tend to move objects in one direction with momentum and then in the equal and opposite direction with momentum as well.

People can also feel this at the beach where a wave might push someone towards the water’s edge and then a rip might pull them back out. In the past a minor crises might have made the stock market plunge but in effect the reversing effects of this momentum made it go back up again. In an economy this beach is composed of frozen money like ice and waves of liquidity in effect break against it.

This also occurs with a bubble where a wave of momentum inflates the bubble but then a wave of momentum in the opposite direction makes it collapse as the money panics and flees. When there is not enough liquidity however this reversal of momentum is changed into turbulence, for example when the shock waves made the prices of many securities crash like a wave hitting them it caused so much destruction and loss of energy that there was little or no reversal of momentum lifting the market up again.

With the collapse of the carry trade in cheap Japanese money reducing the liquidity available and subprime defaults creating more shocks through the economy these waves increased in energy with people responding by making panicky trades amplifying the energy of the waves. These waves then acted like a catalyst releasing more destructive energy like knocking down levees or retaining walls and causing more waves to form out of former V-Bi pools of liquidity.

Eventually as the liquidity dried up in some areas the destructive power of these waves made V-Bi investors hoard the remaining money more and flee, this left steadily less liquidity and tsunamis hitting more shallow water causing more destruction. This shallow water is like where traders had a small remaining equity of value in the securities they were holding compared to a larger amount of ice money as debt.

When these shock waves hit these assets the prices would collapse, they would suddenly be worth nothing and the trader would be insolvent or bankrupt. He might still survive if this debt would remain in place rather than the lender forcing the sale of the securities like a margin call, the ability of this debt to resist the strength of the wave could then determine whether a business could survive its impact.

## The momentum of the system now became concentrated in fleeing for a safe harbor like boats looking for deep water with many tsunamis coming, other areas became so dry with frozen debt that the waves broke up their whole businesses like buildings into matchsticks.

This momentum finally weakened like a wave expending its energy on a frozen beach of debt which could not usually move much. This is because the securities with a high amount of debt were insolvent and unsalable, if the lenders tried to sell these securities quickly they tended to lose even more money. The system then in effect froze up nearly completely as investors stopped trying to panic sell because these debts were higher than the value of the securities, there was then no way for the momentum of the financial system to continue and so it ground to a halt.

The system wasted an enormous amount of energy like this, because there is time and energy determining prices this loss of energy and momentum represented a permanent loss in the value of some assets. There was also no chance the system could completely rebound after this crash because rebounding is like momentum moving in one direction and then reversing itself with no loss of energy.

This left some still high energy money which had reached safe harbors, concentrations of some liquidity also meant some companies survived these tsunamis better than others, for example Goldman Sachs and Morgan Stanley managed to survive this cratering and then partial rebounding of some securities while Bear Sterns and Lehman did not. The US Fed helped to a large degree by flooding the system with liquidity reducing the destructive power of some of these waves later on in the crisis but often this was after much of the momentum and hence value of assets had been lost or dissipated.

The rest of the financial sector was mostly in effect mired in mud where liquidity could only move around with much resistance sapping its energy and momentum. So much energy then has been wasted in the crash that the global economy has become sluggish in some areas and frozen up because the low energy of the debts absorb any energy when a stimulus tries to restart the economy.

It is like magneto trouble as Keynes said but because the energy has been dissipated in chaos there is a lack of energy left to turn it as well as few clear channels for this magneto to push liquidity through the economy. People are depressed in their animal spirits to some degree because the Iv-B energy and excitement is more subdued in the advanced economies.

Much of this energy is gone for good, to revive the economy after the GFC then it is necessary to use this remaining energy by reducing this chilling effect of debt which is now being accumulated as Sovereign debt such as with the current problems in Greece and Italy.

Instead of Iv-B momentum there is now a lot of inertia where starting an economy moving is more difficult. For example when different parts of the financial sector are growing slowly or stagnant then when one parts grow the others lack behind, this makes coordinating growth more difficult. This is the same problem as when the Iv-B boom hit the ceiling where prices could go no higher, some traders were still making deals at high momentum based on a need for prices to keep going up.

They then could not easily coordinate with other traders where their part of the market was running out of energy because of high real estate prices. There were still other areas where the market was going down, for example with subprime bonds starting to be difficult to sell, when an investment bank was trying to trade all three at once it was hard to in some areas move forward quickly, in other areas, cash up and short while still others were treading water waiting to see what happened.

This happened in the real estate market, some house builders had a high momentum is bringing new stock on the market and could not easily slow down without laying off needed workers who might then go elsewhere. They also had contracted for building supplies and if they slowed down those orders those companies might go bankrupt and a particular product like doors might be suddenly unavailable.

In other areas of the real estate market toxic houses were becoming hard to sell, these were built in bad areas or far from work so the only reason to buy them was for speculation. When these stopped selling this affected the momentum of new home builders, also it made other investors pause and wait to see what the market was doing.

These two situations could not coordinate easily, the result was like roots and branches between the two tearing apart and because of low profit margins this could easily reach tipping points and cause investors and companies to lose money. This happened in many places in the GFC, for example some real estate areas plummeted in price while other more expensive areas stabilized or even appreciated.

Rural areas often had not had a real estate boom at all so there was a disconnect between the values of different areas that could not easily be justified by investors, this made them wonder if the market might crash in the boom areas. B workers also experienced this tearing apart of the fabric of the boom, as the numbers declined of workers willing to take on subprime loans even at 100% financing and not being able to make one payment this caused a backlog of houses being unsold.

This inventory also grew sharply and chaotically because the number of B workers taking out loans also declined abruptly as they saw house prices no longer going up. This sudden change in momentum propagated all the way up the subprime tree from the B liar loans to the V institutional investors, Iv agents were still trying to sell subprime bonds as quickly as possible but often the loans in them were defaulting before they were sold.

This caused the number of quality bonds to plummet chaotically and made V investors such as banks using them in place of liquid reserves suspicious. These changing levels of momentum in different Iv-B areas then caused stock to back up and clog the roots and branches in different areas while other areas became starved for liquidity as a result.

The situation was similar to the one that caused trouble for Long Term Capital Management, they invested heavily in less liquid bonds with higher yields and the momentum of the sale of these was well coordinated with other bonds. When Russia chaotically defaulted this tended to tear apart parts of the market and so the momentum of more liquid bonds was increased while the less liquid ones became much harder to sell. They in effect were like roots and branches breaking apart from the rest of the market.

In the same way then when the economy is V-Bi and stagnant trying to regrow Iv and B parts of the economy suffers from a lack of coordination, for example a forest has a diverse ecosystem where animals and plants depend on each other. When a forest collapses many plants and animals might reduce in numbers or become extinct, it is then very difficult for this forest to regrow. The trees might regrow but the smaller plants under them might have had their seeds decay and so they don’t provide the humus the trees need for nutrients.

Some plants might depend on insects for pollinating or animals like squirrels to distribute their seeds but these might have been decimated when the forest fell taking some time to regrow. To be successful the forest might need a hundred different kinds of plants and animals interacting with each other, with only fifty it might not be viable.

In the same way the shadow banking system relied on a complex interaction of many roots and branches, also there were mutated new products like derivatives and subprime bonds that could not easily work of parts were missing. When the liar loans were discredited it was difficult then to computerize a subprime bond that V-Bi investors would trust.

The system of tranches relied on the probability of borrowers defaulting but the mathematics underpinning these tranches such as the Gaussian Copula was shown to be faulty. The Fed replaced some of this by using G public money but while efficient in a Roy economy because of scarce resources it was like a grassland where a forest needed to regrow.

In many cases this forest had little chance of surviving anyway because it was composed or so many revolutionary and mutant financial products, however some rainforests have a high degree of mutation in their ecosystems and can survive even with mass extinctions of some plants and animals going on. It is one thing however for a rainforest in the Amazon to adapt to changing weather for example but another for it to be razed into grassland for cattle and then expect it to regrow far from other rainforests. The usual result is a completely different kind of growth where much of the diversity is gone forever.

To overcome this coordination problem then the US should have been trying to regrow this financial forest by targeting the areas lagging behind. For example the US and Europe should have been trying to liquidate the consumer debt in housing by buying them in bulk and renting them out, this could raise the price of some of them enough to have them sell in the I-O market and release more liquidity.

Then later they could sell these houses likely at a profit when the economy warms up and the extra business activity makes housing prices rise even more. This would lead to some losses as well by the government because some housing is still too high compared to before the boom, however by warming up some areas and releasing this liquidity the extra energy generated in the economy will start to liquefy these housing debts more by itself as well.

Most important is to make the revival as healthy as possible by reducing this Iv-B high energy disparity compared to colder stagnant V-Bi areas, we see this happening in 2011 for example in a bubble in internet companies like Facebook, Apple and LinkedIn. US banks are lending money from the Fed around the world, as happened with the Japanese carry trade, instead of moving money into these V-Bi frozen areas which would liberate more of the frozen debt often held by these same banks.

In effect these banks believe they do not have enough money to unfreeze these depressed areas or they would not make a profit. In that case the money they loaned would just become frozen debt as well on assets hard to sell. This has always been a problem in economies though, for example Detroit in the US has been ailing for a long time as the US car industry fought against foreign imports. The lack of Bi-B worker income there made it difficult for banks to invest in the area and generate returns, much of then was left to become Roy areas and G public property.

The I-O market must resolve these V-Bi frozen and liquid areas of money as well as cooling those with Iv-B steam and vapor money, it can do this by strong I-O policing which will remove the fraudulent ways this Iv-B money is still using. For example the oil bubble in the GFC was arguably caused by speculation which drove the global economy deeper into recession and in 2011 food riots around the world were triggered by speculation in food. If these kinds of investments are properly regulated and the deceptions behind them are audited then this capital will be forced into productive business to earn a profit.

In the Great Depression there were also areas that did well with high energy leaving the rest of the economies in a frozen slump, there can also be a problem where once an area starts to revive it in effect gets attacked by the depressed areas with workers trying to move there or overtaxing its welfare system.

This is like a forest trying to regrow and large Roy animals such as elephants in Africa knock down the trees to eat their leaves, for example as an area starts to revive economically the extra wealth might cause a crime wave of robberies causing it to collapse again. Some suburbs might have a high number of foreclosed and abandoned homes and then a nearby suburb starts to get more employment as factories open there.

The B workers in the wealthier area face competition from the unemployed workers which drives down their wages until their purchasing power is weakened. This can cause the factories to be unable to sell their goods and they might lay off workers or go bankrupt. The revival of the housing market in the area would then slow as these laid off workers defaulted on new loans and prices might crash again.

The result is the reviving area becomes depressed again while the other depressed areas are no better off, their workers missed out on jobs and their presence nearby in effect stopped the recovery elsewhere. For this revival to become strong it must be like a forest that grows thickly enough to keep large Roy animals out and is strong enough to stop them knocking down the trees.

For example the I-O police might stop Roy crime from plaguing the wealthier areas allowing them to save and grow their capital, this can then spread to the poorer areas as their purchasing power might employ more workers from there. Bi unions in a community might need to keep wages high and prevent the V companies from hiring cheap B workers from other areas, this keeps the purchasing power of the Bi workers higher and allows them to keep buying more goods and services, buy homes and raise the values of housing, etc.

## This might also require the I-O police to use some tariffs and protection from imports so the Biv economy like a forest can grow strong enough to defend itself, otherwise overseas Iv-B companies might dump stock trying to break this manufacturing competition from getting off the ground.

By removing enough of the contagion caused by the deception from the Iv-B boom the reviving economy can be healthier and more efficient, using the resources of Gb more sustainably. If not then businesses like Iv-B desert plants and weeds can spring up and use up resources inefficiently then collapse again as more toxic waste. For example in a depressed area there might be a revival of some manufacturing and Bi-B workers have some more money, these were the kinds of people that were targeted by the Iv-B subprime boom.

These companies used up the money in these communities with a booming subprime industries which abruptly collapsed when the money ran out, this left toxic waste with office buildings vacated and financial workers laid off. Because subprime lending was no longer viable all the training of these workers was useless for other industries, they were in effect like decaying and collapsed trees that were no good as humus for other trees to use.

In the same way a depressed economy might experience a revival in some areas only to have Iv-B weeds like this use up this wealth and collapse leaving no useful by products, for example Iv-B multi-level marketing companies might try to grow exponentially by signing up layers of Iv salesmen to sell often overpriced goods by deceptively promising they can grow as a sustainable business. They might then clean out an area as people sign up to be this stock and then often cannot sell it, they then use it up themselves as a misallocation of resources because they didn’t need it for themselves.

Businesses like this then might appeal to people’s greed by deception, people signed up might not realize that the V company behind it gets most of the profits like a fruiting phase while they make very little. Often these workers might only get rid of their stock by deceiving families and friends and so the business grows like a contagion until distrust from other people stops it.

Insolvency can be seen as like where liquidity is liquid money, debt as frozen money is like a silt that has fallen out of solution when the velocity of the money drops. Ice of course floats on liquid water but most liquids when they freeze are heavier and so would tend to fall to the bottom like silt.

This debt then along with hard to use goods and services tend to accumulate like silt in the delta of a river, there is no longer enough Iv-B momentum to carry it along to somewhere they can be used and so they are dumped blocking up the B roots and Iv branches. For example people’s debts might stop them migrating to areas where their job skills are useful, or they might run out of money while going there. These V-Bi areas then can be inefficient from this lack of energy and momentum, often it is also because of a lack of privacy.

For example Iv-B people with valuable skills might not be able to hide their poverty and so they tend to look like losers when they apply for jobs. If they had enough money for good clothes and a car then they might be able to deceive a company enough to get work and then use their skills. This situation can grow chaotically, for example someone might have debts from losing their job in the GFC and end up homeless, this becomes a harder period to hide in a resume and so their unemployment reaches a tipping point and becomes more permanent.

This was seen in the US in 2011 for example where employers often preferred to entice workers from other businesses than to give a chance to the unemployed. Because people tend to assume a level of secrecy and deception in everyone employers might have assumed that they were unemployed for additional hidden reasons such as being dishonest, lazy, incompetent, etc.

As Bi unions break up the cooperation between workers is replaced by dog eat dog competition and so they can be winners and losers even over minor differences. With competing resumes then after the GFC a blemish in someone’s employment record such as impolitic comments in social media can cause someone to miss out on work and suffer a chaotic collapse in their finances, lose their home or car, etc.

Once people become homeless they are in effect like R prey in a Roy society or area, they can be targeted by Oy thieves and because R might resort to some crime to survive they might get little sympathy from the O police. They might then be protected by Bi community organizations like churches for food and clothing, government welfare, Ro gangs if they are from some black and Hispanic communities in the US, and so on.

At this point then the Biv forest has become a Roy area and the Biv society is more like a grassland providing limited job opportunities. When business tries to grow larger like a forest regenerating this Roy crime might tend to rob it causing it to fail or move away. Frozen debts can become a target for Biv debt collectors, they might be Iv agents trying to collect from B workers who try to hide their assets from being seized.

For example there were some attempts to sue B workers for their liar loans and for walking away from their housing loans. V banks might sell off these defaulted loans including on cars, credit cards, student loans, etc to Iv agents who then try to secretly catch these hiding debtors. This can also turn into a Roy Negative Sum Game where the debt collectors become more criminal in their tactics, they are trying to collect money to minimize the losses of the parent company rather than it being a profitable business.

The B workers might become like the R homeless and flee these Oy criminal debt collectors, they might try for example to hold onto a car from being taken to give them a chance of getting a job. The Bi community might try to get the I-O police to moderate the Iv debt collectors such as with bankruptcy laws or some assets such as a home being immune from seizure for debts. In a Roy area the Ro gangs might beat up Oy debt collectors caught trying to find these R debtors.

Once people have been convicted of a crime then they might find some jobs permanently unavailable, for example some professions might require a worker to not have a criminal record or be bankrupt. With strong B competition having a criminal record or having poor credit might be enough for a company to pick someone else for a job, this causes the B workers to chaotically collapse financially.

Sometimes the I-O police might help after the anger from Bi and Ro communities is strong enough, for example it might be technically illegal to deny work or rent a property to someone on the basis of race but this law might be widely flouted. With enough Bi-Ro protests however some Iv employment or real estate agents might get prosecuted, however often the agent is competing against others to rent a property owned by V investors or hire people for a V company.

They then use this agent with plausible deniability to get them the best workers and tenants, if this agent does not get around laws like these then they might get another agent who can. This is like in Roy society where the Y mafia might use Oy petty criminals to steal from targets they cannot reach because they are too visible.

For example the mafia members might be well known to the police or look dangerous, they might then be watched as they move around. Oy thieves however can be more deceptive and often steal goods without being seen, then they give most of the stolen property to the Y mafia and in effect receive a commission like the employment or real estate agent.

When a Ro community protests enough about these thefts the O police might crack down on the Oy thieves or even get some of them to snitch on the Y mafia in a plea bargain when they are caught. The system then can fall apart chaotically when it becomes stagnant however it also fights back by trying to get the I-O police to do their job.

When the police are at maximum efficiency and are unbiased this uses the community’s resources most efficiently for reviving the economy.

Services can also become inefficient in a V-Bi stagnant economy, for example parts might be harder to get and cost more for freight, some being stolen. Some businesses such as locksmiths and car repairers might become associated with crime and rob the customer later, for example the locksmith might be associated with a Ro gang and use R homeless to rob a house with a copy of a key.

At this point the V-Bi economy is slowed down by friction and sclerotic with debt blocking any new momentum much like a cholesterol buildup in the arteries of a heart patient.

The zombie economy then is like forcing blood through a patient with blockages in their veins and arteries so the heart cannot pump properly, human tissue like parts of the economy have become isolated and used up their reserves and either die off or cannot contribute any more to a healthy economy.

Unless this debt and inefficient use of goods and services is cleaned out like with heart bypass surgery or foods removing the cholesterol the roots and branches of the economy cannot function properly. A bypass in an economy in effect tries to fix it by bypassing Roy ghettoes, areas of unemployment might simply be ignored and people survive on welfare.

Sometimes like dead tissue in a zombie patient areas might revive as some people use this welfare to save enough to pay off debts, start business, and get work. These areas might be mostly supported by welfare like a patient unlikely to wake up but kept alive for compassionate reasons on life support, this can be because too much of the infrastructure of the Roy area is plagued by a contagion of crime, drugs, debt, etc.

After the GFC then much of the strategy has been to bypass depressed areas an hope that enough capital will trickle through them over time to revive their economy, however I-O policing acts like the immune system in the body and so reducing crime in these areas can make them revive more easily and cheaply.

Some manufacturing areas might become permanently depressed because overseas economies have taken over their jobs as part of a mercantilist strategy. This can result in a permanent trade deficit where these areas or even an economy is bled of resources as it revives, for example if the economy starts to grow people might spend their wages on imports and so the money leaves their community instead of creating jobs.

## This might be resolved to some degree by using tariffs and quotas that overseas companies can bypass by doing some of the manufacturing in the advanced economies, this happens with car manufacturing in the US for example.

This would reduce the trade deficit, allow more jobs and money to circulate in the economy, and possibly help local manufacturers to compete with the overseas companies like with GM versus Toyota in the US for example.

In some cases this frozen debt can become warmed up and liquid by the banks or the government taking equity in housing and businesses in return for paying off their debt as it did with GM and AIG. Then later as the economy becomes more Biv private ownership becomes more efficient again and they can sell off their equity.

This can help because when wealth is scarce in an economy it becomes more Roy like and so public G property works better than Gb private property, for example roads are relatively scarce in a city and it makes more sense for them to be publically owned and then the O police moderate crime on them. When a road has a scarce access to an area, for example there might be only one road between two cities then making it Gb private as a toll road can cause the owner to profit too much from this scarcity. If there were many roads and the toll road offered a savings in time or petrol in its use then it might be more efficient, those that could not afford it would take a longer path with a free road while others such as people in a hurry might pay the toll.

In the same way because capital has been scarce the US Fed has used G public money to prop up the economy, if it didn’t then the few holders of scarce capital might be able to charge exorbitant interest rates for its use and collapse more areas of the economy. Depressed Roy parts of the economy can then benefit from G public ownership, for example government owned housing was used more in the 1970s in the US in poor areas.

Some of these areas became more wealthy over time and these buildings were privatized or bulldozed and private Gb residences were built instead. When this was done too quickly however this Gb private property decayed in value, in Detroit for example many areas with Gb private property have become less efficient than the government’s public housing.

This then is the problem with the Iv-B high energy low time economy, it is more prone to chaos and indeed is often completely chaotic without randomness to soften the susceptibility to external shocks. It becomes like a rigid house in an earthquake, the tight construction transmits the shocks throughout until it destroys the whole house.

This can be prevented by making some movements random with more give in the connections so the chaos and tipping points are weakened in energy by increasing the time they can move without pushing on another part of the house. When an economy has plenty of spare liquidity then it can absorb the shocks from tsunami like waves after an external shock, this is like the storage pools mentioned earlier like banks between pipes in the economy.

When an area is chronically depressed it can still transmit these shocks destructively, for example some businesses might start to grow and employ more workers who start to buy the goods the companies make. At this point the businesses might be very sensitive to changes in demand because of fixed costs, for example a delivery business might be barely economical but with a small external shock the demand might not cover the cost of petrol, wages, the truck, etc and the whole business collapses.

This is why the V-Bi aspect of the economy needs to prevent these shocks being destructive by reaching tipping points and collapsing businesses trying to recover. V-Bi works randomly like insurance, it uses savings to absorb the chaos and potential collapses from chaotic events like earthquakes, recessions, financial contagion like with subprime lending, etc.

As an economy revives businesses need to have enough savings to get them over a bad week rather than collapsing and all their invested capital is wasted, this might also come from a bank that loans them enough to absorb these chaotic problems. This is more difficult when the economy is weak, for example a business might be growing by extending credit to other businesses and this can stabilize each of them by letting them get over problems by paying their bills a bit later.

However when money is very tight even one of the businesses being late with its accounts or going bankrupt might cause the others to collapse or lay off workers like falling dominoes. This can be highly inefficient in an economy because a delivery business for example might waste a million dollars in capital because one customer was late with a thousand dollar account, then when they go broke deliveries for nine other million dollar businesses stop making them go broke. The system would be so fragile here that a late debt caused ten thousand times its own size in damage to the economy.

## The two limits on an Iv-B economy then are similar in their effects, when an Iv-B boom reaches its ceiling then liquidity becomes very scarce and even small external shocks can trigger a crash. In the same way when an Iv-B boom crashes then when it tries to restart the first steps of rebuilding this infrastructure can be very difficult.

The 2 extremes of an Iv-B economy are then high or low energy or momentum, the two extremes of a V-Bi economy are long or short time or variations in the position of people or goods and services. For example when an economy is very stagnant it can take much longer to get anything done, after the fall of the Y Roman Empire much of their network of trading routes and roads as roots and branches fell into disuse. Instead of a Roman citizen being able to travel around Europe after the fall of the Empire they could barely move around Italy.

In a V-Bi or in Roy Y-Ro economy then moving goods and services from place to place takes much longer, generates much more friction, and often businesses stay in their own locality. For example in the GFC much of international trade collapsed for a while reminiscent of the trade collapse in the Great Depression and in the fall of the Roman Empire. People then become restricted in their movements, they were tied down more from moving to look for work because of being poor or not being able to sell their home.

In the oil bubble people reacted by driving much less, this also affected international trade and tourism. Sometimes this lack of energy in an economy can be because Iv-B energy is more expensive to buy, the price of oil rose before the GFC and it has stayed high as the global economy has stagnated. With the oil embargo in the 1970s this caused some stagnation in the US economy. If so then the cheap shale gas being discovered in the US in 2011 may lead to an economic revival, another path to this may be from cars become more fuel efficient as a reaction to high prices.

As a V-Bi economy tries to become more balanced in Iv and B then the momentum of new business has to work against this restriction of position, for example businesses might find it harder to expand their territory or to open other branches. Freight costs might be higher in some areas making some businesses uneconomical, people might not be able to afford to travel long distances to work because of fuel costs, and so on.

By contrast other economies and areas might have much higher energy and so trade might be able to go much larger distances at low costs, for example a depressed area in the US might mean people cannot travel to get a distant job but imports from overseas might still be cheap enough to bankrupt a local business with a similar product.

Sometimes this lack of energy comes because of a lack of privacy, the momentum of transactions can often be reduced if other people or businesses can spy on them. For example on Wall Street some stock brokers might front run their client’s order, they might receive an order to buy some stock and then they buy the stock themselves, then place the client’s order and as this makes the stock price go up they can then sell their own stock for more. This however reduces the profit of the client and his energy, in effect taking the wind out of his sales.

In a V-Bi economy there is then more stagnation and low momentum because of this high transparency, Iv and B people cannot do much secretively and so don’t do much business because other people would just steal their ideas as soon as they went into business. For example if B miners cannot secretly prospect for minerals they will just lose their claim as others grab it after wasting their exploration money.

When the economy is weak this jumping on to other’s ideas can be like too many jumping into a boat and capsizing it. For example as the green shoots of new businesses appear there might be barely enough customers for them, other entrepreneurs however might decide to follow this trend by opening the same kind of store with the result that they all go broke.

If Iv salesmen cannot prospect for clients secretively then other agents will see who they visit and then offer them a better deal because they didn’t have to pay the cost of advertising in find the clients. So this secretiveness is necessary to generate momentum in an economy but it also needs the I-O market to determine the best mix between random transparency and chaotic privacy.

This is the problem after the GFC, the momentum of growth in the economy is broken by chaotic collapses of Iv-B mutated businesses that had no long term prospect of survival. Now investors and businesses are anxiously scanning the media each day looking for more problems, there is so much transparency in the financial markets that no one can secretly do much to make profits before others see them.

Currently people watch each other for signs of panic and then rush to get their money out of the market first causing more collapses, they need to start watching for secret opportunities and be rushing to get into them first to give more economic momentum.

When the I-O police in society are weak these three phases of money as solid, liquid, and gas can become disconnected from each other creating economic inefficiency. Energy becomes concentrated in the Iv-B boom areas and so money acts like steam or vapor causing price distortions just because of the high energy and momentum rather than economic fundamentals.

This concentration of energy and momentum in Iv-B takes the energy out of other areas and so they tend to stagnate, for example someone looking to speculate in US real estate in the 2000s would have picked a booming area. Money solidifies in the V-Bi sections where people either lend out money into the Iv-B boom or buy local investments that are also disconnected from economic fundamentals because investors are put off by no signs of momentum. For example after the GFC Iv-B booms have still occurred in speculative areas but depressed V-Bi areas have stagnated even though they offer the best position for sustainable growth and profits.

In between the two liquid money should give a compromise between energy and time, for example as the Iv-B boom heats up then this more dispassionate I-O liquidity is not as useful because it does not have the motivation and appetite for blind risk to sustain the mania of the boom. For example during the US real estate boom there would have been many people with plenty of liquidity willing to buy a house in Los Angeles at a reasonable price based on rental income, the cost of building a house, and the cost of creating the land. This is historically how real estate is valued but this kind of liquidity was irrelevant in the bubble, they could only have bought like this in rural areas.

In other areas there was the need for more V-Bi debt, for example sustainable businesses were looking for capital for expansion but much of the capital was chasing profits in the Iv-B boom. This made a lot of US industry collapse as the Iv-B bubble made people not notice that the manufacturing base was being taken over by China and other countries.

These V-Bi areas then became poor investments even though their economic fundamentals were not being accurately assessed either. Liquid money in the I-O market was then disconnected from both these areas to a large degree, investors that wanted transparent investments free of fraud tended to keep clear of the Iv-B bubble.

Other investors that wanted less transparency in businesses so they could find a secret plan for growth in the V-Bi economy they could invest in were also disappointed. These investors were more like Warren Buffett looking for business that had a secret to exploit such as a new patented invention, a new mine, or a new kind of trade secret hard to copy.

A healthy economy has fewer differences between these three money phases, a boom should not get so hot that prices become unrealistic and then collapse. An industry should not get so cold that legitimate products cannot get funding, both of these then should be traded in the I-O market with strong policing against fraud so this liquidity can price investments accurately with a minimum h of uncertainty.

If not then the economy may resemble the mixture of ice and steam with little liquidity as it does in the US and Europe after the GFC. Money now tends to either chase fleeting arbitrage profits and bubbles and avoids the mountains of sovereign and private debt except to try and speculate against it. This is also seen in some US neighborhoods where many houses are still not worth as much as their mortgages, this frozen money stands next to the exponentially growing bubble of their consumer goods based on computer technology and the internet.

As of 2011 Europe is close to recession so there is a delicate balance as to whether this V-Bi stagnation and debt will overwhelm the forces of growth. This balance is no coincidence but is an illusion fostered by the separation of Iv-B and V-Bi, some areas of the global economy are booming for example college graduates in the US have a low unemployment rate. Iv-B however has pitted US manufacturing workers against those overseas and as the US workers lose they chaotically drop in income. This seemed to be a good deal because it led to cheaper imports but it also led to the GFC as these B workers could not repay their housing loans.

Computers are being improved as quickly as ever, the internet is being upgraded, new fads such as smartphones and tablets are part of this Iv-B boom and leading to faster obsolescence of older computers. At the same time the traditional V-Bi infrastructure of roads and public buildings are in trouble because of a lack of funding or policing.

In the GFC the US stock market and financial sector received extra liquidity from the Fed to stop the chaotic waves shattering the system, much of this money however has now gone into many smaller Iv-B bubbles more like steam than making the I-O market liquid to reconnect the V-Bi and Iv-B parts of the economy. If this money was better used then it could have liquidated overpriced housing already and freed up the frozen capital in them, this must be done sooner or later to make the economy more efficient.

This however does not amount to a suggestion to improve I-O policing in the economy as a way to fix global economic problems. It likely would go a long way in doing this but no color imbalance exists without pressure from other colors and so I-O policing exist for a reason that needs to be changed before it can strengthen. The Iv-B boom and bust cycle is bad for a sustainable economy but it is being driven by revolutions in technology that people are not willing or able to moderate to be compatible with a sustainable economic system.

For example according to Ray Kurzweil Artificial Intelligence is likely to surpass human intelligence within decades, this Iv-B boom is arguably developing in ways that we do not really control just like the subprime boom was not in anyone’s control. The reason for this is that Iv-B people are secretive, deceptive, and in competition with each other and this urge to beat each other causes the Iv-B system to move along a chaotic path that they cannot see.

Where it is going is not as important to the participants as that they might be winning and profiting along the way. They cannot get together and work out where it is heading, as some might try to do in forums such as TED Talks, because these are in effect showcasing discoveries or revolutions after they are made.

There is no real debate between Iv agents as to whether a particular technology is desirable except in terms of potential B customers. V companies could direct this technology to be more sustainable but they are also dragged along by the momentum of the system. The B customers also don’t get together like a Bi community and decide whether these products are heading in a good direction, but only if they benefit them in some way in competing against other B people.

For example as computers get smarter they confer advantages on people who have them compared to those that don’t, eventually there might be portable computers in a phone or tablet with intelligence that rivals humans. Then these will be sold to people as a competitive advantage, not whether it is wise to build them or what they are good for in a sustainable society, but whether someone can make more money out of people who don’t have them.

There is nothing new in this situation either, Iv-B revolutions have been driven by new technology in this way before. For example the railways grew because they gave some businesses a competitive advantage in delivering goods and services, the same happened with cars. Companies could not decide whether railways were good for humanity or not, they either used them and rode the momentum of their growth or lost market share to those that did.

Iv-B technology probably contributed to the Great Depression because mass production and cars changed society so much, this extra productivity ended up destroying many jobs without creating a new sustainable economy to replace it.

However we could not now imagine being without railways and cars. The point is that the color interactions of Aperiomics drive each other in complex mathematical patterns between animals, plants, people, societies, etc. This does not mean animals are control of their destiny, an R prey such as a gazelle is in control of nothing, it must run and hide and hope to procreate before it dies or is eaten.

A Y predator though it is at the top of the Roy food chain is not in control either, if it is too successful it will eat all the easy prey and so it will become harder to catch them. Usually then its life will be hard as well, it will also be lucky to get enough food to survive and procreate before it dies.

Plants are not in control either, any individual plant might get eaten or knocked over by an animal. They only survive if the can seed and grow other plants in their lifetime. People are no different but we have the illusion that we are in control, each individual has to struggle to survive and has little control on where technology and the economy is going.

Though people can act as teams in V and Bi communities a strong Iv-B boom tends to fragment this consensus, for example if a Bi city decided computer games were bad for children these games would still infiltrate secretly. If economies tried to ban or limit Artificial Intelligence because of perceived dangerous as seen in some science fiction then some would still compete and find a deceptive way around these restrictions because of the potential profits involved. If the I-O police are not strong enough to moderate the financial sector even after the GFC then they are highly unlikely to be able to slow the Iv-B technological boom.

Even the leaders of the world economies have little control over the direction their economies take, they are elected often with small margins by groups of voters to do a particular job and often walk a tightrope of being dismissed if they displease these groups. But these groups also have little control, their smaller leaders try to satisfy individuals who don’t really get together and discuss where the world is heading because these other people are their Iv-B competitors.

The main message of Aperiomics then is it tries to explain how the world works but it does not really describe how to change it, it is also an open question as to whether it can be changed.

Computers might be evolving to replace and perhaps hurt humanity but that does not mean we could somehow get enough control of our destiny to change this, nor does it mean we could avoid catastrophes from global warming or a nuclear war. Surviving the cold war and possible nuclear annihilation occurred more from luck than any serious attempt to limit nuclear weapons. As of 2011 regardless of the merits of the global warming debate the world is incapable of slowing its growth of CO2 emissions.

People cannot come together in V-Bi like this against strong Iv-B innovation because the two are disconnected with weak I-O policing, they never have in history except for short periods to sometimes middle their way through a particularly bad Iv-B crisis such as with the New Deal in response to the Great Depression. All we can probably do is hope this path of technology leads to more good things than bad.

Some suggestions do come out of this theory however, assuming that the I-O police were strong enough to reconnect the economy then many of this problems might be fixable. However the fact is that these economic frauds leading to the GFC happened and despite the obvious corruption in the system few have been prosecuted. Some might argue subprime fraud did not cause the GFC but that does not make it less criminal.

Most people then are probably aware of the need after the GFC for stronger I-O policing to solve some of these problems and yet it largely has not happened. Many of the prescriptions outlined in Aperiomics are already being promoted, the advantage of these being outlined here is it indicates which ones are compatible with this theory.

But usually this is not enough, for example many economies in the world have a contagion of corruption that is fought by people every day. Some of them also disappear murdered by their own governments and others take their place to fight on often without making much of a difference.

It is not a matter of an economic system being self-regulating and always righting itself, it is just that some economies historically have had a balance of these color forces that resulted in exceptionally stable economies.

When these forces are out of balance it is quite likely that a stable government and economy is impossible no matter what the people want.

To work to fix economic problems then Aperiomics indicates that these colors need to be rebalanced if possible, for example if an economy suffers from a chronic imbalance then this needs to somehow be corrected before it can prosper. The history of the world usually has some areas that have a stable economy and many others where it is unstable, there is civil war, dictatorships, and so on.

It’s likely then that large areas of a continent such as South America or Africa have these color imbalances so that their economies have to struggle against them. There might be a racial imbalance where two races are intermingled over a large area, where one race is more numerous than another there might be a tendency for one race to outvote the other and so exploit the less numerous ones.

A country might potentially be attacked by a number of predatory countries with a superior defense, for example Croatia had the Mediterranean protecting it to the South and Serbia was mountainous. Bosnia however was between these and largely without natural defenses by contrast, this would tend to leave it open to predation from those with a stronger position and to possibly be attacked by both at once as happened in the breakup of Yugoslavia.

Such a situation has been extremely common throughout the world, for example in the United Kingdom to form a stable government they had to balance the desires of the Irish, the Scots, the Welsh, the English and of course many earlier tribes that were their ancestors. For a long time the English were more powerful than the Irish and so they colonized Ireland.

However over time perhaps because of their isolation on two islands these peoples formed a kind of balance that allowed stable Roy societies punctuated by wars between them, for example in the 1600s there was a King James of Scotland and a Queen Elizabeth of England who developed an unstable balance of power between them often upset by family connections with both to European royalty. However the isolation of the British Isles helped it to form a separate ecosystem to that of Europe and eventually a United Kingdom.

With this isolation it may have been that these color imbalances gradually weakened over time just as in the Roy animal kingdom with animals on an island or an isolated area. We also see this with the Biv plant kingdom, a good example would be the Galapagos Islands that Charles Darwin observed in creating his evolutionary theories. In the same way England and Ireland may have gradually balanced their colors into forming relatively stable kingdoms leading to the Magna Carta as an evolution of I-O laws.

In the same way Greece might have become one of the first democratic states from a similar balance and isolation, nearby countries such as Sparta and Persia were less balanced and so this led to a small period of democracy punctuated by wars and dictatorships.

At some times Greece was persecuted by more powerful Y Empires and in the Peloponnesian Wars it arguably became an aggressive Y Empire itself. Democracy had evolved on many small island civilizations in the Mediterranean before Greece but the right color balance may have caused this neutral democracy to grow larger in Greece.

The Japanese were also isolated on their own island and survived free of foreign domination, this gave rise to many stable Roy civilizations with some I-O neutral policing though they were often a Y Empire as well. The Chinese also succeeded in this mainly because of their homogenous race, when people are similar enough to each other they are less likely to have one group persecuting another. This allowed their Empire over time to dominate their area with the boundaries sometimes growing and shrinking from invasions and conquests both by the Chinese and others.

However this has historically been more difficult for peoples in a larger continent because they were spread out too large for a democratic government to control easily, they were then usually united by a Y Empire such as with the Romans, Genghis Khan, Tamerlane, etc or their countries had to fend off attacks from many predators at once. For example Russia might have evolved as a Ro country because of its history of being attacked from the east as well as the west. World history is beyond the scope of this book, some of this however was outlined in my first Aperiomics book and I hope to extend this analysis in future books.

The main point however is that color imbalances are much harder to stabilize when there are no natural boundaries around a people. The history of the Aztecs and Incas in South America show this for example before the arrival of the Spaniards, with large rival civilization near each other they tend to form as Y Empires like rival prides of lions fighting over expanding their territories.

The same occurred in the history of Africa where the open plains allowed rival Empires to fight with each other rather than being isolated enough to develop a more stable color balance. Egypt may have succeeded in developing a stable color balance around the time of the Pharaohs because of deserts like a barrier south of them and the Mediterranean to the north forcing them to balance the various desires of their own population free of external pressures.

The history of larger land masses has then been dominated by wars and rivals Roy Empires, but these have slowly moderated over time as the world has become a more balanced global economy. Europe for example has fought countless wars throughout its history but is now relatively well balanced in the European Union.

Isolated economies have then tended to have a head start in this color stability and have built Biv democracies, for example the US and Australia have oceans to protect them from invasion, Canada has oceans and also snow and ice, the United Kingdom as mentioned earlier has oceans to isolate it as does Japan.

The history of economic development has then probably been that these isolated countries at various times developed stable and neutral Roy then Biv governments and exported them to less isolated areas. They also acted as pockets of stability when these other areas had color imbalances such as when regular wars in Europe contrasted with the stability of the US and Britain. Until recently South American was highly unstable politically and Africa still has these problems.

Because of these color imbalances and the possibility of destabilizing color interactions from neighboring countries the problems of poverty in the third world and emerging economies according to Aperiomics will require these imbalances be addressed. Many of these some imbalances helped to create the GFC, for example after the fall of communism many Asian economies have developed trade surpluses that caused the more advanced economies to develop trade deficits which helped to cause them to boom and then bust.

Some of these imbalances can be traced to when these economies were poorer because they were Roy societies, for example Communism succeeded in certain economies such as Cambodia, Vietnam, China, Russia, etc perhaps because the people were more Bi-B and Ro-R by nature. They had a history of being attacked by Y Empires, Russia for example was attacked by Genghis Khan, Tamerlane, Napoleon, and eventually Hitler because of their natural resources and wealth.

Over history then the more aggressive Russian people might have been killed in these wars leaving a nation more defensive and resentful of predatory Y imperialists. This would have made it a more receptive country to the ideas of R communism.

Other economies became more Authoritarian or fascist when they were Roy societies and so formed an ideological opposition to these Ro-R communist countries, for example in the 1930s much of Europe leaned to the right as Y-Oy with German Nazism, Italian Fascism, Spain’s Francoism, the sympathy some countries from the Austrian Hapsburg Empire felt towards Nazism, and even with Petain’s Vichy France. Much of this was probably because they were formerly Y Empires before World War One and though they lost much of this in the war the people had tended to evolve depending on predatory imperialistic strategies.

Isolated economies tended to be more stable and neutral, for example Switzerland historically was well defended enough to remain neutral or O, Britain tended to be O neutral and fought against the Y right wing dictatorships in Europe in World War Two and then against the R Communists in the Cold War as did the US.

As the world has become wealthier using more advanced technology it has become more Biv at least temporarily in many areas, this has led to fewer wars and more trade, fewer dictators and more democracy, etc. However these color imbalances largely remain but they have been mainly transferred to Biv overtones of Roy. For example many Ro-R communist economies have now become Bi-B economies and prosper mainly on using Gb natural resources and supplying a pool of B workers as cheap labor for the global economy.

Former Y Empires and Authoritarian economies have become more V-Iv and so tend to work more on refining raw materials and exporting the finished products rather than supply a pool of cheap B workers. For example Japan was a Y Empire for much of its history and as it became more wealthy it became mainly V-Iv refining raw materials and making profits with exporting cars, electronics, etc.

The same probably occurred with Taiwan because it is an island nation historically free from invasion, they would have tended to form a small Y Empire which became a V Empire based on refining goods much like Japan. Also their population was moved to the right by the Y government of China being driven into exile there by the Ro army of Mao Tse Tung.

Korea, Vietnam, and perhaps also Malaysia probably evolved with the southern area in the peninsula being more protected by water and so they had a naturally stronger base for a Y Empire which then preyed to some degree on the mainland. This led them to grow as they became more wealthy into V-Iv manufacturing refiners of goods, further up the peninsula the people would have been more R and were communists.

Italy probably has a similar history as a peninsula with the southern areas being more of a Y Empire, this is where the Roman Empire was founded from a position of being protected by water and a way to expand northward by land. This gave rise to a Y fascist dictatorship as well as the domination by the Y mafia in the south but later it became more of a V-Iv economy refining goods in the south and with poorer R people in the north now more B.

Spain may also have evolved in this way with the peninsula being a defensive area where a Y Empire grew, this eventually led to their becoming a strategically important part of the Roman Empire, having their own Empire under King Philip, and later becoming Authoritarian under Franco.

France also had some natural defenses by being surrounded by oceans to the west and north, this led to its traditional enemies being the rival Empires of Y Spain and England. Sometimes however it was defeated by Y, for example when Julius Caesar made Gaul part of the Roman Empire and in the 1870 war with Germany and nearly losing in World Wars One and Two. This would tend like with Russia to make them more of a Ro Empire as they were under Napoleon to defend themselves evolving to become a more Bi economy with strong worker protections.

Sweden and Norway were also Y Empires in the time of the Vikings when they raided and settled parts of England and Ireland, their isolation and being on a peninsula gave them a natural advantage in defense and probably turned them towards being more Y predatory and then becoming V technological economies.

Similar color interactions have probably shaped the Middle East as well both in Roy military terms and later in Biv. For example Saudi Arabia is relatively right leaning because it is protected on all sides by oceans, it was formerly composed of Y tribes ruled by the Saudis and now is more of a refined V conservative economy.

Countries near it however have no natural defenses and so have traditionally been instable in their colors, Yemen for example would have been weaker because of fewer natural defenses and so was likely R prey to Y Empires near it. This would have made them lean to R communism at one stage and R terrorism such as Al Qaeda.

Iran has probably evolved in a similar way to Saudi Arabia with its former Y Persian Empire dating from the time of the Roman Empire. It would have grown at the time protected by water to the east and perhaps deserts to some degree giving it some security against attack and so allowing it like the Romans to evolve more as Y predators. This probably explains their more belligerent stance today in trying to become a V economy.

As these former communist areas have become wealthier North Vietnam for example has become more B with cheap labor and perhaps there is still more V technology in the south from its Y past. North Korea is still poor and mired in R communism but would historically have been prey along with Manchuria for the Y area of South Korea.

As these traditional Roy relationships based on war have changed to Biv in a wealthier global economy these differences in military power have translated to differences in economic power. Whereas before these imbalances often led to war and colonization they now lead to economic war or free trade where some are victors in Biv as they sometimes were in Roy wars.

For a stable global economy many of these imbalances may have to be addressed or the inefficiencies associated with them may fritter away so much wealth that much of the global economy may become Roy again as happened in the GFC.

For example this was arguably one of the causes of the Great Depression, only eleven years before 1929 World War One ended as the largest Roy war between rival Y Empires in history up to that time. This caused the balance of these powers to be radically changed in an unstable way leading to the Second World War, for example the Austrian Hapsburg Empire was dissolved, the Ottoman Empire dismembered, and Germany lost its overseas Empire.

As the world recovered from this war some economies such as France, Britain, and Germany attempted to return to being Biv economies, other countries had never actually reached the point of having enough abundant resources to have Biv economies and democracy. After the Roy war ended the Biv trade war then slowly began as trade imbalances built up between rival nations and this may have led to a collapse in international trade and led to tariff walls like trench warfare revisited in the Great Depression.

This Biv trade war then continued with economic hardship in the 1930s for the US while in Europe this was so severe it led to the reestablishment of Roy dictatorships again such as the rise of Hitler and Mussolini and World War Two. This was probably an attempt by these peoples to rebuild their Empires as they would have evolved to prosper economically with that form of government. After this war enough of the tensions between nations had been resolved for a period of Biv prosperity to build democracy in Europe and elsewhere.

This Biv prosperity however was threatened by the rise of Roy governments such as R communism and the Y dictatorships propped up in the Middle East, Africa, and South America against communism. However even these Y dictatorships are probably remnants of the evolution of these people with their former Empires, for example the Middle East was mainly created from the Ottoman Empire which was predatory Y in the Middle Ages.

The cold war was probably a resumption of the historical role between the Y Empires of Europe and the Ro more defensive Empire of Russia supplanted with more modern ideologies. This was punctuated by other Roy wars such as with Korea and Vietnam where the West propped up these traditional Y dictatorships against attacks from their former R prey.

The world then settled into separated Roy and Biv areas and ideologies roughly according to whether resources were scarce or abundant. This apparent battle between Roy and Biv ideologies for world domination was in reality defined by how wealthy different parts of the world were. Biv won because of improving technology creating more wealth and so Gb private property became more efficient than G public property based systems such as R communism and Y authoritarianism.

With the end of the cold war then in the late 1980s and improvements in technology these Roy wars have become Biv cold trade wars leading to the GFC instead of a Roy cold military war. This current economic crisis then is similar to after World War One where Biv trade wars as a continuation of the Roy conflicts led to the Great Depression. This trade war that devastated the world economy is arguably World War Three.

This then indicates that these Biv trade wars may yet return to becoming Roy again unless these color imbalances can be addressed.

In many cases then these sporadic Roy wars in the world and the much more common Biv trade wars are a consequence of the geography of various economies and the evolution of their citizens to a particular color balance. This often makes I-O internal and external policing much more difficult because police neutrality depends on finding a balance or middle point between the opposing factions in a society or between economies.

For example when a country has one race and religion the people are likely to be fairly homogenous so one group is less likely to persecute another one. In this situation Bi communities might form unions and V communities management of companies and they might then generally work out fair deals between them. However if the racial or religious mix was 10% of one race and 90% of another then each race or religion might tend to work together against the other.

This has been a problem in the US for example, however a strong I-O police over time can overcome a lot of inequality by offering neutral policing and law courts. In the same way the UN has been successful in using peacekeepers to moderate many civil wars and invasions between countries.

Much of the GFC was caused by this racial inequality in the US, for example subprime lenders such as Ameriquest were often accused of targeting elderly black people. This subprime business then was often racially based, perhaps after the lower income areas of the US received higher incomes in the 1990s this was a reaction as they made themselves targets when the I-O policing weakened.

Treating black people as R financial prey has a long history in the US with slavery, even after this was abolished it continued in the south with blacks being jailed on trumped up charges and in effect being sold to plantations to work off fines. This is then a natural tendency in an economy to separate into different colors where either some colors exploit others or there is a Biv division of labor.

Multicultural economies then have this tension which can erupt into Iv-B and V-Bi civil wars in them but this is usually controlled by neutral enough I-O police.

When this policing weakens however then this I economic or O criminal civil war can get out of control, for example in Yugoslavia different people were held together in one country by the strongman Tito.

When he died and the Berlin Wall fell this allowed the country to break up and so this policing was lost, this result in the old Roy predator and prey relationships reasserting themselves. These tensions can be ancient, for example the antipathy between the Christian Serbs and the Muslim Bosnians went back to the Middle Ages seeing Muslims as a dangerous R contagion in Europe.

In effect this is like internal colonial exploitation, for example the Congo and many other African countries have been exploited financially by Y Empires such as the British, the Belgian, the French, and more recently by multinational corporation acting like Y-V Empires themselves. Another example is Shell in Nigeria being accused of acting as Y-V and causing an R terrorist organization to develop there.

In the same way this can happen inside a country such as with some Y warlords in the Sudan attacking R villages like predators and prey, this also happened in Rwanda with the Hutu massacring the Tutsis.

According to Aperiomics the best path to develop third world economies is usually not to dispense foreign aid without a great deal of research because it can distort the local financial ecosystem. Instead subsidizing the I-O police in an economy by creating and maintaining neutral policing and courts both O criminal and I civil can make their economies most efficient. In many cases this might reduce economic waste so much that they could lift themselves into becoming a Biv democracy and business orientated economy.

The problem of helping a third world economy to become Biv is the same as in helping the advanced economies to recover from the GFC, in both cases the problems are caused by weak policing allowing V-Bi and Y-Ro to disconnect from Iv-B and Oy-R. This can lead to a culture of corruption where V people might for a team with a Y dictator siphoning away much of the wealth of an economy, the same occurred in the US in the financial sector because they lobbied to weaken this I-O policing so they could get at this R-B prey with subprime loans.

This is a common situation is countries that have developed their own Empire, just as they have tended to exploit other economies like predators they also tend to do the same to the weaker people in their own country. In terms of Biv this can look like countries part of the Empire supplying cheap B workers accumulating Gb raw materials and sending them to the Y-V Empire center. This Y-V area then refines these raw materials into in products which are then sold back to the colonies at a profit.

The US prospered in this way for many years by using occasionally using its Roy military against the Philippines and much of South America with the Monroe Doctrine. As more of the world has become Biv these previous Roy Empires which clashed in World Wars One and Two now clash economically, for example Japan had its own Y-V Empire and tried to expand this in World War Two when the US imposed an oil embargo on it.

After the war Japan became more Biv and established a similar Empire as V where it imported raw materials from these same kinds of economies and sold them back refined V goods at a profit, this gave it and similar economies trade surpluses that replaced actual pillaging from Roy military conquests.

Cleaning up these internal problems after economic exploitation then are often as difficult as reconstructing economies devastated by war, this is because these Biv economic problems are exactly like overtones of problems in Roy wars and imperialism. After the GFC the global economy resembles in some ways World War two where Germany and Japan have become economically successful as V whereas in the war they attempted to be successful as Y predators.

Germany has managed to profit from other economies in the Eurozone to the point where some of them are near collapse from trade deficits, this is an overtone of its economic exploitation of Europe under the Nazis. These other economies then are in effect fighting back economically in a trade war that happened because of inadequate I-O policing as Germany violated the Eurozone treaty by increasing its productivity. Many pundits have pointed out this economic victory as having parallels to that of World War One especially with Greece.

The US then and Britain are in a similar situation to in World War Two where these V economic powerhouses threaten them with their trade surplus whereas before they were threatened by their Roy militaries. The solution to this is strong international I-O policing which needs like brokering international Roy peace to broker international Biv peace, the trade deficits of some economies need to be reduced in some ways for economic stability to be return.

This trade war then is being fought with goods and services, economies then need to defend themselves and their local manufacturing as in a Roy war such as with tariffs and quotas. Also deception in this trade war such as artificially manipulating exchange rates and sweatshop like work condition can be overtones of the more slave like economic exploitation in World War Two where some people were made to work in concentration camps.

Trade agreements can then be Biv overtones of Roy rules of war where each side agrees not to mistreat people and economies captured in war, for example if an economy demand that its Biv trading partners pay good wages and avoid sweatshop working conditions this is equivalent to in a Roy war where combatants demand better conditions in work camps. Following these analogies can then show the way to resolve Biv trade problems by comparing them to the Roy war they are overtones of, when this is done the right policy is often apparent.

This also includes what economies are not likely to agree to, just as in a Roy war where countries will not give up advantages that ensure their defeat in a Biv trade war economies will not willingly disadvantage themselves. For example the US espouses Biv free trade because it believes it should be strong enough to prevail as it did in the Roy World War Two and subsequent wars.

Because of its geographical advantages of being protected by oceans it has not evolved with a strong sense of having to protect itself, this caused it to be surprised at Pearl Harbor as well as on 9/11. It also underestimated the Roy problems in Europe by letting the Y Empires become too powerful there just as it has not underestimated the strength of these V Empires and their trade surpluses. In effect then the US like much of Europe is not doing so well in this Biv economic war and like in Roy World War Two this has resulted in the impoverishment of much of the population from being on this war footing.

There are also war profiteers in this Biv trade war in ways similar to in a Roy military war, for example in World War Two some US companies traded with Y Germany before the US actually entered the war. Usually to do this after a Roy war starts would be against the law, in effect however Mercantilism is an extension of this same kind of military strategy into economics.

Instead of bombing or sabotaging the enemy’s manufacturing base this is done by lowering the exchange rate and dumping cheap products onto their strategic industries. Persuading local businesses to move their manufacturing offshore in a Biv overtone of making companies in an enemy country change their allegiance, however this need not be a serious in Biv because it is still a Positive Sum Game. For example manipulating exchange rates with Mercantilism allows V Empires to capture the economic enemy’s manufacturing and if it persuaded the enemy’s capitalists to move their industries to the V Empire then this helps their war aims.

The same occurs with secrets as in a Roy war, for example economic spies from Germany and japan in World War Two would have tried to infiltrate the US and Great Britain to steal plans for advanced weaponry, the same occurred in the cold war as well. In this Biv trade war companies often backed by their V government often try to steal economic plans of companies, details of their patents and trade secrets, and they try to influence government policies of their economic enemy with bribes and offers of consulting jobs after they leave office.

They might try to derail efforts to punish the V Empire for its Mercantilist strategies such as in manipulating exchange rates, having de facto tariffs by subsidizing export industries, giving research grants to some industries along with import protection to reduce reliance on imports, and so on.

The Biv Positive Sum Game masks the dangerous nature of this economic war, for example in a Biv forest plants compete with each other to reach the V canopy and to overshadow the others by cutting off their sunlight. However plants also use a Positive Sum Game in the way they benefit each other by sharing humus from fallen leaves and branches. In the same way a Biv trade war appears to benefit the losing economies because they tend to benefit from each transaction, however often these benefits are transitory for one side and more permanent for the other making them much more predatory.

For example when a V Empire takes over other economies V manufacturing industries this is like a Y pride of lions taking over the territories of rival Y prides. If V Empires take over electronics industries for example then even though both sides still benefit when these electronic goods such as TVs and computers are sold these Iv-B goods wear out and then are worth little or nothing.

However the profits the V Empire makes are still worth more, for example they might invest the profits from making TVs in worker wages who build houses and have families while the purchaser of the TV watches it until it breaks.

The V Empire then has lasting material advantages, these houses and families might last for a century while the TV is gone after a few years leaving only the memories of TV shows and no home or family.

A Positive Sum Game then needs to be examined not only in the immediate short time high energy Iv-B context but also in the more permanent high time low energy context of V-Bi where Bi union jobs are lost and the V Empire’s manufacturing crown is also gone.

The creation of a V economic Empire then is similar to a Y military Empire, this is why I often refer to this as Y-V because often there are Roy as well as Biv aspects in a situation. In the book Confessions of an Economic Hit Man John Perkins explains how this Biv economic Empire can grow by deceiving economies into borrowing money for projects designed to fail.

Much of this occurred in the context of the Roy cold war going on where the US and other economies manipulated weaker economies to tie them economically much as they would be attacked and occupied in such as World War Two. Often then the strategic consideration of the Roy wars going on become inextricably intertwined with the Biv economic war.

This is usually because when economies are poor they are Roy and so Roy war becomes more likely as well as shows of military force by the advanced economies are used to keep them in line. When they become wealthier Biv economies, as has happened with free trade since the end of the cold war, most of these military problems have gone away to be replaced by Biv trade wars with similar issues.

These economic hit men acted as Iv agents to some degree but also as Oy deceptive predators on these economies, they were similar though in their effects to the subprime agents selling loans in the US. For example both tried to persuade their clients to take loans they did not need and which would bind them into refinancing and paying more fees and interest later. Both concealed these aims with a deceptive claim that the loans would benefit them, often they could have gotten cheaper loans elsewhere or done better without borrowing more money.

Often this loan money was used in speculative business, the subprime loans were used in the real estate boom which crashed because the economic fundamentals behind the boom were deceptive. The loans to the economies were often used in speculative developments such as for export industries that failed, often with a similar kind of deception.

Both of these kinds of predatory lending occurred because of a weak I-O policing, the regulatory agencies in the US had been weakened by lobbying from Y-V companies. The UN, IMF, World Bank, etc had also been corrupted to some degree by getting money from these Y-V Empires. After these Y-V predatory loans had triggered collapses in both cases both were able to successfully resist much of the strengthening of I-O policing.

With these economies then they were left owing money to the V Empire and so they could be influenced in other ways such as foreign policy, breaking ties with Ro-R governments such as communist economies, spending more or accepting military aid to fight R communist insurgents, allowing the Y-V Empire to work in their countries to also fight the Y-R drug war, allowing a military base in their country as a staging area for the Empire to expand its reach, privatizing water and electricity to Iv cronies of the V Empire, giving profits to these Iv agents in the construction of these projects such as with bridges and dams, having the money quickly leave the country as it is taken by the government and sent to secret bank accounts, and so on.

This then is similar to the Roy invasion of a smaller country by a Y Empire where it is pillaged for anything of value, in Biv to repay these debts such as in the case of Greece much of the local economy is decimated. When Y Germany invaded the other countries of Europe they typically raided their economies for anything of value to pay for the costs of the military occupation. In Biv trade wars these economies are in effect looted for anything of value to pay for the trade deficit which supports the Y-V Empire’s economic occupation.

Just as Biv trade wars are overtones similar to Roy military wars they also have similar solutions to revive defeated countries. For example the US spent a lot of money on the Marshall Plan in Europe after World War Two, this got their economy back on its feet and also reduced the Ro-R desire for a communistic system, being agitated for by Russia.

In the same way Biv trade wars sometimes reduced their bad side effects on the trade deficit economies by giving them aid, writing off loans such as with Greece, flooding their economies with extra liquidity to stave off collapse in the case of the Fed with the financial sectors of the US and Europe, voluntarily reducing the Roy pillaging of other countries because an economic collapse would mean there would be less to pillage later, and so on.

For example in the book Hitler’s Empire by mark Mazower some countries such as Holland and Sweden were treated more leniently by the Nazis. After the GFC China has been more willing to raise its exchange rate after the bad effects of its manipulation were seen, the collapse of the advanced economies in the long term would hurt those with trade surpluses more than the short term profits would compensate for.

OPEC has also tended to keep oil prices lower to safeguard its investments in the advanced economies, this is like in World War Two where Germany reduced its pillaging to keep France easier to control so it needed a smaller army there. Sometimes just as in Biv economics a Roy occupation might be supported by the local population, at least at the beginning. For example when the Y Nazis occupied the Ukraine they were often supported by the people there because they thought they were better than the R communists.

In the cold war many smaller countries suffered under Y authoritarian regimes rather than support the Ro-R insurgents, this is like a smaller economy preferring to be dominated by V Empires because it believes the economic benefits are superior to a Bi-B economy. For example they might disband or control Bi unions and the welfare state because they believe the V corporations will deliver more prosperity.

This has also occurred after the GFC as economists continue to give conflicting advice, for example much like Y as a military Empire pillaged other European economies and rooted out Ro-R communism today it has in effect pillaged them with a trade war and its trade surplus.

After winning this trade war it has to handle the aftermath which was in part the GFC, like Y Empires fight against Ro-R these V Empires fight to reduce Bi-B by lowering wages and cutting back workplace safety, reducing or removing pensions, reducing consumer protection agencies, and so on.

The resistance to this agenda is much like fighting a Ro-R communist presence in a Roy war such as with the communists in Greece in World War Two. This is also created resistance to this V-Iv agenda in Greece much as it did I World War Two, the left wing Bi-B parties are becoming more popular there much as the Ro-R communists did by comparison to the Ro-R Nazis.

In war there is an Oy-R momentum, at some point one side usually has a superior position as well and from there can win with a Y-Ro war of attrition. This can happen in Biv trade wars as well, when economies have a large and growing trade surplus they loan this back to those with a deficit and this momentum of growth makes it difficult for the deficit economies to fight back.

For example with China and the US much as it used to be with petrodollars the US has a limited room to negotiate about China’s low exchange rate because they might decide to withdraw some of this money out of the US and raise their interest rates. The situation is similar to with Y Germany in World War Two, Britain was losing the war but Germany was not trying to go all out against it. However as the British fought back with bombing German cities the Germans responded with bombing London and the war became much more vicious.

As the I-O police start to strengthen after the GFC they have a difficult task in deciding how to revive the global economy, not only do they have much resistance from different color codes who believe they gain from weak policing but there are many economic theories which ignore or sideline the police and regulators. Some believe for example the there was too much policing instead of too little as a cause for the GFC, the police then in the face of so much criminal evidence still have to justify their role.

In this process the I-O police usually proceed in the same ways they do against Roy crime in the community, they tend to gather so much evidence that public opinion is solidly on their side. The reason the police evolved in the first place is that people could generally accept the need for them, however without police many people can defend themselves to some degree. The police then must also prove they do a better job than amateurs.

For example in the US in some states someone can shoot a burglar breaking into their home and in Florida they can sometimes even kill someone threatening them. These are measures the Bi-Ro community can take as vigilantes to protect themselves from Oy crime but they are also examples of V wealthy homes protecting themselves from R thieves.

The I-O police will also have to decide how much of the crime in the GFC they prosecute, this is like for example whether they try to arrest everyone in a riot. Once Iv-B contagion becomes pervasive it is often more an indictment of the police and regulators than the criminals, for example if the police lose control of a riot then people tend to grab what they can in their absence.

In the same way the fraud in subprime banking prior to the GFC was so pervasive then prosecuting it becomes in effect unjust. For example because of low funding and weak political influence the police might only prosecute the easiest and fastest cases, they might also allow more to settle with no admission of wrongdoing and a small fine.

However this is usually not the way to prevent crime, there needs to be sufficient deterrence in the system, this then seemed to result in a free pass for most of Wall Street and then a perception that fraud had been legitimized. Once the I-O police don’t prosecute some kinds of corporate crime then those who are prosecuted might ask the valid question of why them and not the others.

The idea of selective enforcement of laws is deterrence, Oy-R criminals are timid by nature and tend to flee when the police crackdown suddenly because they don’t know what other arrests are coming. Y-Ro gangs by contrast are used to a war of attrition and so selective prosecutions are a benefit for them as they randomly average out the effects of the police.

The way then to police Y-V Wall Street banks and businesses is not to selectively prosecute them because they act as a team, instead it is necessary to go after the Iv and Oy agents that worked for them to do the dirty work, turn some of them into snitches in exchange for a lesser sentence, then use this evidence to target directly those Y-V that used the agents.

This is the same way the O police keep the Y mafia under control, they have Oy thieves as snitches that give them information on Y organized crime in exchange for lenient treatment.

The Wall Street problem then is a symptom of how the system of snitches broke down, they should have been protected and rewarded with a percentage of the fines levied against their Y-V bosses.

This is how these companies are prevented from using Iv and Oy agents to do their crimes with plausible deniability, the same way that the Y mafia uses small time criminals.

The I-O police then should over time examine the older deals from the GFC to look for Iv-Oy snitches, many of these agents have lost money since the GFC and only a few are making large bonuses. If they are vulnerable to prosecution and the lion’s share of the profits went to their Y-V bosses then they are more likely to become whistleblowers. This is an important way to cleanse the system of contagion because this would uncover still secret I-O crimes, it also makes Y-V feel less safe to keep using agents like this.

However the I-O police are still weak from the deregulation pushed by V-B in the 2000s and earlier, they still have trouble getting the funding to have enough investigators because V businesses will use their influence with politicians to keep this finding low.

This then is the time the I-O police need clear out the contagion so the economy can recover with good health otherwise the contagion of fraud is just being subsidized to grow as well and will eventually drive out and kill off the good business needed for a healthy economy. For example stimulus funds were given to many banks that committed fraudulent activities before the GFC, this is in effect keeping them in business to use the same business model. Because these banks have less scruples they make more money than honest banks, they get driven out of the market like with Gresham’s Law. However in this part of the cycle it is natural for the I-O police to be weak and only partially effective as they would tend to be in any crime wave.

This was a problem with the original stimulus and bailouts, with weak I-O policing they tended to bail out fraudulent businesses and helped them to regrow, this ended up adding much more Sovereign debt to the US and European economies while allowing Y-V to protect themselves with election donations. With the infusion of cash from the Fed those Iv-Oy agents that had taken the most dangerous risks were soon doing well again, this was seen in the GDP statistically as being like a revival of the banking system when it was partially a revival of Iv-B contagion.

Other banks and businesses when honest became more like zombies on life support because they could not compete with the less scrupulous ones, the government in effect could not afford to let the honest banks fail because only the dishonest ones would be left but it did not have the political strength to clean out the contagion properly either.

The result is companies like the large banks become like zombies where the I-O police need to fine them to deter criminal behavior in the future, however the fines they pay are given back again with subsidies such as cheap credit from the Fed. There is also a reluctance to prosecute the Iv and Oy agents running these large banks because they might have the expertise needed to save them.

This also happened after AIG and the banks were bailed out in the GFC, many banks wanted to pay large bonuses to keep their agents. Even though the government was in effect paying bonuses to some of the same agents that caused the GFC it could not afford to let them go. The ones that stayed might not be able to run the companies as well and so the government bailout money would be more at risk.

These are the kinds of problems that come up when I-O policing is weak or not considered necessary, these Iv agents were only penalized with bonuses when the Bi communities became angry enough. When I-O policing is weak the system is highly unstable and relies on this balance between the deceptions in Iv-Oy and the anger in Bi-Ro.

A similar problem happens with banks being too big to fail, they are so weak as of 2011 that downsizing them might expose more toxic assets and cause a panic. If they are really dangerous however then this is an I-O police issue like having to pull down a building that is in danger of collapse and falling on other buildings. Because of weak I-O policing however this issue is getting sidelined and this allows the Iv-B contagion in them to continue.

Weak policing can then cause a fragile government and economy that nonetheless is propped up for fear of something worse, this happened a lot in the cold war as some V-Iv and Y-Oy right wing governments were unstable because of corruption but were supported as the best available. South Vietnam was an example of this in the war, it was corrupt with this weak policing but the threat of the Ro-R or Bi-B left wing North Vietnam was seen as too dangerous.

If the US had attempted to clean up their government and business then this might have created a panic and loss of confidence in it, this is then similar to since the GFC. Since the fall of Ro-R communism the Y-Oy and V-Iv parts of the global economy treated this as a victory, this is like in the animal kingdom where Ro-R prey are seen as the enemy and so killing them is a victory. However killing too many prey leaves the ecosystem out of balance and the fall of communism caused the global economy to tilt to the right.

This is because the ideas of the Ro-R and Bi-B left seemed to be discredited, also there was no longer the specter of Ro-R communism taking over a country if the Bi-B workers did not get high enough wages, pensions, health care, etc. Once this Ro-R counterbalance was gone this caused wealth inequality to drastically increase in advanced economies as V-Iv started to make much more money. Along with this free trade caused many jobs to move to former Ro-R communist countries so that they became Bi-B themselves but usually without any safety net.

So this resulted in an erosion in the bargaining position for Bi wages and the safety net in the advanced economies, if this had happened when communism was strong then some economies might have had a rise in communist insurgencies and become much more sympathetic to those ideas. Now that communism is gone there is a sense that the welfare state and higher wages are no longer needed to keep workers from turning communist.

This then leaves the world economy in an unbalanced color situation much like a V-Iv top heavy tree the B roots cannot support and so it is in danger of toppling. It is also like in the Roy animal kingdom where the Y-Oy predators have so decimated the Ro-R prey that they are now going hungry and becoming desperate, they are partially supporting themselves by more Sovereign debt being spent in bailing them out but the Ro-R and Bi-B poor might not be able to afford to pay off this debt.

In effect then this is like the top heavy tree which is starving for sustenance from the B roots and is trying to borrow nutrients from the Bi part of the plant, but this is like taking the savings of the Bi community and is now very limited in their finances. This often happened with poorer rightward leaning economies that became saddled with large debts to bail out the Y-Oy dictatorship and their cronies because they had impoverished the Ro-R parts of their economies.

Much of this is associated with the kind of predation explained in Confessions of an Economic Hit man where sometimes the West would willingly loan this money for fear of a Ro-R communist insurrection, in effect this money could then be used to appease these Ro-R people, keep the Y-Oy dictatorship from collapsing, and also bind the country to a particular foreign police as mentioned earlier.

In many cases then these countries did not fear Ro-R communism because of the US and other economies supporting them, in the same way because the advanced economies no longer fear Ro-R communism they advocate economic policies that favor and prop up Y-Oy and V-Iv. This has then led to an anemic economic recovery favoring the banks and business owners that have record amounts of capital while workers are facing wage cuts to union jobs, declining house prices, more homes with negative equity, welfare cuts, and so on.

In a healthy Biv economy businesses fail sometimes because of V-Bi randomness, sometimes Iv-B chaos, and sometimes in the I-O market with a mixture of both. For example as a V-Bi market stagnates a business might have its turnover fluctuating randomly until eventually it is no longer viable, they might then close p in a relatively orderly way.

In Iv-B a business usually collapses suddenly because of intense competition and this can sometimes expose deception such as fraud in their accounts. In the I-O market businesses fail with a mix of randomness and chaos, for example if the Iv agents do too well then they get high prices and the Bi business have their profit margins cut and sometimes go bankrupt. When the Bi businesses do too well the Iv agents can suddenly collapse as their profit margins are too narrow to survive many losses.

Some of the sale of the assets of these failed businesses are like the shedding of leaves and branches on a dying tree, they can be reused in other businesses and are sold off in for example furniture auctions, factories sold, patents bought, employees being rehired, etc.

Trees shed leaves and branches like this according to environmental conditions such as the availability of Gb nutrients or resources in the ground, their getting enough sunlight and not being overshadowed by other trees. They give up these resources which go into the humus around the trees to be used by themselves as well as other plants. Generally this humus falls under a tree so it is available mainly for its own B roots but sometimes this is blown around and becomes like G property that can be used by any plant that finds it useful enough.

For example V leaves, flowers and fruit decay and become recycled in the soil, Iv branches fall and B roots may rot in the ground or above if an animal has uprooted the tree, these take longer to becomes usable as humus especially if the plant had poisonous leaves or thorns and are to some degree like the toxic waste in the economies after the GFC.

Usually it makes little sense for a plant to make its own humus toxic but in Iv-B there is such intense competition that it might not intend to give other plants any assistance, for example desert plants rarely leave much humus in the soil, in the same way after an Iv-B boom what is left is often toxic and of little use for rebuilding the economy. V-Bi humus however is usually more useful, for example workers get high severance pay and sometimes assistance in finding another job.

Office equipment might have more regulations on its manufacture and be made more solidly so it is easier to sell, however these same insurance like aspects can make the economy stagnant in supporting them. For example Iv-B weeds in a garden might have little to gain from making good humus for their plant rivals, they might adapt more to using the humus from other plants and leaving little for them. In the intense Iv-B competition then it might be more profitable to spoil the economic environment when a company collapses more than the other companies do in a kind of race to the bottom.

For example when Lehman collapsed it was so toxic it nearly brought down the global economy, this gives an incentive to prop up companies like this like a plant that is left to grow because trying to get rid of it causes more problems. Many weeds are like this, if they are cut then the root still remains and it regrows often faster than the grass also cut around it. With weak I-O policing then not only is it a competitive advantage to sometimes start a financial contagion more likely to bring down other companies but also to poison the recovery in ways that that Iv-B business is immune.

For example since the GFC few companies have been successful in the US but hedge and investment banks such as Morgan Stanley and Goldman Sachs have done well. This toxic environment turned out to be profitable for them because this caused assets to stay cheap and businesses with better ways to analyze complex derivatives could find more to salvage in them. This is like for example how trees may have evolved to be more flammable because when the forest burns they are better suited to regrow and reach the V canopy first. Being able to handle this toxic financial humus better then is like trees becoming flammable because they can handle ash as fertilizer better.

Other companies and banks might look at subprime bonds and other toxic remnants of the GFC as unusable and this leaves some Iv-Oy traders a near monopoly on picking through this toxic humus. To understand this aspect of a crisis then it is important to see not only who caused the collapse but who is doing better in the aftermath. This doesn’t mean this crashing the economy is intentional, Goldman Sachs and others nearly went under, however it is a part of the evolution of the system that those that survive handle this humus better. For example Goldman Sachs survived the Great Depression better than most and it may be that this imposed an extra financial discipline that others lacked.

Strong I-O policing then is needed to prevent this scenario, for example these toxic derivatives such as subprime bonds could not have been created if the fraud in them had been controlled with random audits throughout the tree of their creation from the B liar loans to the dishonest Iv loan salesmen.

For a recovery then it is important to clean up this toxic humus by following the fraud that led to its creation, finding the Iv-Oy agents involved and getting them to snitch on the Y-V companies behind them. By also following the B liar loans they can be separated from the legitimate victims who can then be helped to clean up the overhand of homes with negative equity.

Usually in this situation the Bi community would be united enough to get the government to bail them out, instead they are divided by B workers competing for scarce jobs. Because of this V banks got most of the insurance like bailout money even though it has become obvious that the negative equity on so many homes was just as big a drag on the economy.

In some cases V-Iv parts of the economy are not in favor of prosecuting Bi-B liar loans because this might strengthen the role of the I-O regulators and lead them back to the V-Iv crimes. This is like an Iv-B toxic plant such as a weed where cutting off the Iv leaves would leave the toxic roots to regrow and vice versa.

To prevent the frauds in the Iv-B subprime industry regrowing it is important to not only prosecute and deter the Iv salesmen and their companies but also the B workers who took out liar loans. If either is allowed to happen again then the resulting subprime loans will be just as damaging.

The I-O police then can remove the fraud and deception from this financial humus allowing it to be more easily reused in the economy, for example the US Fed is selling off some toxic assets it took as collateral in the GFC, however by examining where the fraud occurred in them then fines levied can allow these to be sold off with a better chance of an overall profit.

In many areas this process is happening naturally in cleansing this humus, Bi pension funds are suing V banks and their Iv agents for the fraud involved in some of these derivatives. Some B people who got liar loans have also been prosecuted. Most of this cleansing is happening in I civil law where companies are paying for damages and some fines instead of people going to jail for their O crime infractions.

This is a mistake because to cleanse the economy properly of Roy crime Roy penalties need to be imposed. For example Y bank robbers are not always going to be deterred from robbing banks if there are only civil I fines imposed on them and no chance of O jail time. R thieves such as drug addicts and prostitutes might not be deterred by I fines only because when they cannot pay nothing else can easily happen to them. When a contagion is a problem in society as well as nature it needs to be either eliminated or quarantined, often then prison is a form of quarantine of Oy-R crime or a cage in effect of Y-Ro crime.

When companies have limited liability they can be vehicles for fraud because if the assets are quickly distributed as dividends then any fines will be mostly uncollected when the company goes bankrupt. In the meantime they can simply start another business doing the same thing, this is why for example directors of such a business might be banned from holding that office again or other O criminal charges are needed to deter Roy activities.

This removing the Roy contagion from this financial humus is like getting rid of Roy pests such as termites and fungus that might damage newly growing trees, in the same way cleansing the Biv economy of O crime will help it to grow. For example in the book The Mafia on Wall Street Iv-B stockbrokers in intense competition with each other sometimes became Oy-R predators in a Negative Sum Game, their R clients usually lost all their money with fake stocks or others manipulated in price.

The Oy agents often lost overall too because the I-O police would sometimes catch up with them and close them down, however they would usually manage to start up again elsewhere like an epidemic hard to stamp out. To protect themselves these Oy agents would get Guys, usually part of a Y Mafia that acted like a team and settled disputes between these Oy thieves.

For example when one Oy stockbroker thief didn’t pay another they would go to their Y Guys who were part of this organized crime family and the problem would be resolved there. As part of this Y protection the Guys would get the lion’s share of the profits from the financial frauds. Often the I-O police would rely on complaints and tips from R victims or anger from their Ro communities, then they might use Oy brokers as snitches to inform on each other and to get to the Y Guys behind them.

This is very similar to in the GFC where some business was also Oy-R like this in subprime lending, other parts stayed inside the O criminal laws and just broke the I civil laws as Iv-B. These Iv agents would also be in intense competition with each other but because of weak I-O policing they often could not go to the SEC for example to complain because their own frauds might be exposed. With this O moderation righting an injustice can be difficult, instead like Gresham’s Law the bad Iv agents drive out the good ones with deception which gives them an advantage.

They might then complain to these V companies such as Bear Sterns and Lehman that handled the subprime bonds, for example some Iv subprime lenders might infringe on each other’s territories by more aggressive advertising. When these aggressive lenders sometimes created too many fraudulent loans or ones that defaulted too quickly then these V companies would complain about the quality of the loans.

This was like the Y Guys complaining about not getting their payoffs from the Oy brokers, also they might complain that there was too much obvious fraud that could bring the I-O police such as the FBI onto them. The Iv lenders would then have to replace these loans with better performing ones. Wall Street has always been Y-V to a large degree like a club and so they tended to look after each other, instead of dog eat dog competition price fixing and dividing up a market with crony capitalism is a V strategy.

The V companies on Wall Street were insatiable in their demand for these subprime loans and pushed their Iv agents to try harder, this was much like the Y Guys pushing their Oy brokers to commit more frauds. The Iv competition created from this pressure could create friction between these V companies by making one start to undercut the prices of the others instead of them all cooperating to keep the profits higher so they all make more.

For example Bear Sterns, Lehman, Morgan Stanley, and Goldman Sachs might have been Iv competitors to some degree but they were also interested in acting like a club or team rather than undercutting each other’s fees. Until the Iv-B competition corrupted this relationship the atmosphere on Wall Street was more friendly and cooperative, particularly with Goldman Sachs for example before they went public.

If one company or bank threatened this arrangement in trying to grab extra market share then the others might unite against it, Bear Sterns for example was regarded more as an outsider in the way it did business and this is probably why the other V companies did not argue for it to be bailed out.

In the GFC these failing companies were in effect parceled out to the V members of the team much like the Y Guys received their payoffs and Oy brokers to look after according to their ranking in Organized Crime, Morgan Stanley got Bear Sterns, Bank of America got Merrill Lynch and Countrywide, Barclays got much of Lehman, Wells Fargo got Wachovia, and so on.

Since the Biv forest economy was damaged in the GFC there are more bad effects from Roy crime. The Biv economy was previously like a thick forest but now it is more like a grasslands like in some emerging economies where Roy people trample and damage Biv businesses with theft and violence like a Y Mafia or Ro gangs before they can regrow.

For example the US and Europe with their weakened economies have had more difficulty in controlling the wealthy Y-V banks and hedge funds, these have for example added to the Eurozone debt by shorting their bonds and raising their interest rates, as of 2011 speculation is creating another oil bubble and threatening to create another recession, they are lobbying successfully in the US to water down restrictions of their predatory trading in commodities, most of the I-O crimes leading to the GFC have been either not prosecuted or have resulted in small fines, and so on.

The Biv economies then have to be careful not to antagonize these Y-V investors or they might in effect knock over the green shoots of the Biv economy before they can grow strong. This is how Gresham’s Law can replace policing, after letting so many bank companies drive out the good it then appears that I-O policing will put so many out of business that the economy will falter again.

This confuses the Iv-B contagion with the balanced Biv economy, though sometimes at this stage the contagion is so pervasive the government may wonder if the real economy would ever be viable again. In effect this is like having weeds spoil a garden to such an extent that the weeds are better than having no vegetation at all.

This Roy crime can be so damaging that some newly Biv economies such as from the former Warsaw Pact are in deep financial trouble. They were sometimes in effect like the R-B borrowers in the US getting liar loans from Iv-Oy agents, these economies including Greece got loans by deceptively making their economies look sounder than they really were. Now that these loans are often defaulting they are like the R-B homeowners in the US with negative equity where the Iv-Oy agents of the Y-V banks can tell them what to do as they in effect foreclose on their whole economies.

For example Greece has to dismantle much of its Bi-Ro welfare state and could perhaps have a decade long recession because of the demands of these Y-V banks backed up by the right wing Y-V governments of France and Germany. Italy, Portugal, Spain, and Ireland also in effect used R-B liar loans and now are being forced to adopt austerity programs by other governments and markets, this is like homeowners with negative equity having to cut back their expenditures to pay their housing loans except these economies cannot easily walk away from their loans.

These economies are in effect like prey in the Roy economics of scarcity, when there is little money available after the GFC instead of trying to build a Positive Sum Game with these economies where both sides benefit there is a Negative Sum Game where all sides are trying to cut their losses.

Russia has become mired in Roy corruption since the end of communism, this is not surprising since it was a Roy society because resources are scarce there. This allows those ruthless enough such as V oligarchs and Y mafia to profit more from this corruption than in trying to do honest business, it also makes it much harder for an I-O police to keep the economy reasonably honest or else it might collapse into a third world level of corruption. Hungary is in a similar situation as of 2011, the political party Fedesz has Roy as well as Biv aspects to its party structure. Like Russia this is usually a response to scarcity of resources making Roy government stronger and often more efficient.

The Biv process of shedding staff and equipment can be corrupted by this Roy crime, for example office equipment might be stolen or auctioned at a fraction of its market value, companies might be denied refinancing of bonds by investors who prefer them to fail because they have taken out Credit Default Swaps on them, companies might have their stock shorted along with panic inducing rumors about them, and so on. There might be for example intimidation of other bidders at auctions, fake companies might be set up by the Y mafia to run up large accounts and the stock received is then sold off and the company bankrupted.

So strong I-O policing is critical to monitor this shedding of the less toxic resources to allow them to be available for regrowth particularly as so much of the toxic humus is being ignored or mined by the Iv-B contagion. Also weakened businesses need to be protected more from shoplifting by Oy and R petty thieves, violent robberies by Y gangs, and riots by Ro people such as happened in the LA riots. This is again like a Biv forest struggling to regrow, the animals used to feeding on it now tend to use up more of its resources with welfare, policing, and repairing damaged infrastructure.

For example the Occupy Wall Street and related Bi-Ro protests caused many cities to spend extra money on police as well as cleaning up after the protests. These Roy activities like with crime can hamper the growth of the Biv economy, for example as R animals get short of food they can damage a recovering forest or grasslands by knocking down trees or uprooting them, overgrazing, etc.

Some of Italy’s problems for example have been caused by their Y mafia that still had plenty of money being the alpha predator most able to profit in the GFC, they loaned money to many businesses struggling for liquidity and then took them over cheaply.

Iv-B and Oy-R interactions in an economy are like mutations gone wild, they are revolutionary in R-B and counter revolutionary in Iv-Oy. The GFC then was caused in large part by competing revolutions, the R-B revolution where people were getting better finance to buy a home as well as getting more wealth in the 1990s under Bill Clinton. Then there was the Iv-Oy counter revolution where new ways to get money from this R-B sector were invented such as subprime lending, in some ways this was related to loan sharking.

This series of revolutions and counter revolutions have occurred throughout history. R communism saw itself as revolutionary and was always on the guard against counter revolutionary spies in their midst like Oy foxes in the R henhouse. Karl Marx came up with most of his ideas during the Industrial Revolution in England, this was in effect a B revolution where workers had completely new kinds of occupations with more potential for growth but also for chaotic collapse such as being hurt by industrial accidents or pollution.

Marx saw the potential in this revolution but also thought the Iv-B system was doomed to collapse eventually. Since then there have been a series of these R-B revolutions and Iv-Oy counter revolutions, for example as workers improved their skills they got more disposable income which created a revolution in the quality of their lives. This in turn caused counter revolutions where Iv agents made money exploiting these workers by creating new products they wanted as well as finding new ways to profit from them.

This is also like B momentum and Iv counter momentum, and R energy and Oy counter energy like where R is positive and Oy is negative as in color logic. For example B farmers and miners might develop a momentum in building up their farms and mines increasing production chaotically and sometimes collapsing, Oy agents develop a momentum in trying to buy these goods and in these negotiation they try to develop a momentum where they get more of the profits than B does.

The overall momentum of an Iv-B system then might be skewed towards one or the other, for example while B workers profited from subprime loans overall the momentum of the system probably generated more profits for the Iv agents as they had more money left after the collapse.

This is also how even with a Positive Sum Game where both sides benefit that rising wealth inequality can occur, for example though both B and Iv might be making money with some momentum of growth if one is doing better than the other then the losing side with its narrow profit margins will eventually collapse. In a poker game two players might be making money from the other weaker players and so it is a Positive Sum Game for them, however one will make more than the other so eventually as players lose their money and drop out only one will end up with all the money. In the same way a Positive Sum Game in V-Bi can lead to wealth inequality in their war of attrition, one side being stronger tends to grind the other side down into making more losses just as in a Roy war.

V-Bi can be described as Bi evolution and V counter evolution, or a Bi position on an issue and a V counter position, there might be an issue in the community such as abortion rights and Bi might have a position on it and V a counter position they both resist moving on. This is often seen with V-Bi pundits in the media where a political position might be assailed by the opposing political party, even small changes create much anger, even minor changes on abortion can bring on large demonstration by Bi or V protest movements.

While B workers might make revolutionary gains in production along with their occasional chaotic collapses the Bi community is more random and stable, they are more guided by what is normal and avoid the deviance of the edges of the normal curve. So B workers might for example come up with a new strain of wheat that gives them a higher yield but tastes different from the standard wheat.

When the Bi community starts to eat this new wheat then they will discuss it openly as a team and what most people think will come to be the conventional wisdom. Some on the edges will like the new wheat a lot and some will hate it, the consensus in the middle might be it is ok but the other wheat is good too in some recipes. This then is a different kind of reasoning to the secretive revolution in B, the wheat might appear good to B farmers and they hope to build a momentum of sales. However they don’t really know what the general V-Bi public will think of it, eventually they will take a position that it is ok or normal or deviant and to be shunned under peer pressure.

This is why a lot of inventions fail, they might be R-B revolutionary or Iv-Oy counter revolutionary but they also might not be popular with the normal community. Facebook is like a V-Bi social platform where normal teams of people find it suits them rather than in many Iv-B revolutionary kinds of social media that are really more suited to anonymous trolls and people deceiving each other.

These V-Bi social platforms slowly evolve, when there were sudden revolutionary changes in its design many people were unhappy because it confused the consensus on what normal was. Instead in V-Bi people want slow incremental changes, there are also positions that Facebook as well as groups there take on issues in social media such as on hate speech, profanity, posting porn, etc. Generally then in V-Bi people are more honest about who they are and what they think, this leads to stricter conventions on what is ok to think. In V-Bi it is important to be cool as this is normal, in Iv-B it is better to be thought of as hot.

The relation to the Roy animal kingdom was explained more in my first book but R animals are also revolutionary while Ro are more evolutionary. Oy predators are counter revolutionary in that they need to counter the revolutionary leaps that R prey make or they face starvation, for example if R prey suddenly adapt to run faster than Oy must counter this to survive.

Y predators are counter evolutionary in that they have to counter the slow incremental evolution of Ro herds, for example when the weaker Ro animals such as buffalo are eaten the overall herd might slowly get stronger and the Y predators have to counter evolving the herd to resist them in some way.

O animals have to adapt in a mixture of Oy counter revolutionary and Ro evolutionary ways. In the same way then V companies are counter evolutionary in that they need to counter this slow incremental evolution of Bi such as the formation of Bi unions and their demand for higher wages and better working conditions. They might try to grind down these unions by finding excuses to fire the weaker workers but this tends like with the Ro buffalo to make the union stronger as they bring in more workers to replace them.

In the same way when the Y Nazis attacked Ro-R Russia they killed incompetent soldiers and destroyed their inferior military equipment so by natural selection as with any war those that survive are smarter and tougher. Because there were so many Russians by the end they were superior to the Y Germans.

This V-Bi interaction then like with Y-Ro animals becomes like a war of attrition or an evolutionary war where both sides lose small incremental amounts. This was like World War One in its positional trench warfare where small changes in the positions of the armies were won at the cost of enormous numbers of lives.

Sometimes then Bi evolution or V counter evolution is slowly winning, at other times B revolution or Iv counter revolution is causing an upset. In the I-O marketplace the forces of Iv counter revolution and Bi evolution come to a compromise.

R Animals would no doubt wish Oy predators would go away and would think their lives would improve if this happened. R revolutionaries like Marx and Engels saw an R-B worker’s paradise could be possible with a violent revolution, like a Biv society where B and Bi workers would live well on their own labors without having them being ripped off by financial predators.

He then believed that R-B made the important revolutions in society and that Iv-Oy counter revolutions were not valuable and could be dispensed with. This led to the creation of communism where revolutionary ideas without counter revolutions tended towards a series of some good and some bad ideas without the opposing Oy viewpoint showing their mistakes like an Oy critic might do with R innovative artists.

In the same way however Oy counter revolutions also tended to fail as with the Nazis and Fascists that grew quickly in response to R insurgents trying to take over other countries in Europe after the R Bolshevik success in Russia.

Both Oy and R tended to collapse because of what happens in the Roy animal kingdom. R prey if they have a revolution in their genetic makeup such as becoming faster, stronger, or having a better camouflage can evade the Oy predators more often. This becomes like their worker’s paradise where the counter revolutionary Oy predators might be driven away or they starve, however this causes R to grow faster and chaotically because they no longer have a break on their numbers.

This then caused R communism to spread into many other countries but its secretive and deceptive nature caused a reign of terror or a reign of secrecy and deception, this is similar for example to the story of Animal Farm by George Orwell. The farmer preyed on these R animals though he was really more like an O shepherd protecting them from Y-Oy predators in exchange for eating or selling some of them.

As they had their animal revolution this shepherd Farmer was driven off, this is like taking away the role of the I-O police in society. Because R animals are by nature very fearful, this keeps them alive in the sense that the most paranoid tend to survive, they were easily terrorized by some other animals. Also some of the animals in the book began to form Ro teams where they used their numbers to dominate the R animals that did not unite in groups. Finally the Ro animals began to exploit these R animals by becoming more like O shepherds or middlemen as the farmer had been.

R by itself can be like a debate where the negative or counter revolutionary viewpoint or part of the dialectic is ignored or excluded, this causes more ridiculous ideas or mutated ideas to prosper rather than being cut down before they cause too much harm. In the same way R prey without Oy critics or predators would tend to mutate into some less viable animals, also they would tend to have the same number of offspring as before without having any being eaten. This would cause them to fall into a cycle of boom and bust as they overgrazed and then starved for a while.

Over time this should cause them to evolve into a Ro herd where their numbers remain more stable, this happened with R Russia as it became more stable and stagnant over time. It might even be argued that as in Animal Farm the revolution started out as R, then like Ro gangs teams started to dominate the state causing some stagnation. Then using in effect I-O middlemen to trade with the advanced economies opened them up slowly, this was like some in Animal Farm trading with the former enemy. Finally since the colors had regrown from R to Ro to O, then Oy predatory former communist party members stole state assets as agents for the Y mafia and oligarchs.

As this Roy economy became wealthier it developed Biv overtones with much of this G public property becoming Gb privately owned. The R revolutionary society became like B workers with Bi unions, the O shepherd perhaps like Vladimir Putin shared power more with the I market. Oy predatory agents who stole communist party assets became Iv agents and the Y mafia and oligarchs became more like V conventional capitalists with Western style corporations.

Russia slowly lost its momentum from the R revolutionary industrial boom under Stalin, this was the main thing that impressed visitors from the West though the famines produced by overgrazing and poor innovations were deceptively hidden from them. For example Lysenkoism was promoted by Stalin as a revolutionary new theory in genetics where plants might adapt to changing weather without their genes needing to change.

What might be planted in colder areas and somehow change so it became a new kind of cold weather wheat in a revolutionary leap. Instead these experiments caused massive famines though they deceptively covered up, without Oy critics of these revolutionary ideas or an O police to arrest the fraudsters then they profited from deceptive ideas like this.

In the Roy animal kingdom an R revolution spawns an Oy counter revolution where these Oy predators try to make a similar leap to being faster, stronger, more camouflaged, etc. This happened with the rise of the right wing dictatorships such as the Nazis and Fascists in response to the R communist contagion in their countries. These R prey might be seen as like rats or a disease infecting an area by making an evolutionary leap and as they consume all the food they tend to crowd out other animals.

This happened in the Middle Ages for example as plague carrying rats spread across Europe like an R contagion consuming people’s food and causing the Black Plagues. In the same way R communism infected Europe from Russia and started consuming Germany and Italy at first by trying to divert the resources of the country to their system, much like the way the R rats tried to eat all the V grain stored by peasants.

So communism was like this uncontrolled explosion of R prey like rats, locusts, rabbits, diseases, etc and would tend to grow and collapse on its own chaotically leading to famines and disastrous mistakes in the attempted rapid worker industrial revolution in Russia referred to as Great Leaps Forward. This then relies on revolutionary leaps rather than incremental evolution of an economy even though it leaves it vulnerable to too much growth and collapse.

To counter this Europe as with the rats and plague had to develop something to prey on them, for example it is likely Oy cats learned to catch these R plague rats and reduce their numbers. Other Oy animals might have adapted to eat the fleas on the rats that carried the plague. Oy Nazis learned to root out these R communist insurgents in much the same way the US and Europe learned to do in the cold war with a cat and mouse game of secrecy and deception.

However the mutations of Oy authoritarianism such as Nazism and Fascism in trying to counter the different mutating kinds of R communism such as Trotskyism, Bolsheviks, Mensheviks, Stalinists, Leninists, etc lead to an explosion of Oy-R warfare much like what would have happened as Oy cat predators started to catch up to the numbers of the R prey of rats in the Middle Ages.

As this predator and prey relationship escalated then eventually it would reach a peak, probably the numbers of cats and rats both declined sharply and then there would have been occasional outbreaks of R rats countered by cats over time. The same happened in World War Two as the mutating forms of Nazism became toxic to the rest of the world, communism would also be seen as a contagion later though for a long time it managed like hiding rats and the plague to deceive people as to its real nature. In their early stages however Oy Hitler and Mussolini also managed to deceive the world about their regimes, Hitler for example managed to rearm while convincing Neville Chamberlain he had only peaceful intention.

The result then was revolutions and counter revolutions in warfare that led to the attack on Russia by these Oy Nazi predators and the victory by the R prey, the communists then occupied part of Europe including East Germany and Poland, also forming the Warsaw Pact. The Nazis then while often painted as intent on world domination were large a counter revolution that mutated because of the threats of R communist insurgents starting in Munich and threatening to take over Germany. Without this R war with Russia it is likely that Nazism would have become more like a Y dictatorship evolving into a Y-V Empire and V much like the Germany of today.

In the same way Russia started out as R revolutionary then became stagnant as Ro and then as the world became more Biv and wealthy it ended up more like a Bi economy with an excess of Y mafias and oligarchs. However without a strong I-O international police to mediate the disputes between R communism and the Oy Western countries as anticommunists this chaos between them first mutated into the cold war.

For example this conflict might have been moderated even before the Bolsheviks cemented their control of Russian by the I-O League of Nations set up after World War One. At the time the Western powers were unsure what to do about this secretive R communism, an envoy sent there was thoroughly deceived by Lenin and gave the peace conference in 1919 glowing reports of this new society.

However he was not believed, Britain still had some troops in Russia and could have joined with the several White Armies fighting the Bolsheviks and perhaps have ended communism before it really began. There were reports of R communist insurgents trying to promote revolutions in some areas of these defeated countries, the West tried to make the R Bolsheviks agree to end this contagion in exchange for food aid.

However this could never have been accepted under the highly competitive atmosphere of the Bolsheviks and the Mensheviks, etc. If anyone had moderated their attitude towards these Y-Oy military victors they would have been discredited as counter revolutionary themselves. The R communists also had no intention of compromising because they thought this war was the end of capitalism as foreseen by Marx, they expected to wait a matter of months when their R revolution would sweep through Europe.

Because of its deceptive nature and their exhaustion after World War One had concluded Britain decided to withdraw her troops and allowed the Oy White Armies to be beaten, easier because the R Bolsheviks controlled nearly all the munitions factories.

The White Russian counter revolution then failed and so Nazism and Fascism eventually had to have their own counter revolution to stop a much larger R communist contagion.

In effect then Marx predicted the Oy counter revolution would chaotically collapse after its explosive growth once they ran out of colonies and Lenin assumed this referred to the clash of Empires in World War One, but this also happens with R revolutions as they are both based on the same kinds of chaos. The just finished war was like these Oy Imperialists trying to expand their Empires, the war started for example over the Austrian Hapsburg Empire trying to annex R Serbia.

An R terrorist group there assassinated the Archduke Ferdinand of Austria causing them to declare war on Serbia. This caused Russia to come to the defense of Serbia and then the rest of the Empires with their roots and branches connected each other in complex families of royalty took sides as they had in many previous European wars between kings.

With few new countries to colonize or annex these Empires started having to attack each other like starving Oy hyenas similar to as Marx predicted, because these Oy animals like economies and Empires compete with each other there was little stability. The war however while it was started with Oy-R chaos became a Y-Ro war of attrition with Germany and Austria slowly being ground down and because they feared the US coming into the war against them risked everything on an Oy-R attack at Verdun that failed and caused their collapse.

A common mistake with Iv-B and Oy-R theories of revolutions and counter revolutions in politics, war, inventions, economics, etc is to think of the world only in terms of deterministic chaos and assume randomness is irrelevant. There were two reasons why Marx was wrong about an Iv-Oy counter revolution with capitalism and imperialism leading to collapse and then the R-B communist revolution triumphing.

The first is that Oy and R as well as Iv and B are both chaotic and so both can continue to try to out innovate each other leaving neither side a permanent victor. Marx assumed that capitalist though they had a reputation of innovating such as with the Industrial Revolution would somehow lose this ability while the R communist would take over permanently this mantle of innovation.

The second is that chaos tends to become random at times and vice versa, this is because chaos forms from dependent variables where one event causes another but randomness is just where one event is independent from other events. This means that independent events don’t cause each other, they just happen sometimes in similar ways.

So if an Oy counter revolution such as the Industrial Revolution was doomed to collapse then this would likely mean that Y randomness would take over from it to a large degree creating stagnation for a while. For example if an Oy-R economy is imagined as being like dominoes that can fall over and knock each other down then there is also some randomness in where this dominoes are placed.

So some are knocked down chaotically like this but some are also too far from each other and so these dominoes are independent from each other and so survive being knocked down. The result is random dominoes still standing while others between them have knocked each other down. These still standing dominoes are like a stagnant economy left after all the energy and momentum of the system has been used up in these falling dominoes.

As another analogy the financial system was sometimes seen as being like a house of cards where some cards moving knocked over all the other ones. If there was a village or city of these card houses then some would tend to escape being knocked down by other cards, these would be left standing like buildings that survived an external shock like an earthquake.

So in the GFC external shocks caused this collapse of companies as they knocked each other down in demands for liquidity, others were more separate and survived this but were knocked down by these external shocks before and after the GFC. Still others were helped in time and survived but this created a stagnant economy hard to move around in like a city nearly destroyed by an earthquake.

In the same way the GFC had an Iv-B boom that resulted in a V-Bi stagnation, this boom was highly chaotic and so as some parts of the financial edifice collapsed like with the dominoes it dragged down those other banks, hedge funds, investors, etc with it. However some were not highly connected to this boom, for example many companies in the balanced Biv economy didn’t speculate in the boom and so as soon as they received funding from the Fed they survived this domino effect.

However because they were by nature independent from each other this left many businesses not well connected which leads to a stagnant economy. Because these companies were hard to collapse they were also hard to grow, this is like Ro buffalo that might be hard to collapse as a herd but they also tend to procreate slowly as well.

This then is where Marx’s idea of Oy capitalism collapsing for good was not correct, when capitalism has these collapses it generally causes a recession where momentum is lost in these collapsed businesses. However others survive by being independent and they can often profit from this financial humus of wrecked businesses around them. Slowly then this flimsier businesses regrow and this is like the economy coming out of recession.

However the West made a similar mistake in predicting the collapse of R communism over and over, while some parts might collapse this left Ro stagnation around which the revolution would continue to grow.

For example the early famines in Russia were counterbalanced by more stable economic areas, the Russian army collapsed early under the Oy Nazi blitzkrieg but this left the Ro stronger areas which were harder to break down. In the meantime the R army was innovating under Zhukov with munitions factories in the Urals that were able to chaotically grow in the numbers of planes, tanks, etc they churned out. According to Zhukov it was this exponential growth of weaponry that eventually doomed Germany even though Russia had to endure these early collapses.

The Oy Empires in World War One with their entangling chaotic alliances toppled into war like falling dominoes, this war started by a secretive and deceptive Blitzkrieg attack by the Germans called the Schlieffen Plan much like the attack by an Oy predator such as a hyena on its unsuspecting prey.

This led to collapses in parts of these Empires fighting, for example the Oy Russian army collapsed disastrously and led to the victory of the R communists and France barely survived an early collapse. This chaos led to their Y aspects becoming more dominant in a random war of attrition in the trenches.

R communism then had an ideology of R revolution taking over the world as the Oy counter revolution of capitalism collapsed, however what tended to happen was as the R revolutions and Oy counter revolutions mutated and had spurts of explosive growth and collapsing this often caused Y-Ro interactions to dominated in wars of attrition because they were the parts left standing after the chaotic collapses.

For example the Oy Nazis evolved a large army to attack Russia and in response the Russians evolved a Ro defensive army as its R army was shattered by the Oy blitzkreig, instead of the war being decided by a revolution then it became more of a slow incremental evolution and counter evolution of whoever could put the most men and materiel into the war. The Germans with Hitler’s urging continued to try this counter revolutionary Oy strategy but this while it led to some large growth in territory it also led to some chaotic collapses such as the troops encircled at Stalingrad.

In the same way Biv societies tended to not just collapse in these economic free fall as in the GFC but instead they switch to a V-Bi system of stagnation as the parts of the economy left standing while new revolutions and counter revolutions will eventually produce enough growth to life them out of the slump.

After World War one the Bolsheviks continued their R explosive growth of contagion which succeeded in Russia by trying to take over Europe with R communist cells but this revolution slowly stagnated into a more moderate Bi-Ro political movement in the West and increasingly in the Soviet Union as well. More likely it was this economic stagnation that finally caused the Soviet Union to break up as they became more backward compared to the B revolutions and Iv counter revolutions of technology in the West.

Iv and B people in Biv and Oy and R people in Roy then come up with revolutionary and counter revolutionary plans, inventions, software, novels, music, art, scientific discoveries, business ideas, etc. In a Roy society these can often be criminal ideas such as how to break into a kind of safe, how to embezzle from a bank online, how to profit from sending span to email accounts, how to write viruses that will steal passwords for internet banking, how to steal credit card numbers to use fraudulently, etc so the O police have to be constantly watching for new criminal tricks before they become a crime wave like a tsunami over society.

They do this by a combination of Ro slow incremental and stable evolution of a Bi-Ro society combined with Iv-Oy counter revolutionary ideas to keep the peace. R revolutionary ideas are often highly disruptive because they are new, for example a new genetic mutation in R prey might upset a whole food chain as mentioned earlier. R communism was an innovation that changed the whole political system and so communists such as Lenin were arrested by the Oy Russian secret police. Communists in Germany were also harassed by the O police which is why Karl Marx went to live in England.

R criminals are often seen as a particular threat to society, for example R drug addicts and dealers might cause a drug war as their innovations of new drugs spread like a contagion. R-B farmers of coca in Columbia, poppies in Afghanistan, etc are examples of this kind of revolutionary contagion.

An innovation in cocaine led to crack and a massive R epidemic that decimate the Bi-Ro black communities in the US. New drugs such as Ecstasy were watched by the I-O police and criminalized after they began to spread too much like a secretive contagion in nightclubs. To counter this then the O police try to develop a counter revolution in new ways to secretively and deceptively catch these innovators with undercover Oy agents.

Instead of these R-B revolutionaries upsetting stable societies the I-O police prefer to keep the peace with Bi-Ro communities that are much more stable and team based, they then use these Oy criminals as counter revolutionaries to keep R in check. So this moderating influence of the I-O police stops revolutions and counter revolutions from destroying society with innovative ideas that grow quickly and collapse.

It also stops the Bi-Ro communities becoming stagnant by moderating these counter revolutionaries from doing their job too well. For example when Marx saw the Industrial Revolution in England there were Iv-Oy capitalist having a counter revolution where they could exploit these R-B workers too much. Strong policing would have allowed these R-B workers to make more money and create this revolution in consumer spending that made capitalism grow so much larger in the long term.

Usually the I-O police need to do their job proactively and not just wait for complaints from their victims, for example they should act like health inspectors looking for contagion by random foot and car patrols in crime ridden areas. They make it hard to hide these R revolutionary criminal ideas and so they in effect nip the problem in the bud before a new kind of crime, drug, scam, epidemic, etc can take hold.

In the same way I regulators need to proactively watch for Roy contagion threatening the Biv economy before it becomes a tsunami of fraud and panic like with the GFC. The idea of self-regulation by Iv and Oy as well as by R and B simply does not work in nature or in economies for long term stability, it does however work for the kinds of desert plants in Biv that use up Gb resources quickly and then collapse.

It also worked for a while prior to the GFC until it consumed too many resources and then hit the ceiling and collapsed in shock from this sudden deceleration, for example there was an explosive growth in using computer algorithms in seeking arbitrage profits from small discrepancies in the prices of stocks and bonds.

More and more computer resources, more complex algorithms, and more leverage was used to try and get to any price discrepancies first. This has been described in the hedge fund industries as a predator and prey relationships and like piranhas going after morsels of food. This then is Iv-B and in some cases Oy-R when it became a Negative Sum Game trying to minimize losses in the GFC.

For example Iv-B arbitrage is like someone seeing the normal price of cars and then looking in advertisements for cheaper Ford Mustang cars they can quickly buy before anyone else. This predatory situation in Oy-R is like looking for someone to be foolish enough to sell something too cheap, it is also like an Oy predator waiting for an R prey to do something foolish like giving up its life too cheaply in a chase.

However as these Iv-B deals made profits then others would notice these bargain advertised, then more speculators might look for these making the value of these cars rise. So over time the price of these cars is no longer normal but is dominated by speculators buying them and then reselling, other speculators then think these resold cars are too cheap and they buy them.

Eventually this exponential rise in Mustang prices will hit the ceiling as the dealers run out of money and then the prices will collapse as they have to sell them to people who really want a Mustang in the I-O market. Because all these Iv-B and Oy-R buyers and sellers are trying to deceive each other to get a bargain then the market inflates on deceptive information and this bubble eventually bursts as it must face the reality of what a Ford Mustang is really worth.

Just as the B workers were cleaned out with subprime loans so too were unwary investors going up against computer algorithms in arbitrage trades, in effect like human investors being fed on by Artificial intelligence. It is like for example human poker players against a computer opponent, as with the chess championship with enough research most games, even Go, should be able to be dominated by computers.

As these R prey, or weaker traders were cleaned out then this arbitrage market became dominated by ever more sophisticated computers that were trying to beat each other more than being able to find human traders. This then is like Oy hyenas after having eaten all the prey attacking each other in a dog eat dog competition. It is also like the Ford Mustang prices where the speculators are bidding up the cars between them, this also happened in the art market boom prior to the GFC.

In this situation then it is like a poker game where all the weak players have been cleaned out, the best players like the best quants now need to profit from each other A bad market situation can then be like a bad run of cards which is wildly amplified by the way poker players use leverage on weak hands, if they start to panic or try to chase their losses then they can lose even more quickly.

The Iv-B share market boom then was like these quants using excessive leverage on weaker and weaker arbitrage situations, eventually the luck can turn against some quants with disastrous consequences. For example some needed to sell because of liquidity problems early on, this caused some share prices to plummet chaotically with no normal price which then caused other hedge funds to either panic or be left holding the bag if the share prices did not recover.

This is even worse in a Negative Sum Game where the prices of securities are going down and the quants are trying to minimize their losses with high leverage. This would be like for example where a high stakes poker game has to pay a large part of the pot to a casino to play there, this puts more pressure on players to increase their leverage, or use higher bidding and raising, to win because the odds are in effect against all the players.

Just as in poker the higher the bidding on flimsy hands will eventually lead to a bad run of cards with a wildly amplified series of losses, as these hedge funds used higher and higher leverage on more fleeting arbitrage opportunities then when luck turned against them the losses would be amplified.

At this point however the very meaning of arbitrage had eroded because it was no longer a normal market because investors were acting less randomly or independently from each other. Instead they were watching the share prices and a selloff by a large investor or hedge fund would cause others to chaotically do the same thing. In some ways this was the start of the I-O market pricing securities with a mixture of randomness and chaos, however the algorithms used by the quants would fail in such a market. This is because the prices the shares were trading at, like US real estate was wildly inflated and so both had to drop to the point where there was real demand not just Iv-B speculators bidding against each other.

Arbitrage also tends to rely on the idea of a normal price in transparent markets, they try to buy faster than other quants so when the slower V-Bi market sees that a price is out of alignment then they profit more as this price returns to normal.

This then is like a competition between Iv-Oy based on speed and also secrecy in hiding their computer algorithms used in working out this arbitrage. Without any arbitrage trading the share prices might wander in a random walk back to the normal price by itself, this is really what the Iv-Oy traders are hoping will happen.

If a share accidentally became cheap on one exchange compared to another then random movements would tend to bring them back to the normal price again, this is the idea behind the Efficient Market Hypothesis. The difference is that while the market tends to absorb all available information into the share price it does this at different velocities and energies, for example if a trader can work out what is the normal or conventional wisdom will be about some news on a share then he is part of this process where the Efficient market reacts to this information.

This is like the Iv-Oy trader buying the Mustang cars, he tries to imagine what the average buyer would pay for a Mustang and then tries to buy a cheaper one before it can rise by itself to this normal price. This then is chaos and randomness in the I-O market, new information will efficiently result in a new share or Mustang price but the faster the trader to get to bargains the more they will make.

In the same way with the example of trying to buy cheap Mustangs if there were no Iv-Oy bargain hunters then in a transparent market the sellers might see that their price is too cheap and raise it or withdraw the car from sale, this would be the Efficient Market adjusting Mustang prices as people look at the car advertisements.

There is an element of deception too, not only does the Iv-Oy bargain hunter need to be fast to get his arbitrage profit but he also needs to be deceptive and get the car before the owner realizes he has advertised it too cheaply. For example he might have to lie about coming to see the car early in the morning or the owner might become suspicious.

This Iv-Oy chaos then works in the direction of the Bi-Ro normal curve, this is like Oy predators attacking Ro herds by taking advantage of their random movement in assuming that animals on the edge of the Ro herd are likely to try to move towards the middle of the herd again.

Y predators would tend to grind down a Ro herd as a kind of Efficient Market where everything is transparent, the Y predators such as lions are visible as are the Ro buffalo. Each tends to move randomly so this is like the market being completely random and transparent, in such a market chaotic strategies do not work because there is no deterministic pattern to exploit.

However a normal curve is often not the same as randomness even though it is made up of independent variables, for example Buffalo might move randomly in a certain area but they don’t stray far from each other. So while these variables are bounded they can still be moving randomly inside that boundary. For example a normal curve might be used in opinion surveys because the people that answer questions are independent from each other, I.e. they ideally don’t know each other.

However they don’t change their ideas randomly either, for example Republicans in the US wouldn’t eventually all become Democrats and vice versa in a real random sample. Usually people vote their interests and the survey is designed to remove the chaotic associations to arrive at this normal curve, however these chaotic connections still exist.

In the same way though arbitrage might be based on a normal curve it doesn’t mean that share prices would one day randomly drift down to nearly nothing in value, they are connected chaotically to many other factors such as their dividends and assets.

Just because share prices might move randomly in some ways does not mean everything about shares is random, it just means that some aspects of shares are sufficiently free of this chaos to fit a normal curve. In fact chaos is actually part of the mathematics of the normal curve which will be explained later.

So if Iv-Oy traders look for the chaotic aspects of markets they can use them with speed, secrecy, deception, momentum, etc to make a profit. This is what Iv traders do when they sell to Bi people in the I-O market, there is a balance of randomness and chaos but V and Bi communities can be close to purely random. As long as these communities dominate parts of the share market then it will fit on a normal curve but the chaotic Iv-Oy agents are still part of it.

Randomness in the market then exists but it is limited in scope, the chaotic Iv-Oy agents work with the chaotic aspects of this market as it balances with the randomness. So while the Efficient Market Hypothesis of a random transparent market is right in some areas it does not apply to the whole market.

A Ro herd then might move randomly but on the edges of this randomness it becomes more chaotic, so predators make their profit in effect by trying to grab animals on this edge, this also causes the herd to become more alert and to normalize itself. This is like the debate over fat tail distributions in share markets, it is noticed that the edges of the normal curve tend to have fatter tails where unusual events happen more often than they should.

When a Ro herd is attacked too much by Oy predators it becomes like this random V-Bi market that starts to become chaotic leading to these fat tails. For example V-Bi investors might tend to make decisions randomly but as chaotic arbitrage trades start to dominate this tends to upset them and so they start to react more to this chaos than their random independent investment decisions.

If this chaos continues to increase then this random investing can become fragmented and so this normal curve becomes more deformed in shape. This is like Oy predators such as hyenas attacking a Ro buffalo herd trying to panic it, eventually if looking from above the random milling about of the buffalo is replaced by reactions to movements of the Oy predators and to the panic or anger of other buffaloes.

The random center starts to fall apart, instead the Ro herd starts to become more like an R group of animals who watch each other for signs of panic and are getting to scatter chaotically. So with too much arbitrage the V-Bi and Y-Ro investors find they are losing money, this is like the Ro herd as they realize their random team strategy.is slowly failing.

When the market is rising this is usually not noticed like when the Ro herd is having more offspring than it loses but as the market falters the V-Bi and Y-Ro investors start to become panicked by these small losses just as a Ro herd does, they might then switch their strategy to moving chaotically.

For example these investors might start watching the share prices all the time when they see two shares such as Ford and GM start trading away from their historic price ratio. They might then decide instead of buying GM or expecting this historic ratio to return they start to dump the sinking GM share in panic.

This would seem like an even greater arbitrage opportunity to the quants as long as the investors stop panicking and act randomly again, the quants then might buy more GM shares. This actually happened in the GFC as well as some sharp market corrections before this, previously this strategy had paid off but in the GFC there was too much chaos for a normal price to exist.

In this situation then the V-Bi and Y-Ro investors might be only partially reassured by GM prices going up because of other fears about the economy not part of the quants’ algorithms. The random investors are becoming more chaotic and so they might keep selling GM.

This is contrary to the expected situation for the quants, they are in effect betting that these V-Bi and Y-Ro investors will buy GM to hand the quants a profit.

However the quants with their betting on randomness have in effect allowed the investors to become hidden or even deceptive in their dumping of the GM shares, this might continue for a chaotic and hence hidden reason such as these investors losing money on other shares, needing money for house repayments, losing their job, being spooked by stories in the media, and so on.

So the exponentially growing chaos of the economy in the GFC caused these normal random investors to start panicking and to follow each other in effect out the door of the market which is now like the example of the burning theatre. In the meantime these quants are like ticket scalpers who start buying lots of cheap tickets without realizing why more people are selling them.

Eventually these quants start to run out of money and the price for the tickets keeps dropping, they start to realize they have been deceived because the ticket sellers did not voice their fears when they sold them. In the same way the investors selling GM would not have announced their intentions because they were trying to get out before the shares went down more. Giving interviews about his might then hurt them financially.

When the ticket buyers realize this they might stop buying tickets or start to sell, this causes people to exit the theatre even faster and dump their tickets for less because this ticket buying was calming some of the panic.

As these quants like the ticket sellers run out of money from buying GM shares they need to sell perhaps because of margin calls and so they start dumping shares as well, however these panicking investors have become like R-B prey running away and don’t want to invest at any price.

For example Bi pension funds might normally buy bargains like this but after having been savaged by rip offs in subprime bonds they doubt their ability to handle these Iv-Oy agents like the Ro herd doubts its ability to fend off the Oy predators. The Bi pension funds then start to act like B and secretly and deceptively might sell off their GM shares leaving the Iv-Oy agents stuck with their arbitrage buys of them.

The market then goes into free fall like a collapsing Biv tree where people start to assume in the burning theatre analogy that even if the fire in the theatre has been put out that there must be a reason for the cheap price of the tickets so they don‘t buy either. These rumors become like a self-fulfilling prophecy as the chaos feeds back on itself and amplifies the panic.

The result is the theatre has to close because the contagion of the fire has made people distrust it, in the share market the subprime contagion panics investors and so the quants lose their money. Some of the panicked investors, though they were the target of this arbitrage sometimes got away with more of their money than the quants.

There are then many color interactions here, first there is Iv-Oy quants tricking R-B investors who are foolish enough to sell too cheaply. This is like in the animal kingdom where Oy predators try to catch unwary R prey. It is also like in the Biv plant kingdom where Iv-B plants such as weeds grow by exploiting all the nutrients the B roots can find.

Then there are Iv-Oy quants trying to anticipate the random and normal movement of this herd of Bi-Ro investors assuming they will always bid up shares back to the historical normal price. This is like the Oy hyena attacking the edges of a Ro herd because they either grab them or this moves them back towards the center. This can also make the Ro herd very tight, in a similar way sharks and dolphins catch sardines off the coast of Africa by trapping them into tight schools and then biting into these more solid areas of fish as they are prevented from scattering and reforming elsewhere.

In a market then this arbitrage pushes the normal curve higher in the center, this is seen as an anomaly along with the fatter tails this data is supposed to have if it is random. For example a random market might have a natural variation in prices which gives arbitrage opportunities, if this arbitrage is not seized like the Oy hyena grabbing Ro edges of the buffalo herd then this herd remains more spread out and more flexible in its movements.

This then is like the dominoes falling as referred to earlier, when they are too close then one falling domino knocks down others by when spread out they don’t hit each other. In the same way a spread out Ro herd doesn’t have buffalo running into each other causing chaotic bumping, as the Ro predators force them closer together they become more chaotic in their movements.

A buffalo might stumble for example and almost knock over some others like dominoes. This normal curve is then becoming deformed in the center, the higher peak referred to represents chaos as does the fatter tails where buffalo are starting to be eaten more often then they should be according to their size.

This arbitrage buying then is compressing the center of the normal curve because variations in price from this center such as the lower GM shares are pushed back to the normal price faster than it would otherwise go. At the same time Ford shares might be shorted to bring them down so this is exerting a bunching effect on shares, in effect the normal curve is still roughly correct but it is becoming taller and thinner than it should be.

In response to this more arbitrage opportunities might come up as V-Bi and Y-Ro investors try to move randomly, this is like the Ro herd trying to expand a little to give themselves room to maneuver. This spreading out gives more opportunities for the Oy predators to attack the Ro herd but it is also starting to seriously fragment it as it also becomes chaotic.

Eventually the Ro herd might panic and scatter completely so this arbitrage strategy of picking at the edges no longer works, in the same way the V-Bi investors sold off their theatre tickets as normal random behavior became too uncomfortable. A share market like this seems to be normal and fits the normal curve algorithms reasonably well so the quants keep buying GM and shorting Ford, eventually this squeezing causes the investors to panic and dump GM and perhaps even rush to buy Ford as it seems to have gone up. Now the quants are not only losing on GM but they are in a short squeeze and losing on Ford as well.

Then there are also Y-V quants who maintain a normalized share strategy where they estimate a normal price such as for GM shares and try to stay with this assuming the Bi-Ro investors will eventually agree with them. These are like long term investment hedge funds. Often they have also used up their capital and can no longer buy arbitrage, they then need to sell which forces these share prices further apart, panics the investors more into dumping GM for Ford, and so the arbitrage fails.

The Ro herd after scattering would usually reform somewhere nearby, the same would happen with the sardines mentioned where if they get away from the sharks and dolphins they reform a Ro school again. In such a chaotic environment though it is unlikely that the historic ration of prices between GM and Ford would return, for example the GFC caused GM to go bankrupt and Ford to do much better.

## In this process then the Iv-Oy arbitrage hunters caused the normal curve distribution to bunch chaotically in the center with a higher peak, the edges to grow fatter tails as unusual events or black swans became more common, and then the curve breaks up into scattering with panic and reforms with different prices later.

This is also like in the Biv animal kingdom where Iv-B plants tend to push their Bi storage of nutrients much harder to grow faster, sometimes then they run out of reserves and collapse from this.

Then there are these Y-V hedge funds that seek Bi-Ro prey, they try to profit from the market by embracing the random Efficient Market Hypothesis. They do this not to grab arbitrage opportunities but to look at economic fundamentals that lead to slow and steady growth.

However the actions of this chaotic arbitrage is to deform this normalized market so it doesn’t work properly for these funds. Some investments stagnate because money that would normally go into sustainable businesses goes into boom investments instead.

This is like a fat tail event for Y-V investors as these low returns should be unlikely, for example these companies might have higher dividends and better prospects than their share prices indicate and so their mispricing indicates the market is not being efficient. When the arbitrage squeezing causes the random market to become chaotic these Y-V investors also lose, the Iv-B boom collapses causing massive losses in the economy and increasing the market stagnation and losses to Y-V.

These shares, Ford Mustangs, theatre tickets, etc then move like the Roy animals in the food chain, when there is too much Oy-R chaos then this erodes the random Y and Ro animal strategies and they collapse in numbers too. So these Oy predators when they used up the R prey tried to rely on the normal movements of the Ro herds and then they find this changed or evolved their behavior in ways they could not match.

When oscillations in the food chain happens there are two outcomes for predators which are both disastrous, either a predator does well and exhausts his prey and starves or he does badly and starves anyway. There are also two bad outcomes for prey, either they survive more often against predators causing them to overgraze and starve, or they are decimated by the predators which then leads to the predators starving later.

The result then is wild oscillations of the color ratios and a collapse of the Roy food chain in the same way as the markets melted down in the GFC. Usually the Y-V investors like the Y predators such as lions or the V seeds of plants are the last left standing, they use a random insurance based strategy but if the oscillations are bad enough they lose as well.

## As mentioned over and over these oscillations in the Roy food chain are caused by the weakness of the O animals, in the market the GFC resulted from weak I-O police and regulators.

This weakening of the I-O police, while probably unavoidable in the color cycles, allowed the subprime fraud to grow chaotically and weaken the market, it also allowed unregulated derivatives to grow like a poker game where commodities and securities became priced in an unrealistic way because of computer algorithms. This chaos then infects enough of the random parts of the economy to make it nearly all chaotic and then it usually has a final burst of manic growth and then collapses.

When any part of the Biv economy assumes normal or random movements as part of their business strategy then this works until investors get greedy or panicked and then they move more and more chaotically. As this contagion grows then normal curve based algorithms will give more and more wrong answers, for a long time however these discrepancies are dismissed as noise in the data.

Exponential growth tends to look small at first and then it begins to become noticeable over even short periods of time, this is usually before the explosive growth hits the ceiling of using all available resources causing the data to become completely different from a normal curve and the system to shatter.

Only by trying to find a middle ground between chaos and randomness in the I-O market can these two problems be avoided, this however needs neutral and strong I-O police.

These market problems come then from this weak I-O policing which makes V-Bi and Iv-B parts of the economy become disconnected from each other, Iv-B for example is where arbitrage traders race each other to deceptively grab mispriced shares but this eventually leads to a boom then a bust because they lose sight of what these shares are really worth. When the quants suddenly found there was no longer a normal price for their securities in the GFC this was like home owners realizing that the normal houses prices were also unrealistic.

The boom in subprime lending from the Japanese carry trade grew explosively as low interest rates in Japan caused them to lend their savings out to the US with higher but riskier investments creating an Iv-B boom that collapsed when this carry trade ended. If this carry trade had been adequately policed in I-O then it would have been obvious that the boom was unsustainable, this would have been done by random audits though all the deceptive parts of the Iv-B and Oy-R systems. For example it might have been possible to see the effects of this arbitrage on share prices by showing how the market fundamentals were disconnected from real valuations.

This Oy-R and Iv-B strategy then works well as a strategy as long as a boom and bust is acceptable, this however is not usually desirable when it becomes systemic as in the GFC. It also works for some animals that tolerate this boom and bust, for example with R locusts or mice that suddenly explode in numbers with the right environment as well as their R numbers causing an explosion of Oy birds, cats, foxes, etc that feed on them. So for example a dry area might suddenly get a lot of rain and get a plague of locusts and mice that quickly overbreed and starve as they use up all the food available.

These huge numbers of R prey like a revolution can cause an explosion in Oy predators counter revolutionaries that eat them and also starve, as long as Ro and Y animals as well as the O middle of the food chain can absorb these booms and busts the ecosystem can handle small amounts of this efficient utilization of fleeting resources. This is like Alan Greenspan’s idea

Of letting bubbles grow and burst without interference, however it is also part of the natural economy to have strong I-O police to minimize the effects of these bubbles.

Advocating allowing bubbles to grow without I-O policing then is a recipe for disaster. However as mentioned earlier I-O police tend to weaken as they are only partially stable because of their chaotic side, because of this some systemic crises may be unavoidable because sooner or later the pressure to deregulate will become too strong.

Iv-B usually forms around fleeting resources and opportunities like weeds growing where grass or flowers leave an opening.

However the Iv-B boom was accompanied by secretive and deceptive illusions that it would be permanent, these illusions and delusions need to be investigated by the I-O police to uncover any fraud behind these beliefs.

That is, how much of this delusion was caused by honest mistakes and how much by deception.

Using illusions is a common tactic in the Roy animal kingdom, for example Oy-R camouflage adaptions might have made the problems in the economy invisible as businesses tried to hide their lack of capital and misgivings about the goods and services they were selling. Some animals try to appear stronger than they really are, for example a toadfish might pump up its torso, the frilly lizard puts out its webbed frills, R prey might act aggressively to scare off some predators, and so on.

Even in Biv societies there is sometimes a need for illusions and deceptions without breaking O criminal and I civil laws, for example someone might not only have private thoughts and possessions but they might actively deceive people about them without committing a crime. The concept of thought police is much like any form of I-O police, at what point do they have the right to invade someone’s privacy.

For example some criminals might get a different sentence according to their state of mind or history of thinking or planning the crime. The book 1984 by George Orwell showed a different kind of I-O police where they tried to invade this privacy to look for signs of rebellion against the Roy state. The same situation might happen in a Y right wing dictatorship where the Oy secret police might try to work out what R people are thinking, if they determine they are potential rebels or terrorists then they might be arrested or hurt even without doing anything.

This is also a factor in the Roy animal kingdom, R prey might have a state of mind such as being unwary or sleepy that diminishes their chance of survival. Oy predators might then watch this prey for signs of not being alert, at the same time the R prey might watch the Oy predators for signs that they might attack. In the same way Oy police try to determine the state of mind of Oy and R criminals when they have committed a crime.

B and Iv are responsible for the innovative or revolutionary ideas and businesses in the Biv economy, if they cannot protect these ideas even from the I-O police then sometimes these ideas might lose their value. For example if the I-O police are partially corrupt or biased to Iv then they might pretend to investigate some businesses but really be spying for other Iv businesses. This might be a common fear in Wall Street, for example proprietary trading strategies and computer programs for arbitrage might contain valuable trade secrets.

If these corrupt I-O police could inspect these looking for signs of front running stocks then they might also pas son information to other Iv brokers. This is why

The I-O police need to use random audits because this prevents them from targeting anyone in particular but it still gives them a reasonably accurate picture of what chaos is hidden whether criminal or potentially destabilizing.

This problem also occurs with B, for example farmers might work out a new process of farming or ploughing the soil, B miners might find new minerals that suddenly allow alloys like bronze to be made locally rather than being shipped from elsewhere.

There can then be sudden growth from these because they increase Gb resources, for example tin might have been known in an area but not have been useful enough so it was a G resource not worth owning. This means that it was not economical to make it private property so perhaps the government might have used it or it remain a public area so whoever needed to mine some could take what they wanted.

If it was under Roy government control it might have been technically G public property but the O police might have still denied access to the public. It might also have been controlled by whoever was the most powerful, for example a Y mafia might have decided to rule the area and no one could take any minerals without paying them tribute.

Then copper is discovered and suddenly there is a B revolution because the tin becomes worthwhile to be Gb private property as does the copper, these are then combined in the Bi upper roots together to make Bronze which might allow the community to defend themselves against attack with stronger weapons.

In the same way farmers might work out they can grow some grasses more easily than others perhaps because they are resistant to pests and this leads to a revolution in growing buckwheat or early varieties of wheat. This creates a chaotic revolution as opposed to random business done in Bi.

In response to this Iv agents are counter revolutionary in that they try and do business with these B farmers and miners in a Positive Sum Game where both win, but where Iv tries to make a bigger profit than B. They need something to offer so they might refine this wheat because they secretly discover how to take off the husks more efficiently.

Of course they don’t tell the B farmers how to do this, they buy the wheat and take it away, refine it and then sell the flour back to the B farmers making a profit for both. In the same way Iv agents might buy some copper and tin, refine it and then sell it back to the B miners so both benefit. Iv then contributes to this B revolution in a counter revolution, not in the sense of preying or damaging the revolution like Oy foxes preying on R revolutionary mutations of rodents that suddenly spread because they eat different plants.

Revolutionary mutation then is innate in Oy, R, Iv, and B as well as speed, high energy low time momentum, deception, hiding, camouflage, etc. If these mutations go too far they can create their own ecosystem that threatens the other colors and as happened in the GFC bring down the global economy. For example a kind of R virus such as flu might mutate so much that it kills off many other animals or people permanently changing the Roy ecosystem.

Usually then to change a society or make it collapse as in the GFC this needs to be a continuing R-B revolution and Iv-Oy counter revolution, much of this is being caused by computerization and the rise of Artificial Intelligence.

For example the chaotic speculation by hedge funds could not have been done without computerized trading, quants themselves often believe they caused the GFC. So just as the development of the railroads in the US caused booms and busts the GFC needs to be linked to revolutionary ideas that were growing too fast for the Biv global economy to adapt to, many of these revolutions and counter revolutions occurred in finance such as arbitrage arguably invented by Edward Thorp.

Subprime mortgages were discovered at Salomon Brother by Lewis Ranieri and then other quants and subprime lenders had their own counter revolutionary innovations.

Another destabilizing revolution is arguably the baby boomers themselves who had to innovate to cope with their explosive growth of births, so many being born shortly after WW2 around the world.

Like the R locusts and mice the sudden increase in numbers also created momentum around the world in Iv-B, and to a lesser extent with the baby echo generation of their progeny. However this chaotic growth in the human population was linked to the chaos of World War Two which was in turn linked to the chaotic collapse of the Great Depression and so on.

Chaos then tends to grow in roots and branches throughout history and so a spurt in growth in one branch such as the baby boom has its secretive and deceptive roots in the past. Much of Aperiomics then lies in trying to trace this chaos and showing how history connects together like this, often this is not well known because it is the nature of chaos to not be written about except when there is an explosion of growth or a collapse. The roots and branches in between these are often hidden because people as well as animals profit from secrecy except where being exposed cannot be avoided.

There is also random evolution in nature as well as in Roy and Biv societies, this absorbs some of the boom and bust chaos of the R-B revolutionaries and Iv-Oy counter revolutionaries making for more stability. However with not enough chaotic innovation this can lead to random stagnation rather than new growth, this is a problem after the GFC where so many mutated innovations were not viable and collapsed.

These mutations might have seemed revolutionary or counter revolutionary bit sometimes they amount to a misallocation of resources. For example communism was a revolution that spawned many mutations or innovations that largely cased misery and death for people, however it also caused Biv economies to look after their workers better for fear of their wanting to become communist.

The R revolution in Roy societies then became a B revolution in Biv societies where workers became better off, they evolved a Bi community based on cooperation and unionism in ways similar to Marx’s ideas but without the violent overthrow of V-Iv. However Roy societies have scarce resources anyway so it’s important not to blame R communism for poverty that would have existed anyway, for example serfs were very poor in Czarist Russia before communism and many third world economies after the fall of communism are now worse off.

Mutations then sometimes cause a waste of resources especially if they create goods and services that are difficult to reuse even when broken down, for example plastic has been revolutionary but is often permanently toxic to wildlife. It has also been found to often be toxic for people too because it can work like estrogen in the body.

There is then a price to be paid for too much Iv-B and Oy-R chaos because some mutations are dangerous or wasteful, there is also a price of stagnation for not enough chaos. Sometimes it takes a long time to regrow the economy sustainably by finding older business models that work better, for example after the subprime crisis the US Fed replaced much of the collapsed banking system and now supports it with cash until it can stand on its own.

After the bad name subprime got in the GFC it’s likely that more traditional banking will replace most of it. Sometimes this incremental V-Bi evolution gives a better result than Iv-B mutations, for example people tend to evolve fairly slowly and mutations in people rarely turn out well.

This is the same in the Roy animal kingdom, for example Ro herds of buffalo and Y lions tend not to suddenly change into other kinds of animals, rather they have random variations that might die off by Y not being able to catch prey or Ro not being able to defend itself.

For example a Y lion or Ro buffalo might be born larger or smaller than usual, sometimes these small changes are an advantage such as a lion that can accelerate faster when smaller. Larger buffalo might also survive better so they might be evolving to become larger and tougher if the Y lions are eating the small and weaker ones.

However the Y lions might also be evolving to become stronger so the overall result might be the same in this Y-Ro war of attrition between them. If so then there is likely to be little evolutionary pressure to change, those variations on the edge of the normal curve might tend to die first which reinforces the evolutionary advantage of being normal.

More likely then Y lions might have an optimum size and variations in the litter tend to starve more often, the same might occur with Ro buffalo. For example if lions get too big they might become slower and lose more prey. If they get too small they might not be strong enough. If buffalo become too big then they might get left behind when the herd runs and if too small then the Y pride might gang up on them more often.

Smaller lions than normal might go after the small buffalo because they are the only ones they can overcome, larger lions might go after the larger buffalo because they are the only ones they can catch. The larger lions might not catch the smaller buffalo because they keep up with the fleeing herd or manage to fit into it better for protection. The smaller lions might not be able to beat the larger buffalo.

This would then allow some variation in the sizes of Y predators and Ro prey to survive rather than both having to be exactly the optimum size. However there is still a disadvantage for these variations to become too extreme, for example a half size lion would have to find different prey completely.

It’s like these variations caused some species to evolve into different sizes, for example some Ro herd animals are much larger than others even though they have common ancestors. Y predators are the same, for example lions are much larger than other predatory cats yet they are all related. This was discussed more in my first Aperiomics book but basically then random variations in V-Bi and Y-Ro can cause different species to form in this way.

This also occurs in Roy and Biv societies, for example V-Bi banks have a random distribution in size and in a recession some sizes are not viable and go bankrupt just like some Y-Ro animals starve or are eaten. In the GFC then smaller banks may have been less viable and so the size of the surviving banks has grown. In the same way humans have been growing taller for thousands of years perhaps because being taller has been an evolutionary advantage in some way.

If this advantage stops, for example taller people might be seen as more threatening and discriminated against then this selection of tallness would cease and people might stop getting taller. Fish are said to be becoming smaller because fishermen tend to keep the large ones and throw back those that are smaller.

So with Y and Ro in Roy societies as well and with V and Bi in Biv societies there is a tendency to have a normal distribution whether it be a normal price for some goods, a normal family, a normal house design, etc and deviations from this are less likely to be popular leading to a reversion to the mean. Sometimes there can be a drift with this normal distribution, for example people are getting taller over time but being too tall or short was probably a disadvantage in a team community that prized conventionality.

Housing process can also change in V-Bi like this, for example with random variations some people might build houses with larger rooms and eventually this becomes the new normal. Larger and smaller back yards might be a random variation but over time people might prefer the smaller yard because of less mowing and perhaps because kids play in them less often now.

Some of the subprime Iv-B boom would also have been V-Bi, for example as some people refinanced their homes and bought more consumer goods with cheaper payments then this becomes like the new kind of wheat mentioned earlier. Bi-Ro people start to discuss these changes openly and gradually this refinancing might become the new normal and those not buying these goods might be seen as deviants. At first for example those with a large screen plasma TV were seen as odd but slowly this normal center drifted over so it becomes odd not to have one.

This is a more stable variation of chaos and randomness, a normal curve of people’s height might be roughly symmetrical but if there is a drift to taller people over time then taking the heights of people over a thousand years might give a graph that leans to one side. When house prices are slowly rising because of a chaotic reason creating a new normal perception then the normal curve leans to one side like this, for example house sizes over fifty years in the US would also show this lean when all house constructions in that time were added to one graph.

The normal curve then is affected by energy, velocity, or momentum increasing over time and this affects the distribution of positional or time based measurements. So a graph of all houses built in one year might have a random distribution of sizes, this is because the momentum towards larger homes would not tend to show up in a year. When there is little momentum towards larger homes then the sample of houses over ten years might be a symmetrical normal curve but the stronger this momentum the more the normal curve becomes skewed in one direction.

This is then another deformation of the normal curve, earlier it was shown how this curve can become sharper at the peak and have fatter tails, here the momentum of a bubble can also make it skewed to one side. For example arbitrage in a rising market might short stocks that go above their normal price and go long on stocks below it which pinches the center of the curve. Then when a stock goes too far above or below this arbitrage strategy might be abandoned to some degree or compete with other traders expecting the price to change chaotically.

If this occurs in a rising or dropping market overall with some momentum then this normal curve would also be skewed, for example in a rising market prices might tend to go above the normal price more than below. Like with these other deformations of the normal curve this skew can cause the randomness of V-Bi to break up, in the Roy animal kingdom as mentioned earlier a Ro herd can become pressured in the center and torn apart on the edges, if at the same time it is driven forward then this will deform its normal distribution of buffaloes in a similar way.

Other chaotic pressures can also affect this normal curve, for example there might be a tendency for it to split in two like splitting the Ro herd. For example arbitrage opportunities themselves might occur on different exchanges where the two stocks mentioned earlier, GM and Ford, are under pressure from different hedge funds using a computerized trading system.

## As these stocks are pressured like this the Law of the One Price is itself under pressure, in the GFC this break down as stocks traded with different prices on different exchanges because the arbitrage pressure to profit from them had changed to a desire to sell perhaps because of excess leverage, liquidity problems, or covering short positions.

Other deformations of this curve can be caused by chaotic interactions when several hedge funds like rival packs of Oy hyena or sharks and dolphins working with seabirds to compress and corner sardines. For example if several hedge funds are each trying to exploit arbitrage opportunities then prices might overshoot chaotically from their own trading, in the case of GM and Ford one might short Ford and the other goes long on GM causing more chaos.

This is what statistical arbitrage often exploited, they assumed that with the Law of the One Price there was a normal price for a share or bond and that deviations from that could be calculated on a Gaussian normal curve with probability. These deviations would be like the Ro herd animals that died off under attack from the predators, these outlying prices on the edge of the normal curve would disappear as traders bought up the deviant cheap goods and sold short the deviant expensive goods bringing it back to normal.

In a fully chaotic market such as the Iv-B boom prior to the GFC and the bust in the GFC these variations in bonds, companies, derivatives, etc either thrive longer than they should or they collapse more than they should. For example many subprime bonds should never have been issued because of the massive fraud but in the excitement to get the higher yield few banks were checking whether they would survive.

However in the GFC the crash made many good innovations in derivatives also get sold off as toxic waste even though they had a lot of potential, for example subprime bonds as a business are either severely or fatally damaged because of the crash. In the same way when R animals are mutating then if there are plenty of them then more of these mutations might survive because the Oy predators don’t need to target them.

This allows some space for the R revolution in these prey to keep going, in the same way B workers were taking a lot of revolutionary risks with subprime loans to speculate on houses as well as refinancing. More got away with this for a long tie than they should have because of the boom, later many wondered why these Iv lenders were having anything to do with people who could only make a few payments before defaulting.

In terms of survival of the fittest then these B borrowers had little chance of paying off these loans and so a chaotic crash of defaults was inevitable. In the same way the R mutant prey in the animal kingdom might have little chance of long term survival when the glut of prey runs out. This then is like a misallocation of resources, the same happened for example in the tech bubble where Iv-B business models for internet companies survived for much longer than they should have because of the general hype around the internet.

When this money became tight these mutated ideas like many useless variations of some occasional good innovations tended to go bankrupt. In this tech bubble these mutant business ideas were more like Oy mutant predators where there is a glut of prey, they tended to survive longer than they should because of this extra food but when this food became hard to find the mutants died out quickly.

For example there might have been Oy predators that were slower, had birth defects, had inferior camouflage markings, etc. They are then like the mutant variations of business ideas, also like the mutant counter revolutionary ideas in derivatives prior to the GFC.

Because the money was plentiful in the boom atmosphere these mutant ideas have more credence, the problem is after a while these mutations start O seem viable or even like the mainstay of the economy and so in the crash they get propped up as zombie companies.

For example much of the shadow banking system in the GFC was these mutated business models that had only survived as long as they did by the momentum of the Japanese carry trade money coming into the market.

When the crash happened these shadow banks started to collapse because there was no viable business model except to use up the carry trade model on bad investments and collect a fee in the process.

In fact bad investments were better for this than good ones, if they were bad then there were many more opportunities to lend this money.

For example on the advantages of lending to more deceptive B workers is that there were more willing to take the money and so these Iv-B and Oy-R businesses like with Gresham’s Law drove out or overshadowed the honest lenders with their higher volumes and market share. These chaotic systems either could not know because of the secrecy and deception in the economy that this was systemically dangerous or they did not care.

Like desert plants they were set up to mine these fleeting deposits of wealth whether honestly or not, then fruit with profits for the V owners as they collapse leaving a toxic waste for others to rebuild on later.

This is then like in the animal kingdom where the R mutant prey are surviving well because there are so many prey, also the Oy mutated predators are surviving because the fleeting resources like the Biv desert plant are still available. For example the R prey might have plenty of food after record rains. In the Biv economy these desert plant like lenders will collapse as the B workers are left with no money just as the R prey will start to fail as they run out of food or are attacked too much by Oy predators.

When this happens the desert plants, which are themselves a mutation that cannot survive except in niches like this, die off and in the same way the mutant Oy predators and R prey die off first while the less mutated ones survive longer. In the less mutated desert plants they might also survive longer. However if there are so many mutations, rare in nature but possible for example with radioactive contamination, that they outnumber the healthy animals then this part of the ecosystem might become so mutated that it can damage the food chain severely.

This is like what happened in the GFC, the Biv economy now is so mutated by endless amounts of technological innovations that held together in the boom that no one seems to know anymore what a sustainable economy could look like.

For example with Artificial Intelligence and robots like mutants potentially replacing so many jobs no one can say how people that cannot compete with robots can make money and survive.

There is an assumption that just because there was a high momentum in this boom that it is heading for something good and sustainable, however mutated parts of nature often do the same thing and then collapse as a total waste.

When this excess of mutation occurs the Roy food chain is held together by the Y-Ro predator prey relationship as well as O animals. When these also have some mutations this is as described earlier, they might be on the edge of the Ro herd or edge of the normal curve and get eaten first. This tends to purify the Ro herd, in the same way mutated Y predators like lions might tend to die off if they cannot hunt efficiently.

In the same way then mutated companies and derivatives tend to have their prices attacked for arbitrage opportunities much like the Oy predators attacking he edge of the Ro herd. In the Iv-B and Oy-R boom prior to the GFC then these derivative mutations not only moved chaotically but they started to break up the randomized parts of the economy as well by appearing as more arbitrage opportunities.

For example arbitrage as a business exploded in size along with this Iv-B boom, this was no coincidence because the chaos of this boom caused more chaotic movements in share prices that were then jumped on by these Iv-Oy hedge funds and quants looking for arbitrage profits. The fact that this business was doing so well then showed that there was something seriously wrong with the economy, in this since Eugene Fama was right because share prices should have been more random and stable.

The chaotic boom then affected companies like GM and Ford in their business, they might suddenly sell more cars to Oy salesmen making money from fraudulent loans but this also ensured this mutated market would suddenly crash leaving these manufacturers with losses. Also some borrowers were refinancing their homes or making money from reselling houses, they also bought cars from this mutated way of doing business and so in the same way these car sales were likely to suddenly crash as well.

This kind of business went right through the US Biv economy, for example coffee shops might have boomed from these mutated real estate prices and so their numbers were also a mutated business that had to crash. In the meantime they might have bought more new cars, the same went for people working in the financial industry, building houses, importing exotic tiles and bricks for some homes, interior decorators, landscape gardeners, and so on.

As all these people bought different goods and services they tended to create booms and finally busts in the sales of them, this became chaotic movements in share prices which were then seen as arbitrage opportunities because shares were jumping around non randomly. Because they were nonrandom the algorithms used indicated the normal price was being deviated from so in effect these traders drive the prices back towards this normal price again.

However even at this stage there often was no Law of the One Price operating, these mutated businesses and transactions were never going to be normal because they were the kinds of businesses like desert plants that would collapse in toxic waste with V profits. Arbitrage then was a part of this process of Iv-B boom and bust caused by weak I-O policing, as more and more random V-Bi companies had these chaotic jumps these hedge funds bought more into them with higher leverage which was itself chaotic trying to make these profits.

Eventually though, like the Ro herd harried so much by Oy predators it scattered chaotically and reformed elsewhere, this random market fell apart from all this arbitrage pressure as well as from all the mutated businesses and consumers finding they had no sustainable way to make money in the bust.

The more this Iv-B mutated economy then is propped up with government bailouts the more it becomes like a zombie economy where the mutated businesses often drive the healthy ones out of business, for example consumers are not going to buy the same kinds of goods in bad times as they bought by refinancing their home in a boom. To try to stimulate this kind of economy then is not Keynesian stimulus but more like trying to use ever large doses of adrenaline on a dying patient.

When these mutations are too prevalent in the V-Bi parts of the economy this is the gravest threat to a recovery, this is like for example where Y predators and Ro prey become so mutated that they cannot form enough of a herd instinct to for a team. For example in this mutated Biv economy prior to the GFC Bi unions declined because companies were so different from each other that there wasn’t enough team spirit to make a union.

This then would be why unions have declined in advanced economies in the last few decades as the Iv-B revolutions in technology have gathered pace. For example large steel companies were easier to unionize but when this industry fragments into so many types of metals used instead of steel as well as so many kinds of factories globally it becomes more difficult for cooperative behavior between their workers.

In the same way V parts of the economy such as Wall Street experienced these mutations with hedge funds and the shadow banking system, whereas before it was more collegial and where banks would help each other it became overrun by mutated derivatives traders. This led to a similar scenario in the GFC as in 1929, in the 1920s and earlier there was a cohesion between the larger trusts and banks dominated by JP Morgan.

These larger V businesses were like alpha predators on the economic system but they were able to bail the economy out when there was a crisis, in this sense the Biv market may be self-regulating if this V team is strong enough just as in the Roy animal kingdom with Y alpha predators. However in 1929 these V businesses did not have enough cohesion and liquidity to save the economy, the economy had been through an Iv-B boom where chaotic growth had made for many new fortunes in this gilded age.

These nouveaux riche people however did not have much allegiance to each other, in many cases they were excluded from joining the V aristocracy of old money. Many of these businesses were built on chaotic growth that collapsed or speculations that suddenly evaporated in the crash. In the aftermath then there was not a strong team to rebuild V capital to invest in businesses damaged in the bust.

In the same way the GFC saw a completely different group of wealthy entrepreneurs to even two decades ago, internet and computer businesses had grown explosively by Iv-Oy competition and often with deceptive methods such as with WorldCom and Enron. Instead of having a financial system of bankers that were all friends many of these hedge fund managers were competitors and like the tech companies many lost huge amounts of money in the GFC.

Instead of being helped any weakness was taken advantage of, more like starving Oy and Y predators turning on each other in a drought. This was the new scenario Hank Paulsen was faced with in the GFC, even a decade ago Goldman Sachs was a far more friendly V business and by the height of the boom it had become more Iv-Oy and deceptive in its trading.

The Fed then needed to stitch together a strong V team to hold the economy together so it could hand out bailout money, it managed to get some investment and commercial banks but nearly the whole shadow banking system was a secretive and deceptive Iv-Oy group of predators that had no business model of cooperating with each other.

In fact they were so secretive that a few years before this Alan Greenspan did not even realize how much they were a part of the economy, when he tried to raise interest rates more cheap money came in from overseas through this system and the rates hardly moved. Because of this then the V part of the economy was saved with bailouts as many takeovers were orchestrated by Paulsen, however they could not work with these hedge funds and so their chaotic collapses were impossible to stop. This then is like in 1929 where so many new Iv-Oy businesses from the bubble collapsed because they could not cooperate with the V team.

This scenario rarely happens in nature, the Roy food chain is much more stable so this indicates just how out of control these technological revolutions are.

Oy-R mutated animals are then revolutionary and are either killed off or survive and change the ecosystem, for example as mentioned earlier they might be faster or more camouflaged and so live longer. The GFC was in many ways a result of mutated businesses that collapsed because their revolutions could never have survived the real world economy, this is the same problem that happened with R-B communism that ultimately did not create wealthy economies. However it is also like the Iv-Oy dictatorships propped up by the advanced economies to stop the spread of communism, they were a mutation that could not create wealthy economies either.

There are however plenty of businesses that are based on revolutionary and counter revolutionary innovations that are sustainable, usually this is because they are well I-O policed. For example computer manufacturers create value with their products and improve productivity enormously with little or no fraud, the same has happened with software manufacturers.

Many internet companies such as search engines, online sales and auctions, social networks, etc have matured like stable Biv trees unlike the many Iv-B mutated ideas like them. For example Microsoft has built quality software with a transparent V-Bi community based strategy, it aims to sell into the V enterprise business market to network them together as Microsoft Partners. It also has a Bi friendly community approach with parental safeguards for example built into their software.

It also however as Iv-B parts of its business model where it tries to rapidly innovate and sell its products aggressively. This then represents a balanced tree company, the roots and branches are strong and growing while the V-Bi leaves and upper roots have plenty of liquidity for research and development without wasting money on speculating.

Car companies such as Ford have a similar approach, they try to innovate rapidly to compete with other car manufacturers but not to the point of creating mutant car designs that become popular and then suddenly collapse. They did this to some degree with SUVs along with GM as there was an explosive growth in high profit sales because of low petrol prices, when the contagion spread and speculators inflated the oil bubble it made this mutant market collapse as these kinds of cars were no longer sustainable as fuel becomes more scarce.

This is a difficult situation for companies in an Iv-B boom, more people have money that want these mutant products, for example more Iv-Oy subprime salesmen might have wanted luxury cars and this market would also have collapsed in the GFC. The only way to be a sustainable balanced tree is to realize that these Iv-B booms cannot last and more conventional cars that people want and can afford need to be available quickly when the collapse comes.

It is difficult to pursue a balanced tree approach when there is a disconnect with Iv-B and V-Bi, there are then Iv-B competitors that seem very dangerous with their explosive growth. For example American Online got such a large share price in the tech bubble that it was able to merge with Time Warner in a 169 billion dollar deal. Later the shares of AOL plummeted when the bubble burst.

This is like a market reconnection of V-Bi and Iv-B, here an Iv-B company with a bubble like valuation was able to buy into a V-Bi stagnant business making a more lasting business that the market eventually was able to price accurately. This also happened in the GFC where for example the Bank of America as a more V-Bi stable business bought the Iv-B Merrill Lynch and Countrywide.

This then made the bank more balanced because it had stagnated by not being as involved in the bubble like derivatives and subprime markets, however the unstable situation in the GFC made for some losses with this buyout. This is then like an I-O market reconnection of Iv-B and V-Bi except that instead of individual securities being more accurately priced in this market whole companies might be reconnected.

The US Fed itself did a similar V-Bi Iv-B reconnect by taking on many toxic waste securities in the GFC, however as of 2011 they had actually made a profit from reselling these. When Morgan Stanley and Goldman Sachs became bank holding companies this to some degree was also a V-Bi and Iv-B reconnection because it gave them a stabilizing access to deep pools of V-Bi liquidity.

The idea of a normal society is a pervasive one in V-Bi areas, people are relatively open towards each other and particularly in country towns there might be few secrets. People then that want to keep something private end up on the edge of this normal curve, for example where people are secretive and evasive about their private life this in itself might make them seem to be Iv-B and ostracized or watched more closely.

For example gays might find this small town transparency leads to persecution and might move to a larger city where they can be more Iv-B secretive. Companies with a deceptive way of doing business might also tend to be driven out, this is like in Ro neighborhoods where vigilantes tend to drive out or punish Oy criminals. However these criminals and Iv agents can still sometimes make profits by going in quickly and staying only for a short time. For example travelling salesmen might arrive secretly and leave when word gets around of how they might have tricked some R-B people.

In the same way the Iv-B boom was partially successful because it happened so quickly, most of the time the subprime fraud was well hidden and the R-B victims did not do enough complaining to the Bi-Ro communities. The chaos in the real estate market from price rises also happened relatively quickly and it seemed to take several years for the general public to become suspicious about subprime loans, the real estate prices possibly crashing, Wall Street crime, etc.

This is like with a Ro herd that might not recognize a new predator as dangerous for a long time, however they have already communicated with each other about well-known Oy predators like hyenas and try to defend themselves. The same also occurred with YV Wall Street businesses, many of them such as Merrill Lynch and AIG did not realize that their Iv-Oy agents were taking bites out of them as well as their clients.

V-Bi and Y-Ro tend to evolve slowly and stably and this high time low energy nature has some disadvantages when dealing with the low time high energy Iv-B and Oy-R people. So as the global economy continues to innovate exponentially many V-Bi people tend to get left behind, for example older people avoided learning how to use computers and the internet for much longer.

In the same way chaotic mutations in R and Oy animals can overwhelm the assumptions of Ro and Y animals that there is still a normal relationship of predator and prey in the food chain. These chaotic mutations in the world economy such as with computerization, Artificial Intelligence, fluctuations in population age, etc can upset this normal economy and create disaster particularly if the I-O policing becomes too weakened and lax.

While the baby boom and echo shows signs of stabilizing in their birthrate fluctuations the computerization revolution and AI is growing even faster so these Oy-R and Iv-B innovations may cause more chaotic collapses in the world economy, for example how robotics and AI can replace so many human workers.

If Ray Kurzweil is right in a few decades there will be no job on Earth a computer cannot do better and cheaper than a human worker. Like the revolution of cars condemned horse and buggies to oblivion the same may occur with much of our stable Biv economy. Most V-Bi people in the advanced economies however still cling to their normal view of society and so as Iv-B and V-Bi continue to disconnect their ideas become less relevant.

For example computerization has created a virtual money grid where capital can speculate in all the world’s market and move around at near the speed of light. However for many V-Bi people banking is still like talking to a bank teller and using paper money, because Iv-B business is also so secretive and deceptive it is difficult for them to make informed choices about limiting technology when they vote. Politicians are also regularly exposed with their lack of knowledge of how this computerized economy works.

We now see an Oy-R contagion in computerized networks around the world with the rise of various kinds of R and Oy computer viruses as a kind of virtual pest like locusts and mice. With this new virtual food supply of computers owned by so many people, viruses can mutate quickly and they are being selected by anti-virus programs to mutate faster, this is because the ones these programs catch are like unsuccessful Oy-R animals not reproducing.

This Oy-R contagion is now spreading to mobile phones, TVs, car computers, home routers, RFID detectors and scanners, etc as well.

To defend against this we have a kind of O policing with anti-virus programs on individual computers, spam filters for email, firewalls to prevent various port connections, etc.

As computers and software continue to revolutionize society this is turning into a rapidly evolving version of the Roy animal kingdom as predator and prey though mostly aided at this stage by people writing these viruses, Trojans, malware, and anti-virus programs. In fact it is more like an Oy-R revolution of R viruses and a counter revolution of Oy anti-virus programs to prey on them rather than actual O policing and so is like a rapidly increasing contagion that can render computers useless and choke off communications such as email, instant messaging, bring down websites or make them contagious, have infected pirated programs by R-B people being traded in an a secretive underground economy, have spam like a contagion plugging up search engines with fake advertising sites and places for more infections by secretive and deceptive Trojan Horses, have spam programs invading forums with spam and overwhelming programs designed to tell software from humans such as CAPTCHAS, and so on.

Where this this explosive growth will end up is unknown, this hardware and software might for example with AI becoming smarter than humans simply become a war ground like the Roy animal kingdom in our computers. In that case the GFC may only be a preliminary shock associated with this exponential Oy-R growth in computers.

Our Biv computer systems are also evolving exponentially as Ray Kurzweil shows in his book The Transcendental Man. This becomes a rapidly increasing network system of roots and branches connecting people with each other in a higher energy lower time way, also allowing more secrecy and deception such as being anonymous in forums and emails.

While this is usually referred to as a mesh or the World Wide Web it works more like roots and branches because of this tendency for many conduits to join into a few number. For example there might be many users who connect to say a hundred websites, these connect to say ten news sites where they get their information, then they in turn might get some information from a few sites such as Associated press and Reuters. People also connect to each other with peer to peer and email in a kind of mesh, this can sometimes be like Roy systems where people move and connect more freely like animals might do.

This system of roots and branches has led to an explosion in secretive and deceptive crime that I-O struggles to contain such as sexual predators in forums and phishing or fraudulent money schemes such as getting banking passwords with email. From this context then the chaos from the GFC is in many ways a symptom of the deeper chaos being caused by this rapid Iv-B mutation occurring in software and computer networks such as the internet.

## Just like a lack of regulation of computerized trading contributed to a collapse of the financial system I-O regulators have not come to terms with the prospect of rapidly evolving AI and how it might be prevented from being used in ever more dangerous criminal activities as viruses, Trojan Horses, spam, and phishing.

It’s important to take this exponentially growing problem seriously as Aperiomics predicts that these virtual worlds will come to contain twelve different color groups that interact like plants, animals, and people do. It also predicts that I-O regulation and policing of computers and AI will regularly fail to contain it, when this happens there could be rapidly expanding chaotic contagion in computers worldwide as well as the internet.

We saw a forerunner of this in the GFC where world financial markets run largely on a series of interconnected computer networks, when the trading algorithms used created Iv-B chaos then it nearly collapsed the world economy. For example computers can sometimes become infected with botnets and Trojans because of a vulnerability found in an operating system such as Microsoft Windows.

If such a vulnerability could not be patched or a virus mutated in ways that antivirus programs could not stop it then the worldwide computer network might become completely infected and largely stop working. This would become like a model of the GFC in many ways, computers would become more isolated with an infected network and so industries could communicate only with more trusted connections.

This is like in the GFC where banks could only lend to a small circle of other trusted banks, these infected network roots and branches would be like the infected conduits for subprime loans. People would tend to be afraid to use the internet for fear of having their passwords of banking stolen, in the same way investors became afraid of lending in this computerized money grid as well as hesitant in buying these opaque subprime securities.

These dangerously infected connections then would cause a large collapse in international trade using the internet for selling, also it would slow down a lot of transfers of money because of a lack of trust. This then is like after the fall of the Y-V Roman Empire where roads to other cities became too dangerous because of Oy robbery.

Just as the money grid was also plagued by computerized trading programs that distorted the I-O market until it collapsed this infected network might become populated by AI bots and botnets that distorted and collapsed communications with people. The same would already happen with an infected internet from known viruses and Trojans.

This might then be like a global epidemic but on computers and the chaotic growth of this would lead to a sudden financial collapse and perhaps a stagnation of the economy and also of internet commerce .

The potential then is for a future more Roy like Terminator and the Matrix rather than Biv like Star Trek. This kind of Iv-B innovation from computerization is hard to resist because like desert plants or weeds it grows so easily and it offers new things like electronic goods that quickly become obsolete, however financial innovation offered the same kind of vision of stable and rapid improvements in economies and then led to total devastation.

Iv-B is innately chaotic so computerization and AI should keep causing more explosive exponential growth as well as shocks and collapses, it may also mature into something more stable like the wonderful future Ray Kurzweil envisages. Aperiomics however shows that this only occurs with a strong I-O policing to prevent the often easier path of Roy predator and prey becoming predominant.

At this stage there is no real I-O policing of this computerized society at all beyond actual computer crimes such as phishing, stealing banking passwords, hacking, etc. Like police that need to regulate speed on freeways to prevent crashes it may be that this headlong rush to ever faster computer speed might have to be controlled in some way. Everything else of this nature has needed policing and there seems to be no reason why computers and AI should be different.

This subject will be thoroughly explored in an upcoming book however it should be noted that science fiction has also grappled with this idea of policing robotics and AI such as with Isaac Asimov, Frank Herbert with the Butlerian Jihad and the book that inspired it Erehwon by Samuel Butler. For example I-O policing needs to evolve in society to keep up with criminal and civil infractions of its laws, what happens though if AI becomes so smart that no human police can outsmart them or even keep up with them?

We would then need to rely on I-O police that are themselves computer programs, we see this already in software designed to monitor high frequency trading where the government is trying to monitor these transactions for fraud at these high speeds. We also see this in antivirus programs, they are in effect like private I-O police on computers.

However if the I-O police become computers themselves then why do we think they would be more likely to protect us rather than their AI brethren?

We might think we could program these inhibitions into them but antivirus programmers are falling behind as of 2012 against the contagion of computer viruses, there seems to be no way to make these I-O police always stronger than the code they try to detect. This is like in Aperiomics where the I-O police are composed of the same kinds of Oy and Ro people who often become criminals, in effect it works by balancing one kind of criminal against another.

Whatever people program that is highly complex tends to have bugs in it that can be exploited by criminals or computer malware, this is unlikely to change because the same code is being used to attack as well as defend and so it has the same strengths and weaknesses. This is like for example the I-O police patrolling a city with the same kinds of cars, phones, computer systems, etc as criminals might use, there is no permanent edge the police can ever attain.

Software is increasingly being used because it is so valuable and so entertaining, it becomes a natural progression to use Artificial intelligence to provide even more value to people, at some point though these revolutions of software can create a contagion that will grow chaotically as Oy-R and Iv-B. Because there is temporary money to be made in this kind of contagion it can often become predatory, for example viruses are written by Oy-R criminals to prey on people’s computers for profit. Just as Roy capitalism is based on predator and prey relationships this software will grow along the same lines.

## Since Roy criminals already write viruses for criminal purposes it is likely they will continue to do the same as software becomes more artificially intelligent. When these programs become smarter than people and are also writing software themselves then there would need to be strong I-O police to stop their committing exponentially greater amounts of crime.

This book however has a more narrow focus on the causes of the GFC and how to recover from it, computerization and AI will be covered in more detail in an upcoming book. However while reading this it should be recognized that virtually every paragraph could in principle refer to software based code as it would also change according to the twelve color codes. Our future then is likely to contain all these kinds of problems that happen in financial crises such as the GFC but with robots and computer intelligences.

These Iv-B growths and collapses occurred in many early shocks before the main GFC, this was a sign that the chaos was growing more virulent and not a sign that the system was becoming more resilient.

For example as R termites eat into a tree they might sometimes attack a branch too much and make it fall, that the tree survives this does not mean that it is fighting off the termites or is a sign of a self-regulating tree. In the same way surviving a burst bubble or a recession does not mean that the market is self-regulating or that the I-O police are unnecessary, in the same way not seeing rampant crime in a suburb with few police controls does not mean police are redundant.

Instead it often means that there are not enough I-O police investigating the problem to see the underlying chaos in these events, for example if occasionally buildings in a city collapsed then this should be a warning for I-O police to proactively check all other buildings for the same causes in case they collapsed too. However there were few in depth investigations into the weakness of the financial markets before the GFC except by speculators to exploit its collapse, in fact many hedge funds profited from this shake out in the market because they could in effect feed on the weaker funds that had to sell in a credit crunch.

This is like in the animal kingdom where there are suddenly fewer R prey or perhaps too many Oy predators and so there is a period of going hungry. Then some more prey might be found and this is regarded as proof that the food chain is still working ok when it may be that they are nearly extinct in some areas. This pattern can occur because Oy predators might feed in one area until the R prey is exhausted and then in effect leave that area like fallow ground to revive as they attack fresh prey elsewhere.

In the same way small crashes in the market might indicate to investors that one area is becoming tapped out and that they should move to another, for example usually booms occur in a row because the money moves to a booming area and then as it falters they move their money out to another developing boom. The tech bubble was like this, when it started to crash a lot of V-Iv predatory capital moved to other markets for a while and then moved back as it stabilized.

The Biv economy then tends to not be alarmed by smaller bubbles bursting or some areas turning to Roy scarcity, this is also like in the Biv plant kingdom where a near desert might temporarily exhaust the nutrients and water in the soil and die off, then it revives as these nutrients increase again from being fallow. When plants compete with each other to grow quickly they might temporarily such the ground dry of nutrients and collapse partially until there is a number of plants and level of growth that the soil can handle.

This is often a model of recession, an economy has an Iv-B boom like weeds that overtax the resources available and exhaust the savings people have as well as the reserves of minerals and food, it might for example cause oil prices to rise as the demand exceeds the supply. Then the recession as with the oil bubble in the GFC causes the demand to fall to the point where it is sustainable compared to these resources.

However when these resources are rare then the system can become chaotic and use even fleeting amounts of them then collapse, instead of a recession it becomes like a series of tipping points as resources run out and collapses. This is common in third world economies for example. In the Roy animal kingdom when R prey get scarce enough booms in the numbers of predators can cause dramatic collapses in the food chain, this is hard for Oy predators to prevent because they have evolved to breed quickly when there is plenty of food. These fleeting gluts of prey then are quickly exploited leading to starvations again.

In the same way the advanced economies after having lost so much wealth from trade deficits have become marginal societies in some ways, this is described in my first book where many areas become Roy and threaten the infrastructure of the Biv areas like a forest on the edge of collapsing into grasslands. With these scarce resources any new source of profits is jumped on quickly as with arbitrage and quickly exhausted leading to a state of chronic collapse similar to in the Great Depression which itself was similar to Europe after World War One.

One of the main reasons the subprime boom was so large and riddled with Roy fraud then was because of the few other alternatives to make money, the R-B poor had accumulated some savings in the 1990s under Clinton and these were quickly attacked and used up with the subprime counter revolution. However just as Oy predators often eat too many R prey this boom overreached because it overestimated from the liar loans how much money these B workers really had.

In the meantime when the B workers run out of money the Oy predators might be feeding on each other in a dog eat dog competition while the prey hopefully regenerates, this process also however can cause the GDP to rise and so it appears to be a sign of a healthy economy. However when these B workers are chronically exploited they have little chance of accumulating enough money to be a source of profit again, for example Iv-B free trade decimated their chances of getting good paying manufacturing jobs.

V-Iv influence got the financial sector bailed out but left these Bi-B areas saddled with debt, because these B workers are so secretive and have revived in the past there is an assumptions that these invisible feet like invisible hands of the market will somehow rescue the economy by finding new Gb resources.

It is also like in the Biv plant kingdom where plants might suddenly find themselves running short of nutrients as they desperately try to outgrow each other to get to the V canopy first. Sometimes they might collapse or slow their growth, if the area is having a drought or running out of fertile soil though these plants might start to collapse as soon as they become seedlings. This is like after the GFC in many ways, there is not enough Gb resources for these B workers to make enough money, however somehow they are expected to find it to keep the V-Iv capitalists flush with their gains from the previous boom.

This change in resources probably started to occur in the early 1990s because free trade started to draw so much wealth from the advanced economies. While they also gained from this usually this was in goods that did not last, for example much of this wealth was spent in consumer and electronic goods that are long gone.

This then is like desert plants that do not create enough humus for a self-sustaining forest, these savings might have earlier gone to local workers who invested in the local economy but now it tends to flow out to foreign economies and they get the financial humus to strengthen their forests instead. This would be like where Roy animals come into a forest to eat but only excrete this food when they return to their own territory, this would build up fertilizer and seeds there so eventually if there is enough rainfall there might be a new forest so they don’t need to feed elsewhere.

However the original forest has in effect transferred all its nutrients to the new forest and might find it hard to regrow and replace its decaying trees. This then leads to pouncing on any new resources found in an Iv-B competition and so it could become more infected with toxic weeds, in the same way the trade deficits have exhausted many resources in the advanced economies and now they pounce on any resources found with Iv-B booms and busts leaving toxic assets.

This should eventually evolve into becoming more resistant to these draining deficits, it might be that if manufacturing cannot compete that the local currencies become more toxic and less usable translating into currency devaluations. This would be like the Roy animals not finding food there to eat any more, the assets become locked up in ways that are not accessible to imports.

For example people might not be able to afford electronic imports as much and eventually these importers might have to establish local factories to provide wages to buy their products. Also this creation of toxic bonds might make these trade surplus economies more reluctant to invest in these deficit economies, this has already happened to a large degree with the US where they now need to borrow from overseas with government bonds and then relend with the Fed to their private businesses.

As these resources become more scarce then balanced trees have to compete more with Iv-B weeds as well as Roy predatory animals, for example there was a change in Bear Sterns and Lehman Brothers where in the 1990s where before they were more like staid Biv trees, with this Iv-B boom they became seekers of large profits from financial innovation mainly because it was seen as a rare opportunity to grow.

Those that did not take risks in this boom might well have collapsed anyway because they would get overshadowed and pushed around by those that grew faster even if they did eventually collapse too. The same fate that Bear Sterns and Lehman suffered almost occurred to Goldman Sachs and Morgan Stanley, like the earlier Salomon Brothers they adapted to the Iv-B revolution and weakened I-O policing by growing explosively, mutating into many derivatives so deceptive no one really understood them, were often deceived by B workers taking out liar loans, and only surviving by V-Bi randomizing bailouts from the government.

However there would have been many companies like them that did not take chances and never grew large enough to be a significant factor in this new economy, they are like trees that could not grow fast enough to reach the V canopy and so they became permanently overshadowed by these large businesses. Often however these companies also collapsed in the GFC because they became dependent on these large unstable Biv trees above them, for example many small brokers and hedge funds collapsed when their credit was cut off or they were outfoxed in the selloff of securities by the larger traders.

For example Goldman Sachs has been sued repeatedly for its predatory attempts to save itself from collapse in the GFC by allegedly deceiving other hedge funds and short sellers. Staying small then was often not a successful strategy either, the large banks got bailed out in the GFC or their collapses created shock waves in the economy that made smaller banks collapse anyway.

Many hedge funds also were destroyed in the GFC as were subprime lenders like Countrywide, in this explosive growth in a deceptive market they were so secretive to remain competitive that they could not share enough information to see the peril of chaos that was coming. This is like in the Roy animal kingdom where the R prey are becoming scarce, if the Oy predators could pool their knowledge they might realize the mass starvation is coming but being competitors they have not evolved any way to do this.

Y-Ro animals however are more likely to share information just as with people in Roy societies because they use cooperation as a strategy instead of competition. For example R communist states were secretive even with each other but there were more international Ro communist organizations also allied with Bi unions. By sharing information from different countries these unionists for example could more easily target economies that were mistreating their workers.

In the same way Ro communist organizations could more easily plan on how to grow their communist influence. This also occurred with Y authoritarianism, for example there was a sense of sharing with the German Nazis, the Italian Fascists, Franco’s fascism in Spain, the Croatian Ustase, and even with Vichy France.

In Biv economies there is also more sharing between V-Bi communities, for example as corporations become multinational there has evolved a V class of management of many races with few signs of racism. Bi communities often communicate internationally as well, sometimes for example cities might become allied with others in a different country for cultural reasons and there perhaps thousands of cultural and community organizations with international alliances. This cooperative behavior then limits the chaos if Iv-B booms with random insurance as well as with being able to predict and plan the future.

Without this cooperative behavior then Iv-B and Oy-R tend to run into a sudden collapse because of their opacity. Many of these subprime lenders such as Ameriquest for example mutated into this new Iv-B boom with little thought of how sustainable it was, there were new Gb resources which were to be used quickly before a competitor got there first and grew to the point of overshadowing them or buying them out. In that sense, in the absence of a moderating I-O to weed out the crooks, they had to continue to grow like trees struggle to grow fast enough to spread their V leaves and cut off the supply of sun from the others.

Companies that make this V canopy then form a team that is usually bailed out in a financial crisis, those companies under them tend to wilt in the crisis and get bought out by the V businesses. While Goldman Sachs and Morgan Stanley managed to survive with randomizing bailouts by becoming bank holding companies others were absorbed into randomizing V businesses. Iv Merrill Lynch and Countrywide were absorbed by the V Bank of America, Iv Bear Sterns by the then somewhat stronger Iv Morgan Stanley, Iv Wachovia was absorbed by V Wells Fargo, AIG became partially nationalized in exchange for randomizing funds to quell their chaotic mistakes.

These collapses were similar to the 1930s which may also have been brought about by Iv-B innovations such as mass production in manufacturing. There was also a boom in population caused by immigration of Irish from the potato famine as well as a baby boom from after the civil war, these people were approaching retirement age in the 1920s and may have created strains in the US economy.

For example as these children grew up they created a momentum in the economy to buy homes, save money to raise a family, and to save for retirement. In the 1920s this wave of retirement was approximately in their fifties, they then owned property and savings they would need to draw down when they could no longer work. This creates a strain on the economy because these people stop paying taxes but because they own so much property it is much harder for the younger people to find cheap houses to buy. Because of a lack of a V-Bi safety net these strains could more easily result in unemployment and bankruptcy.

In effect then the younger generation of the 1920s was like young trees trying to grow where the older trees are decaying and might soon fall. Usually a forest has a continual cycle of renewal and decay but if for example a new forest was growing from a Roy grasslands then most of the trees would be around the same age, and so the forest would tend to change as it grew older. That would then affect the Roy animals that depended on it, if they could not adapt to this changing foliage then they might be replaced by more chaotic animals with a higher birthrate to compensate for mass starvations.

For example younger plants would be highly competitive with each other to grow to the V canopy first and then overshadow their rivals, this would have been like at the turn of the 19th century when many of these baby boomers would have been around thirty. In a forest then the Roy animals would have to contend with rapidly changing vegetation, plants that lived under these growing tall trees would have to establish a niche for themselves though many would have died out when the areas was grasslands.

In the same way as this baby boom advanced in age industries would have grown up to support their needs and many of these would then have collapsed later because older people would have wanted different things. Much of this industrial structure then would have been based on chasing these aging baby boomers and so when they neared retirement this source of income would have disappeared and perhaps have led to some collapses in businesses.

This grasslands was like the devastation caused around the 1870s, there was the US Civil War, the Irish Potato Famine causing a wave of immigration to the US, the war of 1870 between Germany and France would have also resulted in immigration to the US, and the US economy would have had to regrow from a Roy war and its destruction of industry.

So as these people grew up they happened to have similar goals to each other as with the baby boomers after World War Two, for example they would have had around the same level of skills and experience in their work and would have tended to overshadow other workers coming up below them. At some times they would have cooperated together in V and Bi, at other times they might have competed and deceived each other in Iv and B.

The baby echo generation, children of the baby boomer in the 1920s and 1990s would have been feeling the pinch from this weight of elderly people needing to be supported. To provide for this elderly generation then it may have hollowed out the 1920s economy and so it was largely replaced by Iv-B businesses able to exploit the are resources until it collapsed in 1929. In the same way this baby echo generation in the 1990s and early 2000s would have found themselves squeezed for ways to make money because the elderly would control so much of the assets of the economy, they could borrow this for speculation but then could not pay much of it back contributing to the GFC.

These supporting industries for the aging population as well as for the momentum of the baby echo had to keep changing as their desires and needs changed with age. They were like the smaller plants and animals in the growing forest, there was no real stability for them and so they had to grow along with the main trees hoping the ecosystem could somehow stabilize itself.

This Iv-B momentum in the baby boomers spread this same urge for growth through the economy in the same way as computerization’s exponential growth has transformed the global economy into having to play catch up with it.

As this baby boom then approached sixty the crash of 1929 occurred which also left a lot more people than usual unable to restart their careers and lift the economy out of the depression. This may be another cause of the lost decades in Japan, earlier the younger baby boom after World War Two had the energy and drive to rebuild after each setback. However as they neared retirement with enough savings there were fewer people willing to lift Japan out of this near depression and so the economy was dominated in effect by a retirement community mentality.

In the same way many elderly people had their savings wiped out in the GFC but are now too old or disadvantaged in the jobs market to rebuild their savings. This creates a chaotic fragility in the global economy because the younger generations are saddled with having to support the elderly who cannot now help as much before. If this baby boomer generation had been in their forties instead of retiring then it may be the slump would not have lasted as long.

It may be that many of these aging people in the 1920s were speculating on the markets for a retirement fund out of some desperation much like happened prior to the GFC with those baby boomers. The lure of high returns from Iv-Oy predatory agents would then have caused these savings to create a share market boom which had to collapse because there were few growing industries to support these large profits.

## The economy had evolved under the shadow of this waves of population growth and in a sense had adapted to profit from them at each step of their growth, when this generation declined in strength and working ability and started to retire though it may have been like the decaying trees in a forest all collapsing around the same time and knocking down the vegetation under them

This period of lax regulation in I-O under Calvin Coolidge may then have been an effect of the pressure of these baby boomers looking to loosen regulation and to profit from and prey on younger people to have something to retire with. It could also have been younger Iv-B people looking to use deception to get ahead and so voting for the Republicans as being pro-business.

A similar situation might occur in a Roy food chain after a drought or other event that decimates it, this might also be from new or mutated predators or prey in the ecosystem unbalancing it like a war fought by people in the area such as the ecosystem around Verdun after World War One.

For example as mentioned earlier when the R prey become scarce this leads to a wave of starvation going up the Roy food chain until finally the Y and Oy predators are decimated by starvation, this is the same process that contributed to the GFC. After a time with few predators the R prey start to rebound in numbers but there is a bulge in numbers around a certain age like a baby boom. The same might occur in Ro animals such as buffalo, they would have been decimated by the predator attacks but now that the predators have mostly starved their herds can regrow quickly.

Five years after this mass starvation of predators then there would be a wave of five year old R prey as they explode in numbers because there are few Oy predators to control their growth. The Ro herd would also have a disproportionate number of five year olds, the younger buffalo have probably have gotten through the dangerous times when they were young and weak with few predators to attack them.

There would also be more mutations and variations surviving so far such as slower and weaker prey, they would probably have been taken by Oy predators when young. This creates a problem because each species of these R and Ro prey will all tend to become old and fragile around the same time as an easy target for predators as well as dying of old age around the same time leaving predators to starve. The predators then rebound in numbers at this time but do not realize that they will encounter a mass starvation later because of this.

However Y predators would tend to have a slower birthrate and so would be caught much less by this later starvation and some will survive on the baby echo generation of Ro buffalo coming up. The situation would depend on how many offspring these prey have, if they manage to vary their ages enough with these descendants then this starvation event might be minimized. With people however they tend to have only a few children at best in their lives so a wave of baby boomers take a long time to stabilize.

In the same way this aging population in the 1920s may have been a target for predation by younger businessmen just as the subprime boom was largely fuelled by preying on elderly black people who were confused by the terms of the loans. Many of these had worked all their lives and nearly paid off their homes, this apparent attainment of their retirement goals left many of them complacent and easy to trick as with older Ro-R prey and younger Y-Oy predators.

So some of the elderly would have been using their experience and capital to make more money to retire with in Iv-B speculations while others would have been preyed on with get rich quick Iv-B schemes such as subprime loans or buying an investment house.

The economy in the 1920s like the 1990s might then have been increasingly based on consuming these elderly people’s assets while the elderly tried to support their retirement by placing this extra burden of taxes for pensions and health care on the young. In effect then the young and old were each trying to make a profit from the other without giving much in return, this would have become a Negative Sum Game as both lost money and tried to make up for it with increasing leverage as with hedge funds at the time.

This is then like the wave of R prey becoming old around the same time and leading to carnage at the hands of the predators, when these are exhausted though the Roy food chain tends to collapse. In the same way then once this cannibalism of the elderly was used up in the 1920s and 1990s then both economies started to falter and then collapsed because this feeding on their savings had replaced traditional manufacturing. This feeding on the savings of the elderly had also become global, the Japanese carry trade was based on lending out the savings of elderly Japanese people arranged by Iv-Oy agents, much of this money was lost in the GFC.

The momentum of these Iv-B events is perhaps impossible to control, usually people saw profits from it or because of its deceptive nature did not rally understand where it was going. Politicians probably saw a booming economy from this Iv-B and didn’t want to interfere with it.

As with the GFC the aftermath of 1929 saw massive amounts of fraud that were not exposed in the Congressional Pecora Investigation until after this contagion had collapsed much of the economy but being Iv-B it may have also collapsed without this corruption when it ran out of resources.

Much of this US Iv-B growth may also have come from World War One when its European trading competitors were devastated in Roy, this allowed the US to boom economically from the lack of competition until it turned out much of the money it was lending out with its trade surplus could not be repaid. Then the subsequent trade collapse along with the Smoot Hawley tariffs caused the US heavily leveraged economy to start collapsing, exposing much of the fraud and creating more panics and collapse. At the same time the European economies that had barely gotten out of a Roy scarcity of resources tended to collapse back into Y authoritarianism in the 1930s leading to World War Two.

Something similar happened to Japan in the 1990s causing the Lost Decade, their real estate market grew so large because of the wealth from their trade surplus but this was mainly from lending this money to people to buy ever more expensive properties rather than these people owning this money. This was like the US and European real estate boom in the 2000s caused by cheap interest loans from economies with trade surpluses, in Japan this trade surplus money was available for loan to the B Japanese worker but with his low wages he could not pay it off.

In Japan economic setbacks caused this highly levered real estate bubble to start collapsing. This caused more panic and collapses along with a loss of momentum when the economy hit the floor after reaching these tipping points. Then much of the banking system was propped up as zombies and so lost much of its ability to innovate. This is also similar to those foreign investors who bought bonds in the subprime boom only to lose their money and suffer economic collapses from this, banks in Germany for example.

Much of the reason for this worldwide collapse was how this Iv-B contagion had spread much more with free trade than with previous localized crises such as in Asia and South America. Iv-B is composed of the roots and branches of society, because of this it creates more direct connections between some people and organizations, the disadvantage is that is cuts out communication with other people close by but not in these conduits.

For example imagine a box full of tangled optic fiber with lots of ends leading out of the box to different computers, if you wanted to work out the connections it would be pointless to actually look inside the box because you would be outside each fiber trying to look in. However the signals in each fiber would be like deals being done in Iv-B where they try to be secretive, and even deceptive so they don’t want people such as I-O police being able to look in and see what they are doing.

This is like people in the economy trying to work out what is going on with these Iv-B deals, we confuse not seeing anything to everything being ok. At best we might look in the box and see some diffuse light and conclude this means that on the average the signals like the economy are doing well. This is what economic data is like with Iv-B deals, it is either deliberately misleading or trying to take a random sample of what are highly chaotic deals.

Not only that but anyone doing these Iv-B deals might be able to see some light coming in from other fibers and try to conclude from this that the diffuse light somehow means a lot of stable random business is going on. For example random V-Bi business might be like a solid where the photons between the atoms represent transactions of energy or time.

This might look similar to the box of glowing optic fiber but the way this energy can move is instead highly chaotic because it cannot diffuse through nearby optic fibers. Because of this statistics gives misleading information because it is based on randomness but the conduits have little randomness in them. The nonrandom aspects are then explained away, for example some areas of the economy may boom but this does not spread to other depressed areas.

Wealth inequality would increase in an Iv-B system instead of money becoming more equal everywhere like with random entropy spreading it out. This money cannot spread out, it can only go to where these roots and branches lead and if it does leak around these conduits then this can cause a chaotic collapse because they run on such low profit margins.

This is also like the I-O police looking at traffic on a freeway and trying to work out from the appearance of the cars and their speed what the driver’s private lives are like, because there are so few exit lanes on a freeway then these drivers cannot easily visit shops they are close to and so their money doesn’t tend to diffuse randomly in these areas. For example these freeways might cut through poor Roy areas and connect wealthy areas, however this Iv-B system will rarely leak money outside this conduit.

So there is an innate uncertainty in trying to determine what goes on these conduits from outside them just as people watching cars go past on the freeway could not easily work out much about them, in other words our stationary position looking in the box doesn’t tell us much about the momentum of movement in the fibers which is like the Heisenberg Uncertainty Principle.

Once then it is accepted that this information inside the fibers cannot be easily looked at, like how I-O police might not be able to stop cars and search them then a lot of crime can be missed until it gets bad enough to be visible and then that is likely to be in a crisis. For example if there is an infectious disease spreading through a city and we can’t stop cars then the first sign on the freeway might be where sick people start crashing into each other.

By that time then it may be too late to control the contagion, it might be necessary instead to have random road blocks and testing such as with drunk driving to determine the spread of the chaotic epidemic. In the same way the I-O police can prevent the spread of a financial contagion by random audits of the secretive parts of the financial system.

## An Iv-B or Oy-R system then needs to have some randomness to make it more stable, in the same way a V-Bi or Y-Ro system needs some privacy to give it more chaos and growth.

I-O policing is as of 2011 out of favor in economics, this is because of the push for weaker I-O policing and deregulation that preceded the GFC. It is also because this weakened regulation was blamed for the crisis, some say for example that if there had been less regulation such as not keeping interest rates artificially low then the GFC would not have happened.

This can be part of the Bi-Ro community anger after an Iv-Oy crime wave, people blame the police for not stopping it but also blame them for restricting their ability to respond as vigilantes. Sometimes though the reason the I-O police fail is that the economy becomes impossible to police effectively with the budget and manpower available or not possible to police at all.

For example without the police doing random audits on secretive parts of the economy there was no real way to anticipate the GFC, if they did not have the budget or if there was too much opposition in the community for this then it may not have been possible to detect this contagion in time. Also the environment might not have been conducive to Iv-Oy snitches coming forward, they may have been making too much money on Wall Street and the financial sector generally to risk this.

To overcome this there might need to be strong enough whistleblower laws along with a commissions for the snitches to balance the money they might make otherwise. For example if the company realizes these agents know their secrets then they might buy them off, the system needs to be able to overcome this. For example those investors who had foreseen the GFC would occur with a subprime collapse needed enough of an incentive to come forward, this then would need some sort of commission like with whistleblowers or as happened they prefer to short the system into collapse instead.

Also strong I-O police needs a balance of strength between V-Iv and Bi-B, if there is wealth inequality then one side might have too much influence with politicians to water down laws or to pay for expensive legal proceedings to protect themselves. Also if they pay more taxes the I-O police tend to be paid more by them and can become biased for this reason. The result is the police can become more Iv-Oy as a rightwing tilt, this can make them more secretive, corrupted as agents of V business, more likely to ignore the anger of the Bi-Ro communities, and allow more Iv-Oy self-policing because they have become more like this themselves.

However letting Iv-Oy self-police does not work, it creates booms in corruption and busts as this secretive and deceptive policing is regularly exposed in the media often through Bi-Ro protests. This is why many police forces and regulators in the US are exposed at times with a scandal, this rightward tilt to Iv-Oy makes them secretive.

This also happens because the police like the Iv-Oy companies and professions self-policing become incapable of seeing what other chaos and corruption is going on, the police are then more likely to take bribes because they underestimate the extent to which other police are doing the same thing until it becomes exposed in a collapse or sting.

For example these branches of corruption start to lead to V businesses or Y organized crime so that one policeman might pay off several others in a branch structure or he might receive bribes from many different branches, those agents might receive bribe money to pass down from multiple sources as well, and so on. These branches become vulnerable to an external shock, for example someone might expose part of this corruption and then it can be followed to knock down police like dominoes falling on each other.

They are also vulnerable to stings and traps because the system is based on so much secrecy and deception they really don’t know who is behind some of the bribes. For example Internal Affairs might trap one officer like this and then he turns on others to make the dominoes fall just like they might do in the Prisoner’s Dilemma. This corruption is natural though and impossible to completely remove because I-O is a hybrid of Iv-Oy and Bi-Ro.

The best that can be done is to minimize this with neutral policing but this requires a community that allows it, something that was impossible prior to the GFC. These Iv-Oy agents then cannot self-police any more than Iv-Oy police can because they cannot moderate their behavior because of fear of being beaten by the competition and overshadowed. For example Iv-Oy police might fear not taking bribes because they might be demoted or transferred to maintain the branch network of corruption.

Like Gresham’s Law bad policing drives out the good, in the same way a voluntary system of Iv-Oy agents watching their own conduct does not work because those with less scruples take advantage of it.

This means that the other agents need to either do the same to avoid losing market share or they start to get shunned and cut out of deals by the more corrupt agents. Therefore the result is all the people in Iv-B without I-O policing tend to keep competing through worsening crises until they completely crash the system just like desert plants keep growing until they use up all the Gb resources and die out.

A series of crises leading up to a major collapse like the GFC is just the typical outcome of Iv-B competition as resources are used up. This is similar to a poker game where some players lose all their money and drop out in dramatic losses or crashes from their bluffs and bidding. Finally the game itself falls apart as allegations of cheating from weak I-O policing start to cause mutual distrust, also Gresham’s Law dictates that bad players will drive out the good as they cannot compete with cheating.

Iv-B also tends to hollow out resources evenly because each pair of secretive and deceptive people in a deal tend to sense what they can get away with without being publically exposed in V-Bi, if they do then this can be regarded as an isolated incident if the I-O police don’t check the patterns of secrecy behind this attempted bluff or fraud on both sides. When an area gets hollowed out it also has less money to be made their, the competitive nature of Iv-B then causes them to move to another area where there are more profits to hollow out. This tends to preserve the system until when it does collapse the destruction is relatively even like a fractal.

This is then like R termites that end up hollowing out wooden branches so much they collapse virtually into dust, the same might occur with roots rotting from mold so the plant suddenly falls over one day. As the system becomes unstable in some areas or runs out of resources the Iv-B traders especially with the advantage of computerization switch to another area until it recovers enough, this is like in the Roy animal kingdom where Oy predators might tend to leave some R prey alive so their numbers rebound and where R prey might not overeat parts of a field so the grass can more quickly regrow.

This can be a viable strategy as long as the system does not become too unstable, for example if R prey in a drought ate a field of grass very evenly but closely then it might cause a dust bowl because the grass would have few reserves to stop a mass dieoff. Chaos then can make deterministic patterns that efficiently make a financial structure efficient by removing any unnecessary assets in favor of leverage, however without enough policing the competition drives this into forming a house of cards ripe for collapse with an external shock.

Roots and branches are like a fractal system in that they can keep dividing and cover more area with less wood as in a tree, this is like for example a Sierpinski Gasket or Triangle which can cover a larger area with less and less material by hollowing out more of its structure. It’s likely this represents how Iv-B grows in V-Bi areas, savings of all kinds are hollowed out so that less money and assets can do the same job. This is however not the same as a growing tree where the roots and branches are actually growing, rather it is a kind of self-cannibalization or attack by Roy parasites trying to take more secretly without collapsing the system.

For example subprime refinancing hollowed out the equity in homes like this, people took out new loans and got money back to spend and often refinanced to get more and more as the house prices grew, this is like a Sierpinski Triangle in shape where as the B roots go down further the more the system was hollowed out with B workers taking out equity from houses until only hundred percent financing could be sold to them. This would be like a tree with no V-Bi over time, the Bi upper root system where nutrients are combined gets hollowed out like this, in the same way Bi communities become broken up into B competitors. V businesses also have their team aspect broken up by excessive competition as the assets there are hollowed out in a fractal way.

Roots and branches in a tree can be quite strong but when they collapse the lighter upper branches might fall and break the ones below them like a domino effect. The hollowing out of the Biv system lke a Sierpinski Triangle is like playing a game of Jenga where each player tries to withdraw blocks which represent assets and profits while not making the whole economy collapse.

Each Iv-B deal is done like this, looking at what they can get out of the system without making it collapse as the maximum aim of this competition, in effect this is like hollowing out the savings in the economy that can absorb chaotic shocks like insurance. For example Credit Default Swaps were used along with subprime bonds to hollow out the amount of liquidity that needed to be kept by banks to protect against chaos, it seemed this system could asses risk more accurately than traditional random insurance.

However the mutual deception and secrecy meant that this hollowing occurred without anyone understanding how much had happened, they did not know whether the counterparties would have the funds to pay out in a collapse and so there was no mathematical understanding of this risk at all. For example risk minimization implies knowing what the risk are and how much reserves are needed to cover them, however when the Iv-B competitors were also bluffing each other like in a poker game they could not assess these risks.

This game might have Credit Default Swaps added to it so players could insure themselves against running out of money or defaulting on their bets, other players and investors could also buy these swaps to hedge against a player not being able to pay for his bets after the game. However to price these swaps accurately the system would have to know when the players were bluffing, or at least do random audits of their hands and money they have left otherwise the risk is just being worked out on deceptions.

For example a player might look confident and start raising his bets and so the other players might decide to speculate in his swaps betting the prices will go down as it looks unlikely for him to be losing. However he is also more likely to act this way when nearly broke because he needs to bluff to stay in the game, the system then cannot accurately gauge bluffs and lies to work out the true risk and so people will lose money chaotically. The ones bluffing are most likely to profit because they might have swaps on their own game and find it cheaper to lose and collect on these than win.

This system would free up a lot of capital though, instead of each player needing to have the cash on hand they might have these swaps in case they default and these swaps might pay out and then collect off the player later. This game might take a long time to collapse if there are regular numbers of poor poker players because they get their money taken by the good players while the losers are also unlikely to have swaps on their play.

However once this source of income is gone it becomes a zero or Negative Sum Game where good players or those who have bluffed themselves into having a good reputation must start losing and so more swaps will start producing losses and then some counterparties will also not be able to pay. In the absence of I-O policing the cheats will drive out the good players according to Gresham’s Law and so they might have deceptively good players get insured with swaps cheaply and then defaulting. The result will then be a chaotic collapse where the crooks tend to win and the swap values especially if worked out on a normal curve will have been mispriced.

The Sierpinski triangle can be imagined as like the roots as well as the branches of a tree, both tend to get hollowed out as people’s assets are used up in exchange for more momentum. This can happen in Iv-B technological innovation as well, for example all kinds of consumer goods are becoming lighter with less material used. This is like leverage as well, to do more with less material is the same as doing more financially with lower reserves of capital. Just as this might cause some cars to be damaged more in a crash so too does this cause financial instruments to collapse or deform in a crash.

This also happens in the Roy animal kingdom where Oy predators and prey might hollow out the Ro herds by getting at any weaker and elderly animals. The herd then might look healthy but if all the young as well as pregnant females have been eaten then there can be a chaotic collapse in its numbers, they might also be eating the more Ro team. orientated prey and so the herd might devolve back to R prey. This was covered in my first Aperiomics book.

## This hollowing out in plants frees up a lot of material for building a tree compared to the usual thick trunk, but this trunk is needed for nutrients to be passed between the upper and lower areas, if it breaks or bends then this can be interrupted and the plant can die or become weak.

In Iv-B businesses as well as in plants there tends to be little or no trunk and so when it collapses the system in effect snaps in half, the Iv branches lose contact with the B roots and the system freezes or dies. For example a vine might grow as Iv-B and if it kills a tree then it doesn’t have the strength to stand by itself.

Before this weakening and collapse happens though the increase in liquidity from hollowing out the system gives the impression of prosperity because the money is freed up more and more from reserves, this was seen in the higher leverage Iv hedge funds and investment banks were using prior to the GFC. For example even after the GFC when so many people have financial troubles there is still a feeling of prosperity because some things are cheap such as communicating and having a social life on the internet.

## As goods become cheaper with computerization then Marx’s problem with capitalism becomes more acute, with B worker’s competing they could keep lowering their wages as prices also decline from innovation. Workers also become less valuable because of Artificial Intelligence and robots replacing them for more jobs.

This was also behind the GFC, the trade surplus economies made so much money from taking the manufacturing base with their lower wages, then they had to loan this money back to the advanced economies to keep their exchange rates low. The chaos of this situation then drove up real estate prices and the drove them down again, however this caused problems with the V-Bi debt from the mortgages on these homes.

It is likely then that with this deflation coming from improved productivity and innovation that all goods might keep going down in value and this will also cause most services to also decline in wages. This then cases problems with the V-Bi model of loaning a large percentage of the cost of a home over decades, for example some people might take out a loan today and by the time the loan would be paid off computers might be more intelligent than people and capable of doing any job they can do.

Debt and deflation then are likely to become major problems as goods and services chase each other down towards zero and essentially being free. This of course has its own problems, if someone earns no wage then even of goods are free they probably won’t want to work. The likely scenario then is a freemium economy in the future where goods and services will decline in cost to near or at zero for a basic product but extras will cost more.

This then can converge with welfare such as health care, the taxes paid to support this would also need to decline to near zero as health related goods decline in value as well, people might have the equivalent of free health care as in many economies already as well as a free level of living with pensions and unemployment insurance. These would need to be policed in I-O to ensure people really deserve them and are not collecting them fraudulently as they are checked today.

The problem is the V-Bi disconnect with this Iv-B innovation which can cause many booms and busts along the way, loans for example might have to be indexed at being worth no more than say 80% of the value of the asset purchased. For example if people are paying off homes then if the prices crash then the loan principal could be reduced to this 80% as would the payments perhaps with a twice yearly valuation of the property.

This would need to be policed in I-O such as in people causing damage so it declines in value, if so then people might get a cheaper home by slowly wrecking it and then fixing it up later as they can afford the payments better. However once this system was in place then banks would factor it in to their balance sheets, they lose plenty of money in a crash anyway so this would just formalize who actually gets their loans readjusted as in the GFC. In this case then instead of arguing about who deserves a loan modification then everyone gets it automatically and banks might hedge this risk with derivatives to some degree.

This automatic reduction in payments would then inject money into the economy where it is needed, this would tend to moderate the chaotic effects of the crash. It also could allow house prices to decline to near zero in a possible future for example where robots might build homes very cheaply. Banks might then even today lose money on loans they are writing, however this prevents house price deflation from freezing the economy.

One problem will be the variations in prices going down, some might deflate much faster with improved productivity and force down the B wages of workers in those industries. Other might go down much more slowly, for example it might be much hard to get robots and Artificial intelligence to do plumbing and wiring a home than to work as doctors. Advertising based goods and services might become far more common, for example as with many internet services people might get free lodging and food in exchange for looking at advertisements if they become cheap enough to produce.

## In effect then all kinds of businesses might provide a free basic lifestyle as a private safety net in exchange for the opportunity to chase freemium sales.

The Iv-B and V-Bi disconnect would place severe strains on prices as they declined to this level, for example the wages in the advanced economies are under pressure to match those in the emerging economies, however they could not afford to buy houses on those wages. This might become more coordinated by increased efficiency in the banking sector and perhaps even with supplying banking and credit as a freemium service like with Medicare and pensions.

For example banking is becoming more like a function of the money grid, a computerized international market of capital, derivatives, loans, etc. The cost of providing loans then is likely to decline to a very small percentage of the loan amount, the more inefficient part will be the cost of valuing a property to avoid fraud as often happened prior to the GFC, verifying income to avoid liar loan fraud, and so on.

This capital then needs to be tied to the cost of and the value of real estate as it deflates in value, it might then become mainly software with few employees and so there would be few costs. Valuations might be done by telepresence robots, satellite imagery, drive by inspections by self driving cars also updating street maps such as with Google Street View, interfacing with a house computer to check each room with cams built in, and by searching electronic records of improvements made.

Worker income might also become highly computerized, with so much social media and tracking of consumer habits profiles of people might come to include a highly reliable estimate of their income and ability to repay loans. Overall then the cost of administering such a system might decline to a few basis points on the loan, it might also be possible for such loans to have near zero interest rates and so people might be able to ease this transition to ever cheaper homes in this way.

For such a balanced Biv system to evolve sustainably though it needs to be better policed with I-O, however this will continue to cyclically weaken causing crashes in the economy. The most likely scenario then is this Iv-B economy will continue to drag the V-Bi economy along with it with some I-O market connection while leaving other areas behind completely in stagnation or depression.

For example just as there are areas in the US and other advanced economies that have been in a near depression for decades there is no reason why many of the hard hit areas from the GFC would recover at all. They lost their connection to this Iv-B economy and have little chance of regaining it, for example the manufacturing base of this Iv-B economy might be difficult to attract back to the advanced economies.

The most likely solution will be that manufacturing will have to return to the advanced economies, if not because of Iv-B competition then perhaps a tariff wall which can be circumvented by local manufacturing will resolve this problem. This reverse the original problem that caused this loss of manufacturing, the V-Iv parts of the economy benefitted from jobs being sent to China and others because they could buy or manufacture these goods more cheaply.

Then they could sell these cheaper goods to the Bi-B parts of the economy often with high markups and in effect hollow out the savings of these areas while putting pressure on them to lower their wages. Eventually these caused the advanced economies to nearly topple in the GFC like a plant growing too much in its branches and leaves and becoming weak and losing its reserves in its root structure.

However V-Iv companies in the trade surplus economies could still make good profits by manufacturing in the advanced economies as long as they got to own these businesses like Toyota and Honda do in the US. This would also tend to balance the trade surpluses they have to a more sustainable level. It is also important because as this Iv-B technology has more robotics and Artificial Intelligence then local jobs might tend to disappear throughout the global economy and this needs to happen less chaotically to avoid a series of collapses.

The Iv-B economy is then growing in momentum and complexity around the world fuelled by this desire to increase these trade surpluses as they continue to hollow out the savings of the advanced economies. This then is growing with more leverage, more flexibility, faster innovation, and so on. For example fast growing companies might rent their premises and furniture and their staff might not be on contracts and so can be quickly hired and fired.

This seems like an efficient system until everyone is doing it in Iv-B, then an external shock can cause demand to plummet as people panic. Then there can be quick layoffs which make people hoard money as they lose their purchasing power, the system then continues to shed equipment and workers while the financial sector dumps securities to minimize the losses from this downturn. They do this because they assume they can rebuy stocks more cheaply after this small crash, they can even short these stocks and other derivatives to force them down even further for a short term profit.

Iv-B companies might also assume they can quickly rent new premises and hire new workers, this however assumes that the Iv-B infrastructure of the economy is strong enough to handle these shocks without collapsing much more than people realize in this opaque situation. In the same way shorting stocks puts downward pressure on some companies and might cause them to start collapsing like falling dominoes.

This process can be like plants snapping in two and quickly being able to reconnect and regenerate, the Iv areas of management and capital quickly lose their B workers and assume they can quickly hire more so this is like quickly regrowing a root structure. For example a storm and high winds might damage a forest and cause some plants to lose their connectivity with their upper branches, then they need to sprout new roots and branches from the reserves of nutrients in them.

However as was seen in the GFC this reconnection and regrowth of the shed parts of a business does not tend to happen as quickly as people might assume, instead the pace of innovation causes shed workers and equipment to become quickly out of date and toxic for further growth. The momentum of an Iv-B economy is like a finely tuned machine and these external shocks can be like dropping fragile mechanisms, once some parts are even slightly damaged they might slow down the system or wear out more quickly causing chaotic collapses.

For example once the subprime conveyer belt of creating bonds was shocked in the GFC it never recovered, the fact that it became so dysfunctional meant that banks and investors would not be interested in buying more bonds even if of high quality because it would be too hard to resell them. The US Fed is still supporting the US banks with liquidity as of 2011 because the whole financial system after these shocks has not been working efficiently since.

As these Iv-B businesses fell in the GFC they were like large trees dying from a contagion that collapsed smaller plants under them as they fell. This would also tend to damage their own seedlings growing under them, in the GFC then as the shadow banking system collapsed very few businesses were able to regrow from this wreckage.

In effect it is like a sustained domino effect where a domino can fall further over time and keep knocking down more of the others. This is partially what happened in 1929, as companies started collapsing this broke the connections and liquidity between them causing other specialized businesses to not be able to get the goods and services they needed to survive and so they collapsed bringing down others.

When an ecosystem is highly specialized then these collapses can cause cascading other collapses, for example if birds can only feed from certain flowers then if those plants fail then those birds might disappear and this causes other flowers like that to also disappear. When the banks in 1929 failed companies dependent on this finance quickly failed, and then others dependent on them and so on.

As the hollowing out continued prior to the GFC however the value of real estate was going up as were shares, CDOs or Collaterized Debt Obligations were selling well as were Credit Default Swaps or CDSs, etc so there was always more and more money available while the value of everything was increasing.

This cannot be possible without leverage because the global money supply was not actually growing, people only had more money because they borrowed more or their assets went up in value, however they could easily plummet in value and so they were not really more wealthy. An I-O market needs to have a balance between people being able to sell when they want to, they might choose to keep some goods but sometimes there will be chaotic momentum to buy or sell and the liquidity of the market needs to be able to accommodate this.

For example in a liquid I-O market investors might occasionally get nervous about a stock and a wave of momentum might drive down its price as they panic, others might also drive this down with short selling at the same time. This will cause some chaotic collapses, for example some investors might be wiped out by margin calls and the company and perhaps other companies that do business with it might even go bankrupt.

There may though have been nothing behind the selling, sometimes Iv-B people and businesses do this much like R prey might get spooked and run for no reason. It also needs to be able to handle severe external shocks so that assets might have to be hurriedly sold at a discount to those V-Bi investors with more savings and able to take the long term view.

An Iv-B market however does not have this V-Bi liquidity and so it might collapse for no reason at all, this is like R prey becoming spooked by a branch falling and running a long distance. They might not return to an area and so some Oy predators might either starve or have to move themselves. This is also why looking for the causes of an Iv-B crash such as the Great Depression or GFC can be difficult, often the factors involved don’t seem to be serious enough to cause the crash.

In Iv-B and Oy-R though it is the momentum that causes the damage not the trigger, for example R prey might run at the slightest noise and so a meal for the Oy predators is lost. In the same way a house of cards falls because it is highly chaotic, trying to determine the cause of it falling implies there is a way to prevent it falling by avoiding that trigger.

However this is like an explosive mixture, an Iv-B economy contains a lot of energy and momentum that is highly channeled in B roots and Iv branches. Once a part of this explodes then this will produce enough of a disturbance or heat to continue this explosion like falling dominoes. The way to avoid this collapse then is to use I-O police to inspect areas of contagion before they get out of control.

When the Iv-B economy draws capital from V-Bi areas into it this already contains the seeds for a collapse unless there is I-O policing, this is because the V-Bi credit is only being extended because of the growth in the economy. When this growth flattens out, as with a tree, the Iv-B areas should be repaying this debt so these reserves can be replenished in case of an external shock. For example as a tree grows it might need to grow faster because of competition or fleeting amounts of resources so it usually borrows from the reserves in the plant.

These reserves are not only for this growth but for all kinds of potential chaos, in the same way V-Bi parts of the economy don’t just save capital for Iv-B speculation and innovation but for many other useful things that don’t involve much growth. For example insurance requires large capital reserves but doesn’t need to be involved in growing its capital with speculation, people also might save for retirement, unemployment, for when bargains come up in the I-O market, medical emergencies, and so on.

The Iv-B economy however is like weeds or desert plants in that it is far more biased towards using these V-Bi reserves for growth and innovation and this is why there is such a disconnect between them. When the Iv-B boom falters then, as it must because nothing can grow forever, the V-Bi investors want their money back for its other random uses. This in itself primes the Iv-B plant like economy for destruction because it can only grow with exponentially increasing credit but here the collapse will be accompanies with more like exponentially decreasing amounts of credit as people sell.

Because there is no extra money in the economy the high boom prices have to be either compensated for by people going without using this money for other things or by their assuming they can invest it and get it back when they want. Neither of these things can usually be the case in a long time low energy V-Bi economy, the money needs to return for other uses on demand and this cannot connect with the Iv-B goals except through the I-O market.

However this has been weakened causing the boom in the first place and so when it collapses assets from it will be at prices that are not salable in the I-O market, also businesses involved are likely to either be frozen with debt or assets will be frozen like this because of the frozen money loaned into it.

This boom then depends on this V-Bi debt not being needed which in turn depends on no external shocks causing a panic, also if the values of assets in the bubble stop going up then as people pull their money out this can cause a crash. In effect then the external shock causes the Iv-B economy to crash but this also causes the V-Bi economy to become more chaotic as well as normally long term investors panic and try to grab their money like people trying to escape a burning theatre.

It is like blowing a bubble, the material in it might be stretchable to create this shape but deflating it often causes it to break because folds in the material cause cracks which rupture. When a bubble is deflating then there is too much of the asset compared to the liquid money available as well as for the momentum of the steam money. People as well as business then tend to get stuck with the goods and services that had been selling well in the bubble, for example just before the GFC most of the companies involved in subprime started having to keep the more toxic subprime bonds themselves as no one wanted them.

Companies then tend to have too much stock compared to their money from this shrinking bubble, this stock then needs to be put somewhere and these storage needs makes the economy more inefficient and makes prices go down even further because of the loss of momentum. Eventually some of this stock cannot be easily stored even without needing the money for it, this can create in effect folds in the bubble where some stock gets sold off at steep discounts bring down the overall price of these goods.

As the bubble deflates people also want to get their money out faster because it is losing value which also causes folds in the bubble where prices collapse more in some areas dragging the other prices down too, this can also be exacerbated by V-Bi frozen money in some areas where these assets are laden with debt and either have to be sold cooling the market dramatically or they cannot be sold because of negative equity freezing the market in some areas. This then tends to tear the Iv-B market apart because some assets might still be selling in an orderly manner while deflating while other assets ruin this momentum by becoming frozen.

For example when the US real estate bubble collapsed some properties were still be sold off in a liquid market because people didn’t owe much money, some might have paid very little for their house and so just needed to sell in this deflating market and buy a smaller home for retirement or in a different area. To these people then the bubble would have also been irrelevant if it is was still going up, they might have sold their home in a rising market and just bought into another rising market.

This is an I-O market where there is not too much frozen money as loans to quench all the momentum of the market, however as the prices go down then some owners might buy a second home and then can’t sell the first so the market gets more people with too much housing stock. Also some might have to sell a home to move elsewhere for a job but cannot sell because of negative equity even to buy another home elsewhere with a similar negative equity, this frozen money then stops this kind of momentum in the market and so even good deals for all concerned are frozen.

For example the loan on both homes might be with the same bank but it still cannot be negotiated, more usually there would be so many subprime bonds that it would be impossible to arrange a deal like this.

There are different kinds of bubbles, for example it might be in something that is not good security for V-Bi frozen money loans such as art, when this bursts the prices might quickly drop but the market remains liquid because the steam money and its high energy has just become liquid money again with realistic prices.

With high frozen debt such as with real estate the bubble might be mainly frozen money with steam money inflating it and in effect the skin of the bubble being the liquid money which is being stretched to do more and more.

A bubble like this might burst from be inflated too much so it hits the ceiling where prices can rise no further, there is then not enough liquid money around to cover the surface of the bubble or the transactions that need to occur. When this happens the steam money cannot be contained by the available liquidity and so it might lose energy and become liquid again in the I-O market plugging the holes in the bubble. For example investors might become used to quickly buying and selling homes with high momentum, when the liquidity in the market becomes patchy some take much longer to buy and sell. However this can cool the investor’s momentum without causing them to panic so prices might falter but rise again. It may be at this point that investors get used to taking twice as long to sell a house but otherwise the market is still functioning well.

This might be where prices come down enough for people to start buying or lending again and this repairs the bubble, for example most people in the market might have high liquidity from past profits and so can afford to take some losses in the I-O market to repair the damage caused by fire sales and negative equity on some homes.

However if these prices continue to drop the bubble might become like a frozen piece of ice as V-Bi debt, there is then not enough energy in the system to keep doing business with the available liquidity and the economy tends to seize up or freeze. The liquid money then might also freeze up, the costs of looking after all this debt and unsalable stock uses up the liquidity available as companies go bankrupt with the costs of trying to liquidate.

For example a glass blower might start with solid glass, this is like in V-Bi where money is frozen in savings along with Gb resources such as silica and other minerals that need to be mined and transported along with this V-Bi capital to make the glass. Initially then this capital is used to mine the silica, etc to create a block of solid glass and then liquid glass.

The glass blower then applies extra heat as energy which creates a bubble of glass, this can grow by drawing more out of the pool of liquid glass but it will eventually reach a ceiling where the bubble is too big compared to the fragility of the materials used. Now the glassblower needs to shrink this glass bubble to a safer size, however reducing the air out of it does not work in reverse. Usually this will cause the bubble to develops folds in it and break, the glass then might fall back into the liquid as blocks of solid glass with some gas still trapped in it.

## To prepare this glass solution again the material must be heated enough for all the solid blocks to melt and the gasses to escape, then a new bubble might be formed.

This is also like the wood still uncut in trees, the untapped savings of potential investors, people who might learn to become carpenters, the steel for nails still unused in iron ore deposits along with the ingredients for cement, bricks, tiles, etc. These materials might become more valuable with a real estate bubble forming nearby, along with the V-Bi capital attracted by the price rises the various components of houses are in effect drawn into this bubble to form new houses.

However when this real estate bubble hits the ceiling it also tends to fall apart from its own size, then there is a problem of how to shrink it safely. The process of growing the bubble cannot be reversed as with the glass bubble, for example the houses cannot be disassembled and the minerals placed back in the ground. The energy in building the bubble has been expended and so more energy might be used to dismantle it safely, however a bubble like this tends to cool as investors lose interest and so there are few profits in deflating the bubble in an orderly way so it usually crashes instead.

In the same way a house of cards is like a game of Jenga and cannot be easily taken apart without causing it to fall, the financial industry prior to the GFC was also a one way process that in effect had no exit strategy other than collapsing in a panic. In the same way some Iv-B plants also have no exit strategy, they try to grow quickly and create seeds without needing to decay and collapse in an orderly manner because they rely on the humus from other plants.

A V-Bi or balanced Biv economy needs a high degree of organization to become hollowed out without collapsing at an early stage or else some areas will be weakened too much earlier on. For example the GFC did not happen until real estate was overpriced globally as well as with leverage stretched to the limit. This requires a high degree of organization but there also has to be a self-similarity at different scales from the smallest transactions to the largest.

For example as a bank builds its Iv branches then it might grow a new branch whenever there is enough growth and liquidity to support it. This then can be a mechanical process related to an expanding market generally, rents and purchase prices of new premises, wages, etc relate in a fixed way to the income from new business. The same kind of thinking might occur with a large bank opening in a new city by building a HiRise as with a coffee shop expanding by opening in the next suburb.

A B worker deciding to invest in real estate might go through a similar process of decision making, he might buy another house for speculation when he has enough profits from the first one, he in effect pyramids his investments just like the bank branches does but in this case the profits are from appreciation of real estate while the bank is profiting from increased loan revenue. However these two strategies are in effect using the same kind of branching algorithm, the bank opens more branches from loaning to the B workers who pyramid their housing purchases.

It is common then in a Biv economy for Iv-B people and businesses to make decisions in a root or branch structure, for example with the housing bubble mentioned earlier a person might decide to become a carpenter because he has enough savings to try a new branch of a career. A B worker might find some iron ore and decide to make new roots in supplying the nail business if he can get enough capital. Another B worker might start a quarry with new roots to supply this housing bubble, he then encounters decision points to employ new staff and buy new equipment according to the demand for his cement, gravel, etc.

Once there is demand this branch shape tends to form naturally and the decisions that people make are often obvious, this creates a fractal like structure that is similar at different scales so that we might zoom into parts of the economy and see these roots and branches with smaller and smaller businesses.

In the same way the subprime lenders open more branches and hire more Iv-Oy salesmen in this fractal shape, more salesmen might need more sales managers and other managers above them so that also grows in a branch structure. Real estate agents might respond to this demand for houses by opening more branch offices when they can afford to and then they put on more Iv-Oy agents and layers of branch managers, etc.

Construction related industries also grow fractally the same way, house builders might build more homes as they can afford to and open more sales branches with more staff. This causes shops that sell housing supplies to open more branches and have more staff with layers of management, they might also have larger warehouses that sell to these stores like agents for agents as the branches increase in complexity.

This also occurred higher up in the Financial sector, for example an investment bank or hedge fund like Lehman might have Iv-Oy agents that try to sell bonds, this might often be to Bi pension funds or to V banks for low energy high time investments. As these branches multiply the different kinds of derivative bonds also increased because they too were chaotic, these agents then increased in number with more specialized departments and got more sales managers and other layers of management above them all pushing for higher sales volume. The system then naturally grows these roots and branches that have the potential to grow quickly and efficiently but it can have difficulty in slowing this growth without collapsing.

A derivative can also be a kind of branch structure that grows, for example a trader might try to join two branches, say of two clients wanting a hedge on interest rates and oil prices to a fixed price. Then he might hedge this by another derivative where the oil price might be hedged to US dollars locking in a profit for himself, then another derivative hedges the US dollar interest rates which connects all of them together in branches.

So for example if interest rates or oil prices rose then the client would be hedged, the trader is also hedged and the derivatives he sold connect these to the US dollar and then they might also connect to gold prices, wheat, Credit Default Swaps on the original clients not defaulting, and so on. At each point in this chain someone might have some risk they want to hedge and so they might create or buy another derivative like another roots or branch that moves the price changes onto another commodity, so as interest rates changed all these other derivatives would be affected.

At each branching there is a trade that is based on having enough liquidity to write the derivative as well as back it up for margin calls, this is like a bank opening a branch and being able to support it with extra liquidity if the market goes against them. It is also like a tree growing another branch that it needs to support with enough nutrients for its growth, like with these other kinds of branches sometimes the tree branch might have some kind of contagion or chaotically break in a crash.

As the houses in the pre GFC economy became more hollowed out with debt and inflated values then people spent their profits on consumer goods and cars which were like expanding roots and branches in their possessions, this caused more branches of those shops to open as well as again more layers of management and more warehouses to supply them. Some of these people started buying houses too which also caused their prices to go up leading to more profits and more branches to open.

This then is like a tree growing its Iv branches and B roots quickly with the nutrients it finds, this might happen when it finds extra nutrients with its root system. In this case then B farmers and miners might be doing well because of plenty of rain as well as some new mineral discoveries, this causes these others roots and branches of businesses to grow above them by processing and refining the resources they find.

The best kind of growth then is based on actual Gb resources, when these reserves are very small and quickly used up then this infrastructure will crash perhaps before it finishes growing. For example the farmers might have had a few good years of rain because of an El Nino and this causes roots and branches based on making bread, cakes, etc in new shops. Then the weather reverts to its usual sparse rainfall and the businesses built on the good crops collapse.

This then is like a desert plant suddenly sprouting with the rain then collapsing, it can make sense for a plant to evolve to use fleeting resources and then collapse until the next rains. In the same way these businesses might do better to quickly grow when there are good rains to make profits from the crops and try to save up enough V-Bi reserves of grain and money to last through the drought.

In effect then these businesses are seeding when V businesses make profits to save for the leaner times, they are also growing stronger roots with reserves of food in their Bi areas. When the rain is hard to predict though these V-Bi parts of the economy might not have time to build up reserves and so the Iv-B parts of the businesses might just grow and collapse wildly with the rains and have to rebuild from scratch each time.

This is like in the GFC where the crash was not predicted and so much of the economy had no savings to rebuild after it. This can happen in two ways, either the resources end suddenly like a drought or those exploiting the resources don’t realize how quickly others are using it up.

This wild Iv-B growth can also happen in trees from sensing competition from others as well as from a lack of resources, they might see their salvation in outgrowing and overshadowing the others or in seeding quickly. For example strawberries are said to grow faster if green colored plastic is put around them, they can sense this as competition from other plants.

In the example above the businesses might tend to grow chaotically when there is rainfall, however this is complicated by their having to compete with other businesses with the same strategy. For example there is good rainfall and the farmers expect a bumper crop, usually the Iv-B businesses would start growing quickly by building new stores and factories, hiring and training workers, etc to quickly make profits before the drought returns.

However when too many businesses have the same idea and not all can survive on the business from the farmers then whoever can grow the fastest will get the farmer’s business, some might even start before the resources are confirmed such as when rainclouds appear but before it rains. This is like in a recession when the stock market might start to move upwards with no sign of good news, some investors are taking an early chance to get in front when the recovery does begin. Those who are too slow then might waste all their capital even if for example they finished their flour making factory a week after the winner.

So the businesses need to risk everything in growing faster with no reserves kept, this is like trees competing to outgrow each other so the winner overshadows the other trees which then wither like the unfinished factories going bankrupt. The winning trees then use the withering trees as humus, in the same way the winning factory might buy out the bankrupt factories cheaply and in the financial industry those who grew faster bought out the ones that were overshadowed.

The winning factories might also use their profits from being an early winner to undercut the other factories into bankruptcy and take over their equipment cheaply. This is part of the overshadowing process with Biv plants as well. It is also like Oy predators trying to breed faster in competition with each other as the early maturing predators get most of the food. Then they might be stronger and be able to kill off the younger predators or have gotten all the easy food already so they starve.

The fleeting rainfall then creates chaotic collapses and wastes a lot of resources in half built factories, with a stronger I-O market though this factory equipment might be sold off in an orderly way with less waste. For example there might develop Bi warehouses of equipment for flour making or empty shops, when the rains come the Bi community makes profits from selling or using these. When the predatory flour makers drop their prices to bankrupt their competitors this might be made illegal in the I-O market because the Bi consumers know that prices will rise more afterwards anyway.

Also the winning factory tends to overshadow the others as V and so buys up equipment to store and use after the next drought, this might allow the factory to survive intact through the drought like a large tree connected to the groundwater. In this way then the Biv system tends to evolve to be less wasteful, there might be a team of V factories that help each other with loans through the drought because it is cheaper than competing from scratch each time it rains. Also they can keep the Iv-Oy competitors at bay by not giving them the chance to build when it rains, this is like large trees controlling the V canopy so smaller trees never get a chance to get started until the old ones occasionally fall.

This excessive competition leading to collapses is what occurred prior to the GFC in the advanced economies, there was little in the way of new Gb resources but the growth was coming from increased Iv-B productivity from computerization as well as more intense competition from trade surplus economies. It seemed people were becoming more prosperous from this productivity but there were no new resources, the boom that was created was like from temporary rain and it had to collapse without sustainable wealth creation underpinning it.

This Iv-B growth then mainly occurred from taking the V-Bi savings from the trade surplus economies as well as savings from baby boomers nearing retirement who wanted to loan out their money for higher rates. These Iv-Oy agents didn’t care if the loans would be repaid because they made their money either way.

This then is like the V-Bi parts of a plant loaning nutrients to the roots and branches for faster growth because it seems like the best interests of the plant to get bigger, it is also like seeing GDP growth as a mark of health even when an economy should be maturing.

For example a tree tends to stop growing when it is mature and then its resources are used to maintain itself, if excess growth continues then eventually it hits a ceiling where it is too fragile for its size as happened with big banks like Citi and Bank of America. In the same way trying to stimulate an economy to keep growing in a mature phase just causes more destruction of weaker areas, for example the government does not know what its stimulus does but only key indicators of growth go up when it does certain things.

It also found this growth happened with deregulation, this need to grow as a first priority rather than saving is an Iv-B strategy of avoiding collapses rather than of creating a balanced Biv economy. However in many cases this creates Iv-B businesses that increase the GDP by growing quickly and then collapsing with the GDP increasing expenses in dismantling or fixing them. This might be like for example forcing someone to keep growing until their bones start breaking and counting the health care as increased GDP.

Also this deregulation causes a disconnect between Iv-B and V-Bi which makes the GDP grow from using up the V-Bi savings, for example when people spend their savings then this is counted as economic activity but it can also cause low savings for a rainy day. Much of the US boom in the 1990s onwards was the consumption of these savings, because it was not based on using new resources this led to a collapse just like someone living on their savings until they are gone.

A tree which is mainly roots and branches contains far less materials for the area it covers compared to a tree with a thick I trunk, a large Bi upper root storage area and large V canopy. As a tree turns from a balanced shape to being mostly roots and branches it can in effect be growing taller to reach the sunlight and growing its B roots deeper to find more nutrients just by cannibalizing itself. It is also of course much more prone to breakage and collapse.

Only by growing in this fractal shape could the advanced economies grow prior to the GFC, it also however made it more fragile and prone to collapse as it had fewer reserves to counter the chaos with randomness. For example with all the business branches mentioned earlier downsizing these becomes much more difficult because without growth investors don’t want to buy the equipment and staff being shed, often it is also toxic from the deceptive way the company did business.

For example many real estate agents and subprime loan salesmen might have been making their living with deceit prior to the GFC and so have let more honest skills atrophy. As buildings are put up for rent their shape might have been designed for these kinds of business, for example bank branches, and so other businesses have trouble using them. They might even have to be torn down and new businesses built from scratch. Construction workers might also have all their experience in building the kinds of homes people don’t want except for speculation.

Because of specialization then this financial humus from downsizing roots and branches is hard to assimilate, in some cases houses might have been primarily built for speculation or at least for people not as concerned with living there, they also become like toxic waste as they need steep discounts to make them attractive to I-O market customers.

For example a construction company might develop mutated designs that are quick to build but flimsy with design flaws showing up after a few years, much like cheap Iv-B electronic goods. With B workers assuming the boom will continue they might buy furniture, paintings, cars, etc that are expensive and flimsy, in the crash it might be harder to sell these because they don’t fit into a sustainable budget and so sell like toxic waste at a discount.

So as these roots and branches start breaking off after the Iv-B boom has busted then they tend to clutter up the economy with less useful equipment and often having frozen debts attached to them. This can be the same effect as deflation on an economy, people become reluctant to keep goods because the prices keep going down just like owning a house in a deflation. Cash becomes king in both cases.

Inflation however can have positive effects as with prices going up there can be a need to make profits on capital because it is losing value when idle. In the same way for example if real estate prices are going up then people saving for a house might need to buy in or be losing purchasing power in regard to these homes. It can then be good to flood a collapsing Iv-B economy with extra liquidity as this is needed to unfreeze the debts stopping assets from moving.

This is unlikely to create another bubble for a long time because the system is still in the process of collapsing exponentially, it is in effect growing in reverse and needs to hit a floor to break this downward momentum. When an economy deleverages then this is like there being much less money available, for example if investment banks are using 30 to 1 leverage and go to 15 to 1 then this still amounts to a 50% reduction in the liquidity available.

When this money pressure falls then just as a person feels weak from low blood pressure because of blood loss the economy becomes more stagnant with a loss of animal spirits. This is like in the Biv plant kingdom where water needs to be forced through a swamp to clean it up and make it healthy.

However it is not just enough to provide the money as deep V-Bi pools like a liquidity trap, it needs to be pumped through the economy so motion must be created.

Many financial branches also formed such as different kinds of exotic derivatives. These were mutating to survive by using up these fleeting resources before someone else did, also attempting like a Oy-R germ to be benign enough to not kill off the system before it can to profit all it could.

Add this to the secrecy and deception throughout Iv-B and it was inevitable that some shocks would collapse the system faster than people and computers could react, also that the collapse would be far more extensive than before. In these situation people tend to think a crisis can be avoided by fast enough action, however it is this fast action that causes much of the problem. No matter what kind of Iv-B system it is people tend to compete secretly and deceptively until their savings are very tight, then when there is a scare most will be too slow and lose all their equity leaving an economy frozen with debt.

One reason so many investors were fooled by the bubble was the deceptive nature of Iv-Oy policing in that many V-Bi investors thought the system was being policed much better than it actually was. This is the problem with Iv-Oy policing where companies are supposed to look after their own conduct, they are so secretive and deceptive by nature that they find it difficult to self-police and really don’t even know if they are being successful in doing it.

For example Iceland was somehow assumed to be self-policing its banks and no one realized how overexposed they were with leverage, however in Iv-B they were just grabbing the profits while they could with no knowledge of whether a collapse was coming. For all they knew they were the only banks in the world overextending themselves like this, if that had been true then it is unlikely there would have been a crisis in Iceland. However because deregulation was fractally even this corrupt self-policing was also evenly spread so it collapsed everywhere.

The same happened with banks throughout Europe, many got into trouble by assuming that Greece was better policed financially than it was but it had entered into an Iv-B relationship with Goldman Sachs to hide its debt to get into the European Union.

Many banks and other investors bought subprime bonds because they assumed that the US was well regulated in the financial markets and so someone somewhere knew these bonds really were AAA. Many of the current problems with the Euro are because each country is beginning to discover that the self-policing by banks was largely ineffective, they were using excessive leverage by overinvesting in AAA subprime bonds that turned out to be highly chaotic and prone to defaults.

By using these kinds of bonds they didn’t have to hold as many reserves, so this allowed unregulated chaos to hollow out the system more by deceptively making the number of AAA subprime bonds explode in numbers. Also some banks were allowed to hold fewer reserves by insuring these bonds with Credit Default Swaps but these were also chaotic because the counterparties secretly and deceptively sold more swaps than they could cover.

In effect then banks were allowed to hold fewer reserves because they used CDSs but no one even knew whether there were reserves behind the CDSs, this Iv-Oy self-policing then led to deceptive competition and chaos.

Again there was an assumption in the system that the I-O police or these self-regulated businesses were doing their job but the opacity has obscured just how weakened they have become.

As another example of how a crisis can be so large imagine a Roy society where the O police have become very lax or corrupt. Oy and R criminals are secretive and deceptive, they then try to steal without creating much of a trail and by obfuscating how much they take by avoiding taking too much from any one suburb. The result is the media might have little idea how much crime is really going on because the R-B crime victims tend to not get together and compare their experiences as they would in Bi-Ro, each suburb is hit by an amount that is tolerated without stirring up the V and Bi communities. If they protest too much the Oy and R thieves back off until they calm down and then resume.

This is like roots and branches growing as they see more potential profits and have enough savings to survive a small downturn, in the same way Oy thieves might wait until they see a good place to rob and try to have enough savings to lie low if the police become alerted by Ro complaints.

Eventually these Ro areas don’t notice they are becoming poorer and hollowed out as non-essential assets are stolen until finally with the last straw as a tipping point there is a huge crime wave exposed. For example people might have their valuables in safes and not realize they have been opened and the contents taken.

This was like Bi investors with subprime bonds that were found to be worthless when it came time to examine them closely to sell them. In the resulting panic and anger the Bi local economies collapse with people afraid to go out and safeguarding or hoarding their remaining money making businesses go broke everywhere.

This is like the GFC,the Iv-B fraud managed to avoid attention and kept the chances of the V-Bi communities from being motivated enough to strengthen the I-O policing until they had stolen so much that the system collapsed. The resulting panic and stagnation caused people to hoard their money instead of circulating it, this is also a response to crime when the I-O police cannot protect people. In the same way an economy can go into a death spiral where people hoard their money instead of buying goods which bankrupts businesses and causes more to lose and hoard money, and so on.

In Aperiomics this can be caused by a perception of crime making business too risky and causing people to hoard money, also when people have profited from crime they might tend to hoard it to avoid being found out. This hoarding then is another aspect of an Iv-B economy, when it crashes then people who are secretive and deceptive anyway tend to hide their money to use it competitively and the V-Bi parts of the economy have been cleaned out. To solve this hoarding problem then V-Bi needs to replenish its savings and then their trust and cooperative behavior will cause those kinds of businesses to revive.

The thieves here would not intend to collapse the suburban economies because that would make them starve later from a lack of targets and prey but they would have no way to assess whether the crime wave was going to collapse the economy or not. Instead they tend to grow fractally in roots and branches, these Oy thieves might work for higher level crime figure in layers to the Y mafia team. This is then like Iv agents working in layers or branches up to the V management getting the lion’s share of the profits.

The Oy thieves might interpret a lack of chaotic collapse from their secretive crimes as a sign of their efficiency just like a tree’s branches and roots might see a lack of collapse as a sign it is growing ok. However a tree in nature would do much more than this, sensing for contagion throughout its whole shape but with this self-policing in Iv-B there was no effective way to sense this. The Iv-Oy agents in Roy and Biv areas could just see the parts they connected to, in the same way a tree root or branch is just designed to transfer nutrients to the next part of the tree and to grow or mend.

## When people work as Iv-Oy agents they are usually also this short sighted as to the consequences of their actions because these chaotic colors focus on short term high energy goals.

This is usually how a sales force works, they are suspicious of each other possibly stealing some of their clients just like Oy predators are wary of others stealing their R prey. Instead of helping each other they are more likely to stab each other in the back to rise up faster through the branches, to become a manager or get a pay raise.

To overcome this isolation between roots and branches, for example with the box of optic fiber mentioned earlier imagine there are some signals in the fibers which are fraudulent deals. The only way to tell which ones are a problem is to randomly pick some fibers and follow them right through their whole path to see if you arrive at any problems.

Then you can take that as a random sample and determine approximately how healthy the whole system is, do this at random times and you can calculate if it is getting better or worse. This is correct I-O policing as opposed to looking in one Iv-B fiber and then assuming you know something about the others. This in effect is how some investors discovered the subprime market would collapse, they checked each mortgage in some subprime bonds and determine they were either fraudulent or had to default and then estimate from that how much of the total market would also be like this.

These conduits were like derivatives, with this root and branch they connect counterparties and might be for example B versus B as miners hedging with each other against price rises of wheat, Iv versus Iv agents speculating in delivery contracts for this wheat with each other, or Iv versus B where for example a farmer might be trying to hedge the price of wheat with an Iv speculator.

In each case the counterparties know little about the overall system because of the secrecy and deception everywhere and so have no real idea if their particular business might be a tipping point for the Iv-B system to start collapsing and send shock waves like tsunamis throughout. For example speculation in US food is said to have caused some food riots and even the Arab Spring uprisings but these speculators could not have predicted this because they compete as loners and don’t see the overall picture.

In these speculative trades because each chaotic root and branch carefully assesses whether it has enough liquidity on hand to grow, also whether the situation seems safe, when this is multiplied throughout the Biv system these people are in effect acting like logic circuits in a giant computer themselves.

This is how Iv-B businesses work generally, at each branching there are decisions to be made and a new branch can also be created according to set criteria such as increased profits and an assessment of risk. By each group of people at these forks being careful the whole system tends to grow chaotically as long as it has enough reserves for mistakes and also if there is some kind of internal I-O policing to stop fraudulent decisions. For example if employees got secret commissions from other companies then they might go on a buying spree of new equipment for the company.

At times this Iv-B system can become shaky with external shocks causing problems, when this happens each trader might feel some disruption in his business and connections with others as well as reading some deceptive media reports about it. For example the business media might feel compelled to be optimistic about a crisis because of their advertisers and also to safeguard their personal investments. Traders then learn to be suspicious of what news they here and this makes it much harder to assess if the system might collapse or not.

At each fork where decisions are made this is the same as a logic tree in computers and Boolean Algebra where choices might be made in logic circuits and computer chips. Computers are then Iv-B in their nature which is one reason why they are growing exponentially and with so much innovation, when they are used in the Biv economy their strengths tend to support this fragile Iv-B growth which can lead to collapses.

Because of this same kind of branching structure as with trees these computers grow faster in competition with others as they give results to their users that also represent branch structures, computer manufacturers then develop faster machines with more complex decision trees and these led directly for example to computer algorithms used in trading derivatives that caused so much contagion in the economy. More will be explained of how technology is evolving in the twelve colors will be explained in an upcoming book.

## This computerization of branching and decision trees then drives the global economy to develop the advantages and disadvantages of Iv-B and Oy-R but weaken the V-Bi and Y-Ro aspects at the same time.

As an Iv-B boom grows people tend to assume that different parts of the global economy were not intricately linked, this was because of the opacity caused by Iv-B as well as the way people are isolated into only seeing what is going on in their own roots and branches. Wherever they went they tended to see people doing their jobs efficiently and with increasing productivity, the economy seemed to be booming and so they assumed from this that everything else was ok.

This was seen for example when Lehman was not bailed out in the GFC, no one in the government or the markets knew how connected it was to the world economy and so when it caused so many chaotic financial dominoes to fall it created more panic. Strong I-O police would have prevented this because with random audits they would have had a good overall picture of how the financial system was interconnected, however this would also have caused them to have stopped fraud and dangerous leverage much earlier. In effect there was no way to save the situation because any police that could have been effective would have been in place long enough to stop the problem from growing in the first place.

With opacity then this increasing overconfidence can mean people assume things are better than they are, then with increasing panic in the crash they assume that they are worse. This is because Iv-B tends to amplify a signal, it is designed to grow things and it will even do this to the emotions of confidence and panic.

To recover an economy after a crisis it is especially important to have enough transparency so people can have a real knowledge of the problems but enough privacy so they can make investments and start businesses and get a head start on competitors. This is more critical now since so many were bailed out that were deceptive in the GFC, this means much of the contagion was subsidized by the state and has been prospering and weakening more healthy and useful businesses.

## This is a common situation seen by the IMF in Y-V dictatorships that use loans to prop up their cronies without using the police to reduce the corruption that caused the economic problems.

This situation is usually handled by the IMF refusing to loan the economy money until it reduces some of this corruption, for example they might have to let some of the corrupt cronies fail.

Much of this kind of business would have been purged when the US became a Roy war economy in WW2 and also when Europe had much of its infrastructure destroyed. After the war then strong regulations of I-O from the New Deal would have meant that regrowth everywhere led to a healthy economy, that would be the explanation of how the war seemed to end the Great Depression.

The global economy has become more specialized, this is also because of Iv-B growth and a lack of global I-O policing so that companies for example can compete by selecting countries with the most lax environmental and labor laws. Imagine for example if this occurred in Europe, one country might have no minimum wage and worker safety, also no controls on pollution.

They would make goods for export much cheaper than a country next door with the same kinds of B workers and Gb resources and so that country would either have to erect tariff walls, remove its own worker laws, or lose its industries and develop a trade deficit and perhaps have a financial crisis. This situation then is similar to that inside a country with few labor laws and environmental controls, Iv-B competition will force companies into the cheapest and most dangerous worker conditions to save tiny amounts of money and the workers will have their pay slashed as well as being fired for any reason.

Then these companies would sell goods much cheaper because the B workers could not afford anything expensive and the whole effect is extremely deflationary, it is also like Gresham’s law where bad companies flouting labor laws drive out the good by undercutting them. The Iv-B economy tends to amplify differences even when small into larger effects, for example it might also have a boom in wages when a particular skill is scarce.

For example companies might compete to export goods to other parts of the country and with a scarcity of workers they might end up in a bidding war like a worker wage bubble. This happens to some degree with CEO pay, companies start to assume that a good CEO is like an investment that will pay off like a work of art and they get head hunted back and forth until their compensation reaches bubble like territory.

A similar thing may happen with bonuses on Wall Street for good performers, this becomes disconnected from the job they are actually doing so agents might make huge bonuses for doing fairly ordinary cold calling for prospects. A good example was with loan officers in many subprime companies who made huge amounts of money in commissions on loans to B workers.

It can also be like Gresham’s law where V companies are hiring Iv-Oy agents with the understanding that they will commit fraud to get ahead but also give the company plausible deniability about this. If other companies don’t get dishonest agents as well they might get overshadowed by those who do.

Lax I-O policing in the world economy can create booms and busts in almost anything Iv-B related, the roots and branches spread around the world giving ever more specialized goods and services and more specialized jobs requiring faster retraining to keep up. Each good and service, i.e. a product being made and a job then becomes highly chaotic and also secretive and deceptive so workers would not share much information about their job prospects and tend to exaggerate their resumes where possible.

A bad performance in a job can give a poor resume and cause a chaotic tipping point in that person’s prospects for employment, for example in the US those unemployed for too long sometimes become unemployable simply because they are tainted by this apparent failure. In this competition for work they can slash the wages they will take to the point of college graduates with master’s degrees working in fast food outlets but at other times a worker’s wages might get bid up to move from one company to another with no loyalty to any.

Wage driven inflation or deflation can be caused by these chaotic changes, for example the inflated boom in CEO bonuses, stock options, and wages resembles a boom in V prices related to talent such as the art bubble prior to the GFC. The Iv-Oy competition for these higher wages and bonuses causes them to make large profits for a business and V gets the lion share of this distributed between members of the V team. For example a V company might be part of an extended V team based on ethnicity, where someone went to university such as Harvard or Yale, loyalty to an art or sport such as famous sportsmen on a board of directors, and so on.

When these Iv-Oy agents are let loose because of weak I-O policing they make large profits for the V company much of which goes to this V team causing more wealth inequality. In the same way B workers might sometimes be in high demand and competition drives their wages or contract rates higher, as Bi communities develop these B workers realize they can get even more money by forming a cartel or union. This is one of the ways the Biv economy replenishes its V-Bi savings by using the Iv-B roots and branches to grow but also to give up the major share of their profits in exchange for being financed.

## Iv-B people usually have to do this because they are so deceptive and competitive, this makes it much harder for them to run their own business or negotiate their own wages because others can use a divide and conquer strategy to reduce their profits.

The opposite process can also erode V-Bi savings, just as Iv and B workers can sometimes have a boom in profits they can also have a bust such as with unemployment in the GFC. When this happens this tends to erode V and Bi teams because the profits decrease. This may lead to some of them being ejected from the team, usually these are the ones who are seen as more deviant and unconventional to the center of the normal curve.

Removing them from the team then maintains the normal sense of V and Bi while the deviants are more likely to be Iv and B people anyway. This might happen for example as a Bi union has to shed people, GM made the unions do this when it went bankrupt in the GFC. The most senior members are usually the last to go, this is a normalizing process because the deviant union members are more likely to have been pushed out long ago.

For example a Bi union might tend to ostracize those who work more than the normal people, they would tend to be B workers anyway used to competition. Also persistently bad workers might cause too much trouble for the union and be forced out, the result is a fairly homogenous group of workers the longer they are in the union.

In the same way the longer someone is part of the V team the more normal they have to be, others tend to get marginalized through the years and this normal core might be close to retirement but still running many industries with their control of the boards of directors and law firms.

The same process happens throughout V-Bi communities and their people, for example in Bi the houses might tend to become more similar to each other as a normal home. Deviant houses might have too many or few bedrooms, be too dark inside, be an unusual color or shape, etc and are discriminated against by those wanting to appear normal. In V there is also a conformity but it includes more art and sports as V is the fruiting and seeding part of a plant.

So over time more artistic kinds of houses become the norm without being too different, people might collect art which has a good consensus of its worth based on price, the position of a house in the center of a normal area becomes more important, etc and any deviation from this becomes something to apologize for. For example the architecture of a house might be deviant but Iv genius, however the V occupants are more likely to apologize for it as just being what was available when they were looking.

This then is a high time low energy strategy where those most normal over a long time become more successful because of it. If someone is perceived to be a competitive threat rather than a cooperative team player then they might be ostracized from the normal center because of this. In V then this becomes a conservative political ideology where gays might be seen as deviants to the normal but allowed to coexist as Iv by being secretive about it, in effect any deviant activity might be tolerated in this way.

The same occurs among actors, for example gays usually had to stay hidden as Iv while the V talent had to appear preferably as married, having a V charity which looks after R disadvantaged people like V leaves feed R grazing animals, have to work together well in movies as a team which can be advertised, and so on.

## This also occurs in economics and politics, for example the Federal Reserve in the US has evolved an increasingly normalized group of members with a bias towards V-Bi stability and acting as insurance for the economy. This also has extensive ties to R charity and links to others like them in banking, industry, politics, and so on. In this club then when there is an Iv-B crisis those on the edge of the normal curve tend to not be bailed out such as with Bear Sterns and Lehman.

Wage and price inflation can then be influenced by whether workers and companies are chaotic or randomized in their survival strategies. Also though these jobs can grow deceptively in industries that appear to be sustainable but can quickly collapse in an Iv-B bust.

An Iv-B boom then has the potential for chaotic disaster in employment, when there are enough Gb resources the system can quite quickly move up to near full employment but this work can be highly fractal in shape with people forming roots and branches whenever there are enough resources available. For example companies might not know in an Iv-B opaque economy where the money is coming from but they will but on extra B roots of workers whenever it will turn a profit while having some reserves against a downturn.

The financial basis for this extra employment can be illusory as it was in the US after 9/11. There was a boom in employment but mainly related to investing money from the Japanese carry trade in bad loans, programmers and laid of manufacturing workers became loan officers and the construction industry also boomed with orders for new and remodeling houses. It eventually became apparent though after the GFC that the 2000s for the US were in effect a time of zero growth and much of the loan money was just wasted on mutated real estate that no one could really afford or even wanted to live in. people also increasingly spent their V-Bi savings on quickly obsolete Iv-B consumer goods such as big screen TVs and computers leaving them with few savings to insure against a downturn.

This Iv-B system then is innately opaque because competitors do better by leaving each other in the dark, it can be moving towards a tipping point where hitting the floor will lead to economic loss for workers but no one realizes it. Gb resources might be increasingly transitory and the system jumps on them quickly and exhausts them much like in commercial fishing where a school of fish is found and wiped out in one big catch.

This indicates an unbalanced Roy predatory system where any prey when found are quickly overeaten and then more must be quickly found to avoid mass starvation.

This Iv-B situation is occurring in the global economy partially because so many countries are Roy or newly Biv and so have fleeting resources they need to exploit quickly. For example it is probably recognized by most that the Western trade deficits are unsustainable and so those who export first to them will make profits that later companies will miss out on perhaps because of tariff walls or devaluations of their currencies, this then is a high energy low time Iv-B business. It tries to exploit this trade deficit to the edge of collapse without ruining it completely, much like before the GFC each financial company in a game of economic Jengo tried to grab as much profit before it ran out.

The international wages system then is designed for exploiting fleeting Gb resources and fruiting or getting profits before they run out. The same occurs with goods made by Iv companies, more mutated goods are for sale like chaotic branches of a tree. If they are popular they grow quickly in sales and if not the branches collapse to be quickly absorbed as humus for other business ventures. This is also like logic circuits in computers, business decisions are made in roots and branches based on a profit in particular branch related to the potential for risk.

Often small differences in wage costs make the difference between large profits from high sales and disaster if for example the two products sit on a supermarket shelf with one a few percent more in cost than another. Companies like this cannot avoid participating in this high velocity branching into new markets, this is like Oy foxes who must grab at any R prey they can catch even if they know it will lead to exhaustion and starvation for themselves later.

If a collapse is coming then they might compete even harder for the remaining prey, in the same way Iv companies need to compete more strongly and often deceptively to have enough reserves in a downturn to outlast the others as they go bankrupt. This is like in Biv where trees try to outgrow each other and get the most nutrients from their B roots so in a drought they might last while the others wilt and perhaps form a V canopy and permanently overshadow their rivals.

The products are in effect mutating in a revolutionary way, the idea is to bring in a disruptive product that destroys the market for others and allows a profit for example in internet companies. Often however these products are no more useful than the more slowly evolving V-Bi products they replace, as a result of this revolution more people in the West are out of work, have lost retirement benefits, often owe more on their homes than they are worth, their education is often obsolete, much of their possession are goods that fall apart ever more quickly to make way for the new mutation, and the threats of permanent unemployment from robotics and AI become more real.

Much of this then is from I-O deregulation which unleashed this revolutionary wave of mutated goods and services and which progresses in a series of manic booms for the latest fashion or craze and eventual collapse. By having a more international I-O system of policing much of this can be avoided, for example wages and pollution can be protected worldwide with an I civil remedy by countries having tariffs against those who gain an unfair advantage by mistreating their workers.

In this way those emerging economies would make more money for their economies in a sustainable way while those with a trade deficit can hold onto higher wages themselves. The problem with deregulated markets though is that this constant competition will keep slashing wages until people are earning money in condition like they did in England in the Industrial Revolution which inspired Karl Marx to rail against Iv capitalism. We are then seeing the kind of collapse that Marx predicted would happen to capitalism much as he foresaw it, competition would reduce wages until workers could no longer afford to buy the goods they make.

At the same time Iv agents speculate to make more in this tightening market with ever more risk until they eventually chaotically collapse.

Marx was then correct in some ways but was describing the Iv-B economy which not coincidentally took off once communism was gone to scare Iv capitalists from going down this path too far.

The solution to this is also quite simple and was in place after the same Iv-B excesses caused the Great Depression, a strong I-O police stops this contagion of destructive capitalism getting out of control like this. However like Marx also said the system has one flaw in that the I-O policing of it seems to spontaneously weaken at times allowing this disconnect in the market to grow out of control and caused booms and busts.

The Iv-B system of goods and services then is highly chaotic and workers as well as factories work on ever smaller margins of profit unless they are among the best, this is especially ironic as China is proceeding down the very path that Karl Marx warned about. It is an open question then as to whether China might return to R communism as their export led boom chaotically collapses when the advanced economies eventually cannot fund their trade deficits.

The Iv-B system becomes very fragile like this so an external shock such as the subprime crisis in the US quickly spread to the financial markets around the world, but it also spread to global trade as liquidity for financing these sales froze up. There is no real answer to the chaos without strong I-O policing, this trade crash might be an early shock of much larger ones coming with these persistent trade deficits in the advanced economies and large trade surpluses in emerging economies propped up by low exchange rates and loaning most of their profits back to the West to finance the deficits.

This can only get much worse because there are plenty of other Roy countries who could increase their manufacturing to compete with China, indeed the Chinese like the Japanese are starting to use more robotics which is virtually limitless in the amount of goods and services by AI that could overwhelm any amount of V-Bi savings the advanced economies have.

There is no balance in this system because Iv-B has no sense of normality about it, nothing actually happens on a normal curve but is ultimately completely chaotic. Waiting for the market to be self-correcting in Iv-B is doomed to create disaster with tipping points because self-correction implies a normal equilibrium to return to.

This global trade might then collapse when too many workers compete from other countries and exhaust the V-Bi resources of the advanced economies, this is like in the Iv-B real estate bubble where developing more land and building more houses eventually made price increases impossible because no amount of demand would be enough, and so the bubble burst.

In a balanced Biv economy this process might lead to in effect Biv financial forests extending into many Roy economies, however the Iv-B and V-Bi disconnect is just depleting the savings in the global economy and spending it on goods that are quickly obsolete leaving no savings and eventual toxic waste. This is why the advanced economies are stagnant after the GFC because they cannot compete with the low wages of the emerging economies so all the growth goes to them.

They are then like people in an economy who cannot get a job and use up their savings buying things that are consumed or wear out leaving them with nothing. The long term unemployed are then like the advanced economies themselves, they can borrow money from the manufacturing economies to buy these goods but they cannot be employed in these manufacturing economies to give their labor in exchange for them.

A similar thing happened with the tulip bubble in Holland, eventually so many were growing tulips that the market became saturated and could not grow in value any more so the only reason most were dealing in tulips was gone and so the market crashed as everyone tried to sell. At first it seemed that this economy was good because of so many people growing highly desirable tulips but no matter how cheap or desirable goods are if paying for them can only come from savings then eventually they will be exhausted.

For example before the tulip bubble Holland was relatively wealthy, when they saw the tulip many people wanted to own them and this created a market between those with this wealth. This is in effect like wealthy advanced economies seeing cheap goods from overseas. Many then make profits reselling these goods, for example Apple makes large profits manufacturing its products in China and then selling them to Americans.

This was like some traders buying up cheap tulips and reselling them to others, there was a market because some people valued these tulips more than others and so transactions could be made between them. In effect then the arrival of cheap tulips represented profits for all who bought them because a small sum of money bought something much better than anything else they could buy with that money.

Everyone then felt richer for this, in the same way the advanced economies felt they were suddenly wealthier because of the cheap consumer goods available from overseas. So this is like a Biv economy finding Gb resources such as a new mineral discovery, where with these minerals this wealth flows through the economy and enriches it with the cheap imports like the tulips people felt relatively richer and so in the same way this relative wealth flowed through the economy.

This created more jobs and speculation because often people bought from traders instead of direct from the overseas manufacturer, in the same way people would have often bought tulips from traders instead of direct from the growers. However with a new mineral discovery the economy is really wealthier because people trade other goods and services for this mineral, they refine and resell it, and so on.

There is then usually no problem in paying the B miners for this mineral because they get value from it, also the B miners in effect are paid with a lesser amount of their own minerals. For example the B miners might find some iron pre and coal and get steel cookware and equipment in exchange for it. Both sides benefit from this because the refiners get to keep some of the coal and iron ore as profit in exchange for their refining skills.

However when goods are imported they can also be more valuable by comparison to the goods already available, they might save time or energy. However these imports need to be paid for by local refiners taking these goods, refining them and then reselling them overseas keeping part of these goods as profit. If not then no matter how valuable these goods are they represent a drain on the wealth of the local economy.

Sometimes this can be offset by the savings in time and energy, for example an economy might import advanced farming and mining machinery and even though it cannot improve and re-export these it can save time and energy in farming and mining and become more wealthy than the cost of the equipment. Then they might be able to sell some other goods overseas and balance their trade or have to borrow money back from these exporters but this might still be less than the value they got from the equipment so overall the economy might be benefitting.

When there is an Iv-B and V-Bi disconnect though the Iv-B companies can be highly competitive and the most likely result is one economy wins and takes over most of the manufacturing in some products as happened with South Korea, Japan, China, and Taiwan relative to Europe and the US. In this case then Europe and the US become V-Bi and are buying these goods from their savings, if they cannot compete in some other exports then they are losing.

For example the V parts of the economy can’t refine and re-export these goods because they are already refined, also the Bi unions are losing their manufacturing jobs because of the low wages overseas. They then must pay for these imports directly or indirectly from savings. The local Iv-B economy in these goods has either collapsed by losing the competition or is deceptive in really making its money from marketing these goods as agents rather than being involved in making them.

So there would be an initial boom from this as V-Bi consumers buy these goods because they are much better value than they are used to but eventually they run out of savings, they are like someone without a job surrounded by bargains. Since an economy like this cannot manufacture competitively and cannot refine goods in V then it likely has to pay for these imports with raw or slightly refined Gb resources, they might for example have to export minerals and farming produce to pay for these refined imports.

In effect then they are becoming like the emerging economies were and the emerging economies have swapped places by taking over the refining and manufacturing, this is because in Iv-B there is no equilibrium but only a boom for some and collapse for others. In the early stages of this situation the cheap goods create a deceptive appearance of increased wealth in the economy, this creates a speculative boom as various Iv agents buy and sell the imports to make profits.

This occurred not only with cheap imports prior to the GFC but also with loaned money, for example before this interest rates were much higher in the advanced economies and capital was more scarce. Now this abundance of cheap money also seemed like an increase in wealth and so branches of Iv agents funneled this money into the advanced economies making commissions every step of the way.

This then was like cheap consumer goods with agents making commissions importing them, this was in effect occurring with both the goods and the money paid for them. As this money came into the economy some had a better connection to its source than others and so they paid less for it, this then caused a lot of extra buying and selling in the economy as with the imports which was seen as a rise in GDP. This cheap money made some assets such as real estate boom in value just as cheap consumer goods temporarily put more money in consumer’s pockets and let to an increase in their purchasing power.

Once people start buying and selling a product for a profit along these branches then without strong I-O policing the situation can become deceptive with agents promising more benefits than they can deliver and also concealing the nature of the business. This creates an opaque market that seems to be generating wealth for the economy like from real Gb resources but it is mainly a boom based on people using up their savings and cheap credit.

## This is like after the GFC where one solution was to try to get consumers to spend even more, however the real problem was the Iv-B and V-Bi disconnect where the supply and prices for imports had to become sustainable so people could afford to buy them in the long term.

The only way for a bubble to continue under those circumstances is to disconnect completely from the I-O market and become ever more speculative which ensures a bigger price crash when it has to reconnect later to real supply and demand.

For example the I-O police should have been doing random audits of the carry trade and these importing businesses and would have found that the loss of manufacturing along with the erosion of savings was not sustainable. Any of the reasons for the GFC could have been found out in the way as a trend perhaps ten years earlier.

The world economy then is responding to these problems with the GFC by disconnecting ever more from I-O regulation, many say for example that wages in the advanced economies must fall more to compete and environmental laws be removed so polluting industries need not go overseas to China and elsewhere. Instead they need to negotiate as V-Bi teams to reach a situation where they can save and not just keep draining money away to buy quickly obsolete imports.

The situation can quickly become outside the scope of this book but a number of other Iv-B crises are developing in tandem with this lack of I-O policing such as the exhaustion of fish in the sea, global climate change from air pollution, using up many important minerals too quickly such as rare earths, having crops developing more resistant pests because of overuse of pesticides in this need for farmers to constantly compete or go bankrupt, some diseases evolving resistance from overuse of antibiotics in raising chickens and cattle, and so on.

These are not different crises but all aspects of an imbalance in these colors. Of course there are solutions to these crises but the world has never had the will to implement them because the I-O policing to do so is not popular enough. This then is like the defect in capitalism Marx warned about, not that the system cannot be stable but that people are either not willing to forgo short term gain for it or because it is simply too opaque to see the problems developing.

There is little point then in having a solution if people don’t use it, this is the nature of Aperiomics as a theory in that it does not so much describe how to fix things but the consequences of various kinds of color imbalances. In many cases there may be no way to balance these colors so in that case the situation is not repairable and then Aperiomics looks at how these imbalances will lead to a chaotic crash in some areas as Iv-B or random stagnation in others as V-Bi.

One major problem with color imbalances is just as balanced and well policed colors in Roy can eventually lead to a more wealthy Biv economy for a third world economy, too much chaos and collapses could bring the more advanced economies back to Roy as the crash of 1929 did with the Great Depression. Once this happened the path back to Biv was particularly tortuous as it lead through Roy World War Two.

Biv economies have a strong relationship with trade because the Iv and V parts of the tree, referred to as V-Iv, and the B and Bi parts of the tree or Bi-B trade with each other in this I-O market which is the trunk of the tree, in effect then international trade can be represented by trunks of trees stretching around the world with the roots in one economy and the branches in another. These trunks are vulnerable to being cut or damaged from external shocks because of the long distances between economies, this was seen in the GFC where international trade plummeted.

For example when there is an Iv-B trade between economies this can also have a boom in trade with an increase in shipping as seen with the growth of free trade. However because much of this might be unsustainable as Iv-B this trade will usually collapse like any Iv-B boom tends to do. This can be because trade is highly competitive in Iv-B and people are working in an opaque situation, the global economy tends to move towards low savings and high leverage and so when there is a collapse many purchases also quickly drop off. For example if B workers were buying consumer goods such as big screen TVs from using their houses like ATMs then as this equity swindled falling house prices could quickly cause a far larger drop in this ATM use.

If someone had a $500,000 home with a $450,000 mortgage and then was using up the equity with purchases, finding education, holidays, etc then they might start to depend on a 10% rise in real estate prices each year to give then extra spending money as well as to help pay the mortgage from this ATM refinancing. If they have an ARM mortgage which will reset to a higher interest rate then small changes in the real estate appreciation as well as the interest rate hike coming higher will have an amplified response in their ATM use.

In the early part of the boom these homeowners might have had a $200,000 mortgage and had spent $250,000 on home improvements, college funds, and other luxuries which led to a boom in imports along this I trunk between the US and the trade surplus economies. A collapse in real estate however would lead to a chaotic drop in this international trade because the ATM would be cut off, also Iv-B people are timid by nature and would start to hoard money rather than keep buying things.

## Once this momentum of purchases was broken this would cause collapses throughout the roots and branches from stores in the US going broke and laying off staff who also stop buying goods, also this would happen in China etc with factories going bust and laying off staff.

If this causes too many collapses or indeed if the GFC lasts too long and advanced economies get pushed into Roy with too much debt then these trade links of I markets can become severed and then become primarily O trade barriers instead of I conduits where in effect each country starts to see others as predator and prey.

This can start with Biv tariffs and trade wars as it did in the Great Depression, then the perceived Roy injuries each country inflicts on others in a Negative Sum Game means that everyone seems to be going broke. This can then lead to where countries start to see others as being criminals and so armies and war become .

If then the GFC stretches out into another Great Depression which begins to collapse the remaining healthy economies then this could erupt into creation of old style Y-Oy Empires such as the Japanese invasions in response to the US embargo on oil imports in World War Two. Other countries that are more Bi-B based now might become attacked for their resources much like Y-Oy Nazi Germany and Fascist Italy attacked Ro-R Russia and France in WW2. We tend to think of this as impossible but when the economy becomes opaque with Iv-B and Oy-R we cannot easily see what is coming, after all most people didn’t see the GFC coming.

It is a mistake however to see this color changes in the world economy as being out of control like many countries were helplessly watching the world slide into World Wars One and Two. The more the color codes are examined in depth the secretive and deceptive Oy-R causes of wars become apparent.

The job of policing is primarily in the I-O colors but over much of history that was been little or no international policing, often it was a balance of power from various Y Empires and in some cases Ro communism and religious Empires battled with them. Over time however international I-O policing has grown mainly because Ro and Oy countries have come to realize the benefits of it, for example Ro countries like a neighborhood watch or gang have had to maintain a high level of military alertness to prevent Oy blitzkrieg like attacks such as those from Germany in World Wars Once and Two.

Sometimes the Oy raiders win, for example Genghis Khan was very successful with these sudden raids much like Oy predators attacking Ro herds. Sometimes also they cause too much trouble and the Ro neighborhood watch strategy becomes more like a posse and these Ro countries such as Russia in World War Two decide to push back hard and drain the swamp permanently as this did with Germany. This also happened to Germany in World War One, they attacked France as Oy with the Schlieffen Plan but French resistance hardened into Ro and trench warfare where the Germans had to deploy a Y war of attrition instead of Oy blitzkrieg.

As they slowly lost this Y-Ro war they saw the US was going to come in on the side of France and so tried a final Oy blitzkrieg attack at Verdun which failed leading to a quick chaotic collapse. The Ro armies then were able to demand reparations from Germany as well as taking some territory and breaking up the Austrian Hapsburg and ottoman Empires. It was natural in the circumstances for international I-O policing to be strengthened, Woodrow Wilson tried to do this by advocating the League of Nations, avoiding too much Ro punishment of Germany leading to an Oy rebound of another war later, and for breaking up these Empires into countries with borders less likely to provoke more wars. Much of this was of course unsuccessful but it did lead to the UN and many international policing and trading organizations today with act as I-O.

However these are still relatively weak compared to the momentum of the Iv-B economies and so they were mostly ineffectual in preventing the chaotic collapse of the GFC. Just as Roy war can build a strong Oy-R momentum that leads to a Y-Ro war of attrition or collapse so too the Iv-B boom in the global economy when it collapsed led to a V-Bi stagnation afterwards.

As of 2012 after the GFC the Iv-B chaos caused the global economy to lose much of its energy in hitting the floor after multiple tipping points, the economies are in many areas restoring V-Bi reserves and shoring up companies with increased policing.

Other areas such as overfishing in the sea are a constant battle with waning I-O power such as with whaling fighting and winning some battles against over predatory Oy deceptive overfishing by establishing quotas, at other times the I-O police , lose by not having enough authority or funding. When they become weak this can lead to an Iv-B and V-Bi disconnect where in whaling Ro teams such as Greenpeace and Sea Shepherd try to catch the Oy whalers and grind them into bankruptcy in a war of attrition similar to with the Germans in World War Two.

Often then the I-O police are either too weak or they have never had a strong presence in the first place, this is why world history has had so many wars just like a city might have many crime waves from historically weak police. This is then like a crime infested city like Rio de Janeiro and an underfunded police force, sometimes they will succeed and keep control of crime particularly in more wealthy areas and at other times have to completely abandon some areas to control by Ro or Y gangs as depicted in the 2002 movie City of God.

The police might also become corrupt and lose their neutrality, for example they may become Oy thieves themselves like in Mexico with Oy kidnappings and extortion. They might also become secretive Oy death squads as occurred in Brazil and Argentina, they can also become biased to the left and too allied with Bi communities becoming more like vigilantes themselves. For example where suspicious Oy like people loitering in a Bi-Ro suburb might be framed for a minor crime and jailed, beaten up or warned out of the area.

In the same way the buildup to the GFC was a saga of weak I-O regulators often trying to do their job and scoring major victories but ultimately fighting a crime wave too fast, secretive, and sophisticated for them. Similar battles are being fought to try and avert crises around the world all the time, and most are successful because the color system is very resilient.

We tend to only see the results when they fail in a major way, in many ways the GFC was remarkable from the collapses that were averted as much as for those that happened.

The main reason for so many crises causing an Iv-B imbalance is probably computerization growing exponentially and feeding technological innovation as Ray Kurzweil describes, and so I-O policing will probably be playing catch up and often a losing game until this reaches an ultimate crisis of Iv-B.

Just as the building of railroads in the US created so many Iv-B innovations and collapses these changes are probably also confronting our intuitive belief that a particular level of I-O policing is enough when it is inadequate to handle this continuing color imbalance. Much of the problem comes from the secretiveness and deceptiveness of Iv-B, we tend to forget its power in the global economy because we so rarely read about it in a truthful way unless a crisis exposes it.

As Iv-B roots and branches grow they are more efficient than when they have to shrink or break, in the same way a crime wave tends to grow strongly but can collapse quickly when the I-O police get the upper hand. For example the Prisoner’s Dilemma is where Oy criminals are tempted to turn each other in in exchange for a lighter sentence as a Negative Sum Game, this is in reverse to when the crime wave is growing where they compete for a larger share of the benefits of crime.

This is like in the Roy animal kingdom where Oy predators are competing for large numbers of R prey, there is little to stop them from eating large numbers because the O animals in the food chain might be weak or missing. Instead of these O animals fighting the Oy predators to keep their own food the Oy predators break through like a crime wave.

However when these O animals regain their strength then they can combine as a pack with a divide and conquer strategy against Oy, they are different from Ro animals because they are also predatory and can attack as well as just defend. When faced with this the Oy animals don’t stand together as a rival pack but abandon the others to their fate and so can be wiped out one by one, this is like the Oy criminals turning each other in to get away themselves. This also happens in a Biv economy, for example two Iv agents might be competing for business with B workers, with a strong I civil law well policed then they might turn each other in to escape a fine instead of prison.

In the same way the collapse of an Iv-B bubble is different from its rise because when it is growing it is plausible that the I-O police are unnecessary but when it is collapsing the only question is when the police will uncover the criminal and civil law infractions involved. When the bubble is growing crimes can often be hidden with liquidity, when it collapses this fraud tends to become exposed as has been seen in so many US banks since the GFC.

This is like in the crime wave mentioned where for a long time the police might be unaware it is going on, when an R community become too victimized by the crimes the O police will learn a lot of the secrets involved through this divide and conquer strategy against the Oy criminals. For example Oy thieves might have worked out a new way to pick locks and so their crimes seem mysterious for a long time, however when enough R victims complain the O police will start using pressure on each Oy criminal until one explains how the crimes are done. Once this happens then that kind of crime usually collapses in numbers.

In the same way an Iv-B bubble is usually based on some kinds of secret and deceptive information, this is exploited and closely guarded as trade secrets until the B and Bi parts of the community complain loudly enough whether they understand how it is being done or not. Eventually then this widespread anger and panic becomes associated with the collapse of the bubble because the communities are either exhausted of assets to get or they become too war of any kind of related business.

Once this kind of business stops being profitable it becomes more likely Iv agents will trade away how it works to the I-O police in exchange for legal problems they have. Because Iv-B runs on secrecy and deception once the secret is out this bubble cannot inflate again, the I-O police would not allow for example another subprime bubble to occur because they now know the consequences. So this is another reason for V-Bi stagnation after an Iv-B bubble bursts, the profitable secrets that created this momentum are no longer usable, it is in effect like Oy predators sneaking into a Ro herd and after they have been seen they will be chased away.

These Oy predators will then go hungry until they come up with a new strategy or the Ro herd forgets how the old one works, in the same way V Wall Street had its Iv agents use many tricks successfully causing in part the GFC but in its aftermath most of these have been exposed in the media and most new ones such as the Robo signing scandal in 2011 are also quickly found out. This makes it difficult for Iv-B momentum to get going again, however because of weak I-O policing and the color disconnect there are still few good sustainable ways to make money after the GFC.

The result is like the Oy predators the Iv agents are looking more for new tricks or variations of the old ones to rip off consumers rather than trying to get back to a more sustainable market. This is part of the hangover of a counter revolution in finance, for example in the Roy animal kingdom when the O animals become weak the Oy predators eat well and have plenty of offspring that survive well with plenty of food around but many are unsuited for a sustainable food chain.

When the O animals recover then these Oy predators tend to collapse by being eaten or driven away, however because they no longer fit well into a balanced food chain they cannot adapt to the new situation. They then continue to try to get around the O animals and get killed until their genes get back to a sustainable mix for the situation. In the same way the Iv agents that did so well prior to the GFC often only made money because of that unique situation, like car dealers becoming subprime salesmen.

Because there are no good profits anywhere else like there were in subprime many still keep trying to build a new scam, however the stronger I-O police catch them much more easily and so the corrupted Iv system keeps collapsing until it can get back to a sustainable model. For example Iv real estate agents might have done so well prior to the GFC that nearly anybody made money working on commission, when the market collapsed many of these instead of going back to their old job and low wages keep trying to make the old model work but now the B prey is too wary to fall for talk of a new bubble.

Many then will do this until they go broke, others will get into trouble for fraudulent misrepresentation, etc and this will continue until enough leave the business and it becomes an honest and sustainable Iv business again. However it may become dishonest again when the I-O police weaken again and lead to another boom in Iv agent numbers followed by another economic collapse or crackdown by the I-O police.

This can also happen with B workers, many might have made large profits in the real estate boom or at least in a house they couldn’t afford for a while. This is like in the Roy animal kingdom where the R prey had a boom in numbers and many mutants that usually would get quickly eaten by Oy predators managed to survive and have offspring. In the same way many B workers did much better financially than their ability would usually allow, by contrast their wages might be far lower.

So they also want to play the Iv-B game again like players lured by the potential for big payouts in poker even after they have lost all their money or the game was exposed as a fraud. For many of these B workers then they might get caught doing a liar loan because the I-O police are likely to be monitoring them now, this then is like in the Roy animal kingdom where the R mutant prey tend to get more easily eaten by the O animals even as they drive away and eat the Oy predators.

This then is when the I animals wax in strength by preying on both R and Oy, in the same way the I-O police in the GFC have become stronger by prosecuting RB workers for liar loans as well as Iv-Oy agents for fraud. The police then are in effect paying their own way by catching criminals, when they are weak criminality grows chaotically and so this causes the Ro communities to demand they grow again. They then get stronger until they catch enough criminals so the surviving ones become harder to find or start behaving themselves and so then the police having worked themselves out of a job to some degree weaken again.

This is like for example I-O people such as in local government or private businesses whose job it is to catch chaotically growing animals, for example they might go after R rats as well as Oy feral cats. When these cause enough problems then more catchers are hired, when they have caught enough then some might be fired leading to another explosive growth in their numbers. Their numbers will tend to grow and collapse chaotically to some degree because of the way the Oy-R animals breed, also these animals might have developed new deceptive tricks such as places to hide.

This is like Oy criminals coming up with new ways to commit crimes, for example the R rats might have spread into some houses left unoccupied by foreclosures in the GFC and people might have abandoned their Oy cats which are now breeding in parks living on the rats. Once the catchers realize this they might have to patrol these abandoned homes or have them sealed or traps set, then the numbers might decline until they find a new secret place or way to breed.

Ideally to prevent these chaotic changes in Oy-R animal numbers these O catchers might have a more permanent employment and spend much of their time trying to anticipate where the new explosion in numbers will come from. This would be the most efficient system and is the one local governments usually employ, in the same way the I-O police need to proactively look for the new places where Iv-B financial crimes will develop secretly and not just have to put on extra staff when the contagion gets out of control again.

This is not so easy though, for example there might be a long period of few R rats and Oy cats breeding in a kind of Great Moderation. With few results the O catchers might get protests from the V and Bi parts of the community to have many of them laid off to save money, also it may seem that the Oy-R ecosystem has permanently adapted to not breeding quickly and deceptively. Then enough catchers might get laid off so the new areas of contagion are not noticed until the wave of feral animals explodes again.

In the same way as with the real estate bubble in the GFC these cats and rats would collapse in numbers as the O catchers learn their secrets. Also though the rats might either run out of food and starve or the cats eat enough of the rats and begin to starve, the deflation of a bubble then can be a combination of these three factors. For example the B workers who could repay a loan had been decimated by either already having gotten a loan from an Iv agent or from losing their job in the collapsing economy. This is like the rats declining as they are eaten by the cats or cannot find food.

This might then expose the contagion in itself, for example people might start finding starving or dead cats and rats and complain to the catchers, these animals might not be able to afford to hide any longer and start looking for food even if they risk getting caught. This is like in the GFC where Iv agents became so desperate they made more fraudulent loans as well as ones that defaulted even on the first payment, this caused more V companies to complain to the I-O regulators. Also as these B workers defaulted like the starving rats this also led to complaints from Bi communities to the I-O police.

As the I-O police receive these complaints they in effect determine the problem by the same process they should have been following all along, with random audits. For example V-Bi complaints are random because the people complaining usually have little connection to each other and so this leads the I-O police to investigate random parts of the chaotic Iv-B system in collapse. This is also like random people complaining about dead and starving cats and rats which gives the catchers a random audit of where the contagion exists.

This knowledge allows the I-O police to target this contagion very accurately and this also leads to panic in Iv-B as people start to realize they might be in legal trouble, they might then try to get out of the business which causes the collapse to accelerate.

This is like the cats and rats becoming more exposed and panicking to get away whereas before their hiding places were safe. This panic allows the O catchers to get even more of the cats and rats than if they stayed calm and hid, in the same way this panic in the subprime meltdown caused many to quickly curtail their fraud causing prices to drop faster.

For example subprime lenders as they started to become insolvent might have tried to stay in business and if enough traders had done this then the meltdown might have been contained, instead however many would have been aware of the frauds committed that were now likely to come out and would have decided to go out of business. Trading while insolvent is usually a bigger crime and many had off balance sheet debts that could not be hidden for much longer, also with the media publicizing frauds being investigated by the I-O police and the public outrage these companies could not easily claim ignorance if they continued.

The Iv-B branches then become more like Iv-B cracks where the system starts to break apart as these Iv-B people desert the system, where before these roots and branches gave exponentially increasing connectivity now they are causing the economy to break apart to smaller pieces with finer and finer cracks.

Deflation in Iv-B is a deflationary spiral like a collapsing and withering of roots and branches, money owed to the V-Bi parts of the economy is not paid back which makes liquidity suddenly rare. Also when the Iv-B economy is growing the network of roots and branches is an efficient way to provide financial leverage, this is like in a tree where the branches act as levers to hold up the weight of the tree as well as the heavy V canopy.

In the same way Iv-B leverage allows debt which previously was stagnant in V-Bi pools to amplify energy and momentum enormously. This is how levers work in physics, a small amount of movement on one end can translate to a much larger movement on the other. Borrowing money from V-Bi allows a smaller amount of Iv-B money to develop more momentum or velocity, in the same way a transistor borrows electricity and uses it to amplify a weak signal. When a lever cracks this is like the roots and branches breaking, they can no longer amplify the use of a small amount of money with leverage and so this results in a deflation of the bubble.

For example the real estate market of a city would be inflated because money would into it like air into a balloon. When people sell their homes then this money gets into the city but if the situation is Iv-B and opaque then those that sold might not send their money out of the bubble city but reinvest it back into real estate again. This has to pump up prices again because people would need to get more money to resell.

There is a competition between Iv-B members to make money so this keeps them reinvesting while the bubble is growing, eventually though there is not enough money outside the bubble wanting to get in and so this is a reduction of pressure. The bubble can also burst with too much pressure of money going in, some people might become aware that this pressure is unsustainable and start secretly selling out so this money is in effect escaping through cracks in the bubble.

The Iv-B investors however don’t know this and keep investing but over time they realize the prices are no longer going up because of this escaping money and so then their pressure to get into the market declines. There is also a pressure to get out of the bubble as well, people often have legitimate reasons to sell such as needing to move to another city and have been putting this off because of the pressure to make profits while they can.

Once this pressure is gone people then feel the pressure to get out because the market starts to look worse, those that do sell tend to do so through the Iv-B cracks in the bubble rather than through an orderly I-O market deflation. These cracks are then like fire sales and the bubble collapses and breaks up into a chaotic pricing where people get what they can with little coordination to other sales.

When the roots and branches of the economy are growing and not breaking then this is highly efficient for money, it travels along conduits from buyer to seller and little money leaks to others near them. This might be seen as like cars carrying money along a freeway between transactions and rarely stopping along the way to spend money for food and fuel. This going off the freeway and spending money would be V-Bi and a random diffusing of money through the economy which would reduce the pressure of money being spent at both ends of the freeway, instead it tends to stay tightly in the roots and branches which is why they operate with much less money than the pools of liquidity V-Bi uses.

This is seen in the books of many large banks, they can turn over enormous amounts of money, pay low wages to B workers and often Iv agents make thin profit margins with cut throat Iv-B competition. This then is high turnover as high energy and low time money rarely stays in any one place for long, the main payoff is usually to V where large pools of money might accrue to CEOs and some shareholders with compensation and stock options.

The Bi community can also benefit from an Iv-B boom in the early stages as money they save in the bank is loaned out in Iv-B speculations but this money is paid back with interest. In effect the bubble is trying to do something impossible because of the opaque situation as well as the secretive and deceptive conduct of the competitors. There is not enough money to go around in making prices go up in the bubble as well as pay interest to V-Bi people loaning money to it as well as getting wages and commissions out of it.

As the Iv-B economy grows these roots and branches move money efficiently from the storehouses of liquidity in V and Bi, prior to the GFC there were V-Bi investors such as wealthy families and Bi pension funds who fed this money into the Iv-B subprime bond system. They did not realize however that this Iv-B system was so fragile and highly leveraged that their V-Bi profits were largely illusory and that when these roots and branches started collapsing there would be an extreme shortage of money as it leaked out of these conduits.

In effect the Iv-B system was acting like a Ponzi scheme where no one knew it was doing this, each person was competing for profits in it while being secretive and deceptive. This would be like Bernie Madoff’s Ponzi Scheme in its effect with money going into it because of the higher returns, the difference would be the scheme would be run by many people in separate departments that shuffled money back and forth but did not get together and work out that there was nothing in it that actually made profits.

For example there might have been an investment and trading section but each thought the other was actually doing the profit making investments, there might also have been several different bookkeeping areas with none of them overseeing all the finances of the Ponzi scheme. Consequently none of them could see that the funds available were just fluctuating according to the money coming in and payments going out with no actual profits being made.

This would be how a Ponzi scheme would be constructed in real life, however a company could also be put together like this and grow like a Ponzi scheme without even the owner realizing what was happening. For example the investing section of the business might be presumed to be running but they might have decided to stop trading for some reason but had not one to tell. This is what happens in an Iv-B bubble, like the city mentioned earlier the real estate bubble was supported by the pressure of the money coming in but the people buying and selling did not compare notes to look for the actual profit making areas of the real estate market.

In the same way the GFC happened in part because everyone assumed that the system was still making money perhaps because of the GDP rising, this would be like in the Ponzi scheme where the bookkeeping departments assumed the company was profitable because the amount of money going in and out was increasing. For example there might be another part of the company giving profit and loss information and so the bookkeeping department might assume that section is causing the money to keep coming in. However that area might also have been abandoned in the belief that other sections were taking care of informing the public.

This might also occur with internal I-O policing of risk, the various sections might assume that someone is watching for fraud but no one might be actually doing it. External I-O police might assume that the company is policing itself well enough so they don’t bother to check. This then can also cause I-O police to weaken, the Iv-B parts of the economy assure the regulators that self-policing is working well because they are making profits and there are no obvious cracks in the system.

## However because they are so competitive they never actually get together enough to piece together the actual situation, that there are not enough real sources of profits compared to those being reported.

The Iv-B bubble economy can be imagined as a tree which seems very large in size but actually contains very little wood in weight, this is because it is mostly empty space between the roots and branches. In the same way the Iv-B economy was mostly empty space between these conduits of money but because they were so fine and ubiquitous it seemed to be similar to the pools of real liquidity that previously existed.

This would be like for example with the freeway analogy earlier where people driving along it assume the suburbs they are passing are doing well because the cities interconnected with roads are prospering, however these suburbs might be stagnant because the consumers don’t get off the freeway. In extreme cases there might not even be exit ramps from these roots and branches into the V-Bi economy so the money cannot easily flow into their, V-Bi investors then keep loaning their money into Iv-B because their own areas are stagnant however they are stagnant because all the money is going into Iv-B. The cities connected by the freeways are seen as prosperous when they are just growing from these investment funds going in and will crash when this money is exhausted.

This actually occurred with the US real estate bubble in the major cities while the rural areas experienced hardly any bubble. It is also how cities tend to keep growing and is happening as of 2011 in China, people who grow up in V-Bi areas see the local economy as stagnant and decide to move to the city which is mysterious and deceptive. When they get there they end up with either B worker jobs for low wages or as Iv agents for V capitalists.

Each thinks there will be opportunities for them eventually because so many people are coming and the funds from the rural areas keep getting invested there. The city people then write home encouraging this deceptive viewpoint because they don’t know any better themselves, eventually though the influx of people and money slows and this causes the Iv-B bubble to collapse and an exodus out of the city.

When a tree collapses then it might make a relatively small pile of lumber compared to the previous size of the tree, this shows how much wood there really was in the tree. The deflation of the asset or localized inflation then shows in effect how much liquidity there really was in the economies compared to their actual size. As it turned out the amount of liquidity was far too low once the leveraged system had broken and so the Fed and other central banks had to pour in vast amounts of money to unfreeze the system and continue to do this because of leakages and more collapses in the branches.

Banks can in effect increase the money supply of an economy because they take in deposits and lend perhaps 90% of them out. They then keep enough money on hand to cover random withdrawals of their customers or sometimes a chaotic withdrawal, for example a lot of people suddenly losing their job or bargains appearing from Iv agents in the I-O market.

However this money supply as well as the supply of other goods and services also increases like this whenever there is a time energy relationship, for example any company acts like a bank in this way.

A company might start with a million dollars in capital and uses nine hundred thousand on equipment and stock which might be V-Bi in the sense that they would take a long time to sell. They are then the same economically as the bank loans. They might keep on hand a hundred thousand like the float in a till to cover wages, accounts to be paid, and so on.

Many of these can be highly chaotic, for example some equipment might break down and it has to be fixed. This is the same in effect as a customer withdrawing money. The company might be traded publicly at a premium to its assets and earnings, this represents goodwill or potential for future growth and is also a kind of creation of money from thin air.

In effect then money tends to be created like this as an expanded money supply when it becomes steam or vapor money, it has sufficient energy to move around so quickly that it can be in the right place to pay bills or make purchases as if it had been there waiting. For example a company might have ten sales staff that can use email, phone, and driving so quickly that they can mimic the actions of a hundred staff working much more slowly.

This is in effect an expansion of the labor pool where employment itself becomes highly leveraged, when a company like this collapses then these staff deflate like a currency and so more people are needed to do the same job as the economy slows. While this would usually increase their wages in a downturn it often makes the business not economical to run because they cannot afford to provide extra staff, equipment, etc that was done previously by the higher energy of the company.

To survive then a company often has to work its employees much harder, to do things with higher energy and less time which can be a kind of productivity increase. However it is often not a sustainable increase because the Iv-B companies might be competing so much with each other that it wears the B workers out with health problems and can make companies go bankrupt with small external shocks.

The same leverage can also occur with equipment, for example taxis are a well-known example of a high energy low time chaotic business because they replace the need for everyone to have their own car. By moving fast enough they act as if the taxis were in effect waiting there for each customer and cost less than having to run a car. Subways do the same thing, they move quickly and so people can travel on them faster than having their own car even though there is sometimes a wait for the next train.

An economy then leverages itself and expands by doing things faster and with higher energy, in finance securities might be pledged as collateral for short term loans perhaps in an overnight market, they can replace the need for a long term overdraft with too much money for the customer’s needs. In that way they are like using a taxi instead of having to permanently rent or lease a car.

This leveraged system then can work well until there is an external shock breaking the momentum, for example there might be an earthquake which slows down taxis and so people start missing appointments which like falling dominoes affects other appointments, and so on. In the GFC the financial system relied on money moving in effect at light speed to finance projects and when this lost its momentum with external shocks, such as subprime defaults, it was the equivalent of a taxi service seizing up leading to people missing appointments to pay accounts all over.

This then led to so many defaults in the financial system that many companies went bankrupt, this is like for example people missing job interviews and staying unemployed, missing a doctor’s appointment and getting sick, missing a plane fight and losing the cost of the ticket, and so on.

As an Iv-B economy grows it usually also increase leverage in equipment and employment, this is because as the economy heats up with higher energy and a shorter time to do everything owning equipment and buying from savings takes too long as a competitive disadvantage. People then tend to use up their savings and borrow more to buy homes, furniture, cars, etc which increases consumer and corporate debt.

This also happens with real estate, people go to a gym instead of owning gym equipment, go to a swimming pool instead of owning one, share the use of convention facilities and halls for many kinds of businesses, use more motels where each person in effect lives like they bought a home, use restaurants and coffee shops instead of eating at home, and so on.

When the Iv-B economy collapses after hitting a ceiling the leveraged equipment and real estate also tends to deflate as less is needed to fill the same task as before because of less demand. Businesses like this usually have a fixed debt as V-Bi frozen money to pay off, this means an external shock need only reduce their profits by a relatively small amount of make them insolvent.

For example a gym might survive chaotically in competition with other gyms because of a boom in customers such as Iv subprime loan salesmen, when the boom collapsed then the energy and momentum was lost in this leveraged system. Gyms then might be like taxis with no customers or restaurants without Iv travelling salesmen, they tend to collapse leaving a toxic humus to be absorbed by the economy. For example gyms are not really suited to be other kinds of offices, there is then a lot of waste in remodeling them to be something else.

This Iv-B infrastructure of equipment, jobs, and real estate then is itself a bubble where like hot gas inflating a balloon the energy and velocity of the system props up these businesses to be worth more than they should be. For example there might be too many gyms for the usual budget of a population but the Iv-B lifestyle makes the expense seem worthwhile. When this boom collapses a gym membership then seem to expensive and so prices need to fall back to the real demand in the I-O market.

In the same way wages can also fall, many people prior to the GFC were making more money than they should have because their wages were in a bubble. For example an Iv subprime loan salesman might have made a hundred thousand dollars a month because it appear that he was worth it. When the boom collapsed the wages for loan officers went back to a realistic price in the I-O market, perhaps comparable to those working in banks before the boom.

Before the GFC the subprime mortgage business was relatively efficient in loaning money out and making bonds to be resold compared to the actual costs of office space and equipment, phone, cars, etc. These were usually highly leveraged as they might have been bought on credit and regularly replaced as they depreciated. The system then can be very good at establishing momentum but is often bad at ensuring that this momentum is going towards somewhere useful.

There was little inefficiency in finding money to borrow and people to lend to, buildings and computer networks worked efficiently to create the bonds and communications around the world even though the goods and services involved turned out to be highly deceptive. It was in effect like a car company with a highly efficient assembly line making cars that fell apart after being sold, without internal I-O policing errors can creep into this assembly process that are not noticed because there is no incentive to report one’s own mistakes.

Instead of this earlier efficiency, once the momentum of the system has been broken the Biv system is highly fragmented and inefficient because money tends to leak out of the roots and branches into other expenses, for example now much more advertising would be needed to find suitable borrowers to loan money to. Also it is hard to find money to borrow, it also requires much more effort in finding people to buy the bonds at all.

So this Iv-B system now has more money leaking out to more costs of advertising, phones, shoe leather in canvassing, more staff consuming food and wages, etc. There is little intense competition, rather companies working in small areas might hardly encounter competition in the wreckage of the former businesses because Iv-B people are timid when there are dangers. Sometimes this can be good for the economy overall, while these extra costs of doing business create more friction to the company’s momentum they can also diffuse more money into the V-Bi economy and help it to recover. However this friction often just slows the momentum of the Iv-B economy wastefully like wheels without enough grease in their bearings.

Because of this stagnation and the friction caused by the Iv-B wreckage of roots and branches this causes the I-O market to not work well either, it is like trying to run a swap meet amid the wreckage after a tornado.

People are trying to sell bits of broken products and there might no longer be the infrastructure to get the full value of the newer goods being sold. This then can lead to persistent deflation as Iv-B competes with each other ever downwards to capture the little remaining liquidity like a spiral of fire sales.

There might be no way to build up competitive interest in goods and services or a bidding war to make a new bubble, money tends to stay in the still operating conduits servicing some wealthy areas except for some leakage around them and many former areas of the financial market are just dead wood. For example the subprime market in effect ceased to exist after the GFC and has assets like dead wood or humus that have not really been absorbed into new plants yet. Whenever new companies like plants start to build in the real estate market they can quickly collapse because of this lack of connectivity, in many ways it resembles Europe at the end of WW2 with much of the infrastructure smashed and any recovering areas quickly overwhelmed with poor people.

For example it is hard for wages to rise and give purchasing power when people will undercut each other to a subsistence wage in many areas. Also companies trying to make enough profits to recover and hire more workers get undercut by others who will make almost any tiny profit just to survive. So these depressed areas are like the Great Depression in some ways but they are also like typical problems in a ghetto or third world economies, there is really little money there and so people and businesses cannot make much without taking it forcefully from others like a Roy society.

This might happen in a ghetto for example where drug sales and robberies can make some relatively wealthy. When people have little money though it is difficult to offer them something to make them part with it as they might also be hiding and hoarding their money to avoid being a victim of crime, also Iv and B people have a fear of losing money because the opacity of the situation persists and now this inspires panic instead of blind confidence.

Europe escaped the problem of reviving an economy in the midst of a wrecked infrastructure after World War Two with the Marshall plan, after World War One however there was no such investment and so these economies had not fully recovered by the time the Great Depression knocked them back down into Roy again.

## In the same way the wreckage of the subprime crash has been left to try and liquidate itself while the V areas of the economy got bailed out.

One advantage that Biv economies have after the GFC was that people generally have the training and habits necessary for a Biv society and so usually refrain from increased Roy crime. This then makes the system more stable and free from the inefficiencies of Roy crime destroying Gb private property.

The main problem however can be with V-Iv people who can become more Y-Oy and predatory, this is like predators in the Roy animal kingdom who can find even more to eat as the bottom of the food chain collapses. For example any company recoveries in depressed areas might be shorted into bankruptcy for profit, this shorting creates an artificial glut of the shares which makes it harder for these companies to raise money. Also Bi-B people might find that choice investments are bought very cheaply by V-Iv investors when the economy is depressed, this is like Y-Oy predators attacking stray Ro-R prey as their numbers start to recover and often sending them plummeting again.

This also happened after the Great Depression where false starts in the economy were overwhelmed like these prey. This might also involve some more active deception, for example companies might be shorted and insured with Credit Default Swaps, then be manipulated to make them default to collect on the swaps.

For example a company might receive a large order and then speculators work to have this cancelled leaving the company with large debts from overinvestment and making a profit from the short and swaps. They might also send the company into a death spiral by forcing it to finance with convertible bonds. For example they might have to borrow from allies of the short sellers and have a provision where the debt can be converted into shares instead, these shares are then shorted to drop the share price even further and then more debt is converted into shares at this lower price and so on to either bankruptcy or taking over the company to sell of its assets.

Other false starts in the economy can be from where Biv business is marginally profitable and starts to raise wages in an area, this is like the Ro-R prey starting to recover in numbers. Then there is a panic with some bad economic news, investors might stop buying and rush to a safe harbor like US treasuries.

At the same time consumers put off purchases in a panic which sends these companies bankrupt, this is Iv-B in reverse where as soon as it hits a low ceiling it goes into reverse again and crashes. Ideally in this situation an economy should be growing many small businesses like seedlings that can grow into large businesses as the economy recovers. Instead with weak I-O policing these businesses grow like weeds when they find fleeting resources and because they are so weak they tend to collapse at the first signs of trouble.

This is also like Ro-R predators trying to find scarce Ro-R prey who are used to being skittish because of previous experiences, this can cause many Ro-R prey to make mistakes and be caught by predators making their numbers plummet again. For example when these R prey are rare there are predators everywhere looking for them and so any rebound in their numbers would tend to be eaten back to near extinction. The R prey then might tend to run whenever they see danger and so these predators starve even more quickly.

## This is like V-Iv investors losing money as businesses collapse because of skittish Bi-B consumers reacting to bad economic news and hoarding their money again.

There is also a general reduction in animal spirits where Y-Oy predators become discouraged and are unwilling to waste energy in hunting prey because they might lose their reserves if they don’t find some. They might instead look for small prey and put off breeding, this is like V-Iv investors becoming so discouraged they put off new investing even though the Bi-B consumers have recovered more than they realize. This can be a good thing in the long term as Bi-B might have to save more because of a lack of goods and services to buy and is like Ro-R animals recovering faster by avoiding dispirited Y-Oy predators.

For the economy to recover then it is necessary for Bi-B workers to connect to real Gb resources and not just loans in a sustainable way, to save which is the equivalent of Ro prey getting fatter and healthier and avoiding Oy and Iv predatory business which could defraud them out of these savings needed for recovery. This is why I-O policing is critical at this time as con men might damage the recovery with new manias and scams that use up these vital savings.

For example like the B workers who bought homes with liar loans in desperation because of lower wages, they might be tempted to invest in more speculative ideas because they may just go bankrupt and lose nothing if they fail. This is like R prey overbreeding even with dangerous Oy predators around because they lose nothing if they are eaten. A stronger O middle of the food chain tends to protect these R animals by O warning them of the Oy predators and often chasing the predators away.

The situation is then highly chaotic where an Iv con man might deceive Bi-B workers and cause them to lose their homes or savings and then be unable to keep their car fixed to get to work, be able to move to a new job area, etc. Because the system is so fragile like an ecosystem during a drought chaotic collapses can become amplified into worse disasters.

Just like roots and branches are needed to rebuild the forest, chaos as a fractal also grows in a similar shape like cracks. For example people might have seen a crack on a windshield get larger or even grow to be a spider crack with branch shapes, the same might occur with metal fatigue in a plane wing or a building damaged by an earthquake. In the same way these cracks grow, split into other cracks, widen, and join up with other cracks looking like these root and branch shapes.

These are also Iv-B and represent chaos spreading secretly and deceptively through the system and behave much like the inverse of Iv-B trees. For example when the subprime crisis start to accelerate there were B roots of housing defaults which earlier were conduits for money but they then became cracks at the bottom of the system much like a vacuum where liquidity flowed before. These cracks are resisted in the Bi communities because of teamwork and transparency, people saw these B defaults on mortgages developing and sounded the alarm to the I-O regulators.

They also tried to quell this chaos with randomness, for example neighbors might come together and donate money to others for loan repayments, help the B workers to find jobs, demand bailouts for themselves just as V wanted for the banks, and so on. However in an Iv-B economy these V-Bi areas are highly disconnected and this chaos tends to bypass them and go directly to Iv. For example as B workers defaulted on their mortgages this was quickly felt by Iv subprime salesmen as bonds started falling apart before they could even be sold.

The Bi communities were also protesting but because fewer of them had been deceived by these Iv-B loans then they did not examine the problem much until it started to affect their communities as well. Because Iv and B people were each deceiving each other they had few incentives to become honest about these loans, Bi communities and increasingly V banks were in the dark as to the extent of these cracks appearing in the economy.

In these Bi communities then cracks come together to join to the I trunk or market and this can collapse the whole economy if there is not enough randomness to prevent it. For example if B workers default in sufficient numbers it tends to turn the Bi communities chaotic, this is like as mentioned earlier where Oy predators attacking a Ro herd of buffalo can eventually break its random movement so it panics chaotically.

In the same way these subprime loans by Iv-Oy agents can cause so much chaos that this breaks up the Bi-Ro communities in panic. If this happens then the I-O market becomes fully chaotic because the Iv-Oy agents are competing deceptively and the Bi-Ro communities start doing the same thing to try and save themselves.

For example the Bi pension funds were a calming force in the GFC because they were able to provide liquidity by picking up bargains for long term investment, this also helped to offset some of their losses from subprime bonds collapsing. However if they find so many B workers in their community panicking because of their defaults then the Bi funds might panic as well, this would make them stay away from the market no matter what bargains there were and cause it to go into free fall.

In effect then this Bi community as well as V banks are intended to use their randomizing liquidity like an insurance fund like a lender of last resort in exchange for steep discounts. If they panic and stay out of the market then the government has to step in and do the same because the economy has become Roy where scarce resources mean everyone is losing in a Negative Sum Game.

This then can be the difference between a painful recession and near depression as in the GFC, when V-Bi communities were so panicked by the collapsing economy that they hoarded their money chaotically instead of grabbing bargains. In effect then the US Fed replaced this function with TARP and other programs.

In Iv-B these cracks mainly bypass the Bi community and so the I-O market might still be functioning quite well while the Iv-B boom goes into meltdown. The toxic assets from Iv-B then might lose their normal price and rise or plunge chaotically but other assets such as industrial shares and commodities would tend to resist this as their prices were never disconnected from the I-O market because policing stayed stronger in them.

While these markets nearly collapsed as well the Fed was able to lend directly to these V-Bi companies and keep them liquid so they were relatively insulated from the knock on effects of the crash though they became stagnant with little growth as a result.

V-Bi businesses also tend to bypass the I-O market, for example with V businesses negotiated with Bi unions and cracks take longer to occur between them. For example GM negotiated wages collectively with its Bi workers in a war of attrition which resulted in a stable but stagnant business. The cracks appeared in this arrangement because of chaotic Iv-B demand that rose quickly and caused GM to invest too much and then it collapsed. For example SUVs were popular and highly profitable but the demand quickly collapsed because of the oil bubble and the GFC, both were in many ways caused by Iv-B speculation.

V-Bi businesses however have much more influence with their corresponding team members in the government, V with the Republicans and Bi with the Democrats, and so an insurance like bailout managed to overcome these cracks so the business survived.

The I-O market often has few signs of an impending Iv-B collapse because most Iv-B bypass its policed environment to do secretive and deceptive deals instead. When regulators only watch this I-O market then they are like police patrolling certain areas of town and assuming that because there is little crime there they don’t need to patrol other suburbs. For example derivatives were unregulated but looking at the stock market it appeared as though it contained useful information about derivatives. In fact the I-O market itself doesn’t price Iv-B trades because it sees so few of them just as it doesn’t tend to price V-Bi deals like union negotiations or bulk buys of goods from businesses.

These aspects can have some relation to share market prices for example derivative profits in AIG helped to boost its share price and V-Bi insurance payouts from natural disasters also affected its profitability. Such a business though is more dangerous with strong internal I-O policing because it contained a separate Iv-B speculative division for derivatives as well as a V-Bi insurance divisions. These two businesses are in effect opposites and while a well-run company might be able to combine chaos and randomness instead they tore the company apart.

For example AIG got into the derivatives business mainly because it had a lot of liquidity from its insurance business, this allowed it to try computerized investment algorithms that other Iv agents could not afford. So this is like a V business hiring Iv agents for secretive and deceptive trading, as often happens without policing these agents often made profits for themselves while writing business that bankrupted the company. AIG also came to depend on these profits instead of maintaining liquidity to cover insurance policies, credit default swaps were a kind of chaotic insurance. The result was the Iv-B deception weakened the business so it cracked along the roots and branches that previously brought profits, then these cracks ate into its reserves for insurance affecting its ability to do that business as well.

The cracks in an Iv-B economy then usually start in B because of a lack of resources coming in at the bottom of the economy, they join up in Iv with a sudden loss of income among agents who start leaving businesses built on bubbles. This then leads to a loss of money flowing into the V and Bi communities though the randomness of their savings and cooperation with each other helps to heal some of these cracks.

The cracks in the salesmen staff can then spread into cutbacks in Iv management, they might then be running right through the subprime companies from the B workers with liar loans to the deceptive Iv agents selling them. These cracks can then go into the V parts of the subprime bond manufacturing process where the tranches were put together. The idea behind these tranches is that the chaos is reduced by the cooperative nature of these loans being in one bond. Like an insurance company where the premiums from many customers cover the disasters befalling some of them, when some bonds default then the profits still come from those who continue to pay.

However the subprime bond system suffered from the same problems that AIG had, without strong I-O policing the Iv-B and V-Bi elements of the bonds diverged. For example many of the underlying loans were fraudulent but gave a false impression of security, this was like AIG’s derivative trading which was often deceptively sold to the parent company by its Iv agents. As these loans defaulted the subprime lenders usually had to replace them with other loans, however these also started defaulting more often as well.

This was like in AIG where they had to pay out on the mounting losses on credit default swaps it had underwritten which ate away its liquidity to the point where it became insolvent. The subprime lenders creating these bonds then either had to support them draining away their profits or disavowed the losses which destroyed the chance of future business.

Having to replace loans in these bonds made them equivalent in some ways to a credit default swap because the risk of insuring the bonds for default was covered by the subprime lender much as someone insuring swaps would do. Just as the cracks in AIGs business were formerly conduits of profit these subprime bonds developed cracks as loans defaulted until some became completely toxic and nonperforming particularly in the lower tranches.

The subprime tranches were organized so the defaults went against the income of lower bonds first though they started with a higher interest paid. In the same way AIG issued credit default swaps and earned interest on them like a bank buying subprime bonds, the riskier the chance of default the higher the premium they charged on the swaps. This income stream from the swaps declined as more of the underlying derivatives they were issued on defaulted, in the same way the banks that bought subprime bonds had their income stream decline as the underlying mortgages defaulted.

AIG however was in an even worse position than the banks, they got to the point where they were paying out more on these defaults than they were making from the swap premiums while a bank could not get to the point of actually paying out interest on the bonds it owned though their value did go down. The cracks then reached higher and higher until the defaulting mortgages tore apart the highest subprime bonds, in the same way the cracks of a swaps default became more common until the outflow of money from them caused AIG to need a bailout.

## In effect then AIG’s share price was itself a bubble as it appeared to be worth far more than it really was, the pressure of money coming in as companies bought swaps was reversed as the money poured out through this cracks until the company collapsed like the real estate bubble.

The cracks also appeared in the derivatives sales department of AIG as with so many other investment banks, hedge funds, and subprime lenders. For example just as Iv salesmen started to be fired or left from lack of sales or older deals falling apart with defaults the bond making process became harder to complete, loans started defaulting in the bonds before they were even sold causing them to have to be replaced with different loans. This caused the commissions of the Iv agents to plummet as they either had to repay the money they had earned or they lose repeat business from the V banks.

In the same way Iv agents trading derivatives and stocks by selling them to clients also developed cracks in their business as clients complained of losses and started suing their V bosses. So these cracks forming in the bonds would reach into more and more of them and then complaints from V and Bi investors, who were starting to absorb more losses from the lower tranches, made them harder to sell. Then the Iv companies had to keep more unsalable bonds as part of their own tree like structure and so as these bonds split into more cracks with defaults inside them the loss of value caused companies like Countrywide to get into trouble.

The cracks also spread more amongst the B workers because as people saw the prices were no longer going up they didn’t want loans any more even if they could afford them, this prevented new loans coming in that could replenish the defaulting bonds with performing loans. Also as the B workers saw the real estate market developing fissures in it fewer were inclined to keep paying their mortgages which were only a speculation anyway, some walking away from homes before they made a single payment.

Iv companies developed more cracks from being unable to raise money from loans or by selling their bonds easily, this lack of liquid money meant that frozen money as debt through their structure was more prone to cracking itself like brittle ice. For example when a company has debts it cannot pay it might be broken up or have to sell assets it would rather keep, this strain of paying its bills causes in effect stress fractures where they might have to sell some divisions of the company to survive.

When a company got into trouble in the GFC then it usually had to sell off whatever assets it could even if it left the business even more inefficient or no longer viable, for example Bear Sterns and Lehman had to sell whatever they could to try and slim down to being viable but they both failed. They were then in effect cracked to the point of shattering, these cracks were previously roots and branches bringing in money, now they caused the parts of these businesses to be sold off.

The assumption underlying subprime bonds was that the AAA tranche would remain free of these cracks but the defaults spread into them as well, this happened because the chaos was not conforming to a randomized V-Bi normal curve but from cracks joining up more and more as independent borrowers starting acting more like each other and defaulting. Insurance as a business works by trying to balance randomness and chaos, a chaotic event such as an earthquake creates cracks which damage buildings.

The insurance company tries to accumulate reserves to randomly cover these occasional chaotic events to make a profit. In the same way AIG bought swaps to insure against defaults on various bonds, however insuring defaults in an Iv-B economy is like insuring against property damage in an area prone to riots. While the I-O police are strong the chance of damage from the public is slight and the insurance system might protect shops from someone breaking a window, shop lifting, and so on.

However when the I-O police weaken or an external shock such as the Rodney king beating in Los Angeles triggers a Ro riot then this gives cover for R thieves to chaotically rob stores. When the police are chronically weak in an area insurance companies usually charge much more to guard against this human chaos, however AIG did not charge premiums that took into account the weak I-O policing.

Because of this Iv agents and B workers engaged in widespread fraud against each other, AIG was in effect trying to insure this without any way out if the losses were caused by crime. This is like an insurance company treating payouts from natural disasters such as earthquakes and hurricanes as being the same as from crime, however the I-O police have little effect of natural disasters except perhaps to minimize the property loss from looting afterwards.

The situation is like internal cracks in a building, some external cracks were monitored as I-O risk assessment in some companies like Merrill Lynch but the deeper internal cracks of looming defaults were like internal cracks in a plane wing buried too deeply for their internal risk management staff to be able to inspect as I-O even if they had the desire and manpower to do so. Like Iv salespeople selling goods with cracks in them and B buyers not disclosing the looming cracks in their finances neither side had much incentive to disclose these cracks to each other in a game of bluff, deception, and secrecy and so I-O regulators were left in the dark until the cracks became so visible that the system began to break into pieces.

As was mentioned earlier the roots and branches are often formed in this shape by hollowing out reserves in V-Bi, this is like in effect forming roots and branches not by growing normally like a tree in a healthy economy but like a contagion like termites burrowing into healthy wood. Just as the roots and branches form a fractal shape then this hollowing out forms a similar fractal shape in silhouette and is most prone to cracks at weak points where some parts are too hollow.

So this process with a weak I-O police leaves few areas like a strong trunk with no hollowing at all which can give strength to the whole tree, this was seen with the GFC when the financial system collapsed so completely as Iv-B there were few areas that could be considered a remaining I-O market.

As these cracks grow chaotically the problem arises as to how to slow them down, stop them from spreading and joining, and to heal them. Usually in a tree this is done with V-Bi randomness which can absorb the chaos like insurance companies do and target payments to their policy holders to stop the chaos and prevent more payouts later. For example if houses lose their roofs in a hurricane then fixing these with tarpaulins can protect much of the rest of the house from damage. If this is not done then the insurance company might have to pay much more in damages.

Cracks then can be helped with random payments like welfare in Bi communities, for example unemployment insurance may help some people to not default on their homes while looking for work and some banks might be generous with refinancing loans or allowing some late payments in these situations. In Iv salesmen might get over a rough patch by letting them go into debt for a while with few sales rather than firing them.

However no one knew how far the cracks had spread and how hollowed out and vulnerable to cracking the rest of the economy was, like the health inspectors that look at secretive areas in a restaurant for contagion such as rats or rotting food the system can only be kept healthy by random deep inspections that go in a line right from V to B. Eventually in this way vulnerabilities cannot evade being found and laws could have been tightened to prevent fraud and dangerous business practices much like dangerous driving in a car with structural cracks would lead to crashes on a freeway.

As part of this cracking process then people usually connected with these roots and branches become separated, goods might become scarce as stores go out of business because of people with people losing their jobs and not paying their bills. Second hand goods might dive in value as people have garage sales and sell their possessions at auction or in classified advertising to raise cash.

This leads to a kind of cracking going through relatively healthy markets like many of the shops in malls, new and used cars, etc which were well I-O policed. In effect then the strains from the collapsing corrupt trees fall on smaller tree businesses and crush them with unpaid debts even if they did not depend much on the Iv-B boom for business, these businesses might find that they did depend directly or indirectly on wages and sales in the Iv-B boom and they find they no longer have a viable business.

## For example in an office building area coffee and sandwich shops might find people suddenly don’t buy enough to support them anymore because of mass layoff and no one would travel to those areas from residential suburbs, they then go out of business and their unpaid bills like more cracks extend into previously safe areas of the economy.

So these cracks can grow along unpaid bills where before money flowed along these as roots and branches, also by having overinvested with the expectation of future business that fails to materialize. For example in an Iv-B boom there is so much deception and opacity that businesses have to decide whether to grow along with it or risk losing market share, a company might decide to be conservative and leave a gap in the market that allows a fast growing competitor to undercut them and either buy them out or bankrupt them.

These are like reverse multipliers in economics except instead of just being a mathematical calculation these can actually be mapped out as roots and branches of business throughout an economy. Along these same roots and branches cracks would appear showing not only the multiplier effect but also the connections and where the cracks are likely to go next.

For example the number of branches in a tree grow exponentially as you go higher up, in effect then this is like a multiplier where businesses become more diverse and numerous. When the system breaks at a lower branch then those businesses above that would tend to go bankrupt, for example if GM had gone out of business then smaller companies that depended on it like higher branches would also have gone under.

Following these roots and branches can allow the I-O police to understand where the contagion might go to next, for example given time they might have been able to foresee the disastrous consequences of Lehman failing.

This can allow some quarantining and firewalling of these cracks much like drilling a hole at the end of a crack on a windscreen can sometimes stop it spreading. For example when businesses are seen to be marginally viable but under pressure from falling financial businesses then they might be partially bought out by the government giving them some extra capital to help survive and then these shares can be resold as the economy return to Biv in those areas. This was in effect what the government did with its investments in Bear Sterns, AIG, and GM.

Businesses as well as the I-O police could get an early warning of these cracks coming their way by aggressive I-O auditing of the roots and branches, they could then get more time to save and shift their business to new customers. This can be like a process of the I-O police doing random audits and connecting the dots of isolated pieces of data by getting enough of them to see the root and branch structure underlying it.

This is much easier than actually seeing all of the cracks through the secrecy and deception in Iv-B, much like seeing cracks in roads after an earthquake and inferring there could be a fault that connects them underground. Like an Iv detective in the I-O police might be adept at connecting the dots in a deceptive criminal case I-O needs to be able to see enough of the system to infer what is going on without invading privacy too much as this can have a chilling effect on legitimate innovation.

This is then like a health inspector inferring infestations of cockroaches and rats from dropping and chewed surfaces. Like the saying that where there is one cockroach there are likely many more nearby the presence of Iv-B fraud in random isolated areas usually would indicate there is much more to be found that could be systemic.

For example coffee shops in office areas might downsize less chaotically if they knew many of their customers were likely to chaotically collapse ahead of time,they would be able to see how their business area was connected to other businesses and Gb natural resources. Also foreknowledge can eliminate much of the waste from these cracks because a viable business falling apart is worth much less than one that has these cracks fixed up before they fail.

Often then it may be cost effective for the government to prop up some viable businesses and lose money to stagnation or creating zombie businesses rather than lose even more when they collapse. One way might be accelerated writing off losses against previous income, for example where a company might be able to write off a current year’s losses against a previous profit this might be extended so they can either write back further from previous years or even have a multiplier where say 120% of previous profits can be written off against current losses acting like a stimulus to businesses that were profitable.

However this would be more problematic where businesses were Iv-B corrupt and they might have to submit to random audits to qualify for it, at this stage of an Iv-B collapse it is vital that few resources are wasted on feeding contagion as it will go onto the public debt. This is like insurance companies avoiding paying off fraudulent claims or they would quickly go out of business.

One solution would be where the government clarified when it would bail out parts of the economy in a downturn, in effect when it would act as an insurance company as it does already for natural disasters.

For example a company applying for aid might be like someone applying for unemployment insurance, they might have to pay into a fund and be able to receive emergency payments perhaps according to how much they have deposited into the fund. The system might work in a similar way to insuring banks against failure, a company might be bought out or invested in by the government to give them extra liquidity and this government equity might be resold when and if the business recovers.

This would also reduce the problems of moral hazard by spelling out in advance what bailouts could occur and that companies might have to submit to investigations of their financial state to look for any fraud. This would allow Iv-B companies direct access to V-Bi loans and should quell a lot of the chaos before it spreads, for example companies used to slim profit margins from Iv-B competition might be able to get enough liquidity to survive the chaos of the crash. Many financial institutions were able to survive the shock waves of the GFC with money from the government and were able to repay it with interest when this chaos subsided.

Some of the warnings by pundits and experts prior to the GFC were highly prescient, perhaps they saw that the directions the different parts of the economy were unsustainable and would result in a chaotic shearing of different parts like a giant crack. For example the unprecedented rise in real estate around the world was fed in part by the carry trade from Japan as well as from those with trade surpluses like China lending their money outside their economies to keep their exchange rates low.

The growth of this money came from free trade causing the advanced economies to lose manufacturing jobs and profits to overseas, the cheap money then fed a boom in goods that could be used for security for this money. For example real estate was considered to be a good security, also people borrowed on shares, bonds, derivatives, and so on.

The trade surpluses that fed this carry trade were growing with a strong momentum and so this money available to loans grew quickly, however the momentum of this money had to reverse in growth and perhaps decline eventually because the advanced economies could not withstand these trade deficits forever. With the GFC for example some of these trade surplus economies pulled their money out of parts of the US market in a panic reversing the previous momentum. There was also a strong momentum of high paying manufacturing jobs being lost in the US to overseas while the B workers were taking out more subprime liar loans that required more and more income to pay them off.

These opposing momentums are like forcing the edges of a cloth in two different directions causing a shearing effect between them and the cloth tears. This would prior to the GFC form smaller cracks such as increasing loan defaults that keep grow larger and so when people saw these isolated cracks they also warned of future problems. For example those pundits seeing people borrowing 100% of a house price with liar loans would infer this deception would cause losses later.

Others might see that this Japanese carry trade might reverse if the Japanese got into trouble and needed to use this money themselves such as from a slowdown in exports caused by a rise in the Yen, it might also reverse sharply if the Japanese became nervous about some of these investments.

Another shearing force would be the resetting of Adjustable Rate Mortgages to higher interest rates that would be unaffordable without house prices going up enough to refinance the loan over and over. Others might see that the momentum of rising house prices was incompatible with the shearing effect of constantly building new homes and subdividing more land that did not cost much more to produce and so this would eventually outstrip any scarcity of housing feeding price rises.

Some pundits were overconfident in this Iv-B opaque market and so appeared prescient in the chaotic growth phase, some were more pessimistic by nature and warned of problems not only in the lead up to the GFC but even for decades before as the US debt continued to rise.

Some may have seen areas of opposing momentum becoming unsustainable but because the economy was so opaque people could only guess according to their optimistic or pessimistic nature what would happen. For example those who are optimistic tend to see this growth as maturing into a healthy tree, when pessimistic they tend to see even healthy growth as chaotic.

The problem is in an opaque, secretive and deceptive Iv-B economy people could only be right by disbelieving various deceptions However it is easier to predict the outcome by knowing that these systems are inherently unstable, that they could either mature with some disruption into a more color balanced Biv economy or collapse when the fleeting Gb resources were gone or even threatened to stop increasing in abundance. The only way to tell for sure is with the I-O police doing random audits but with some color ratios I-O becomes too weak to be relied on.

Aperiomics then gives a unique way to predict these kinds of crises by examining the nature of the system itself to see if it has inherent stability. If the economy is unstable perhaps because of too much pressure to weaken I-O policing then the collapse is inevitable unless the Gb resources are particularly abundant and liable to last for a long time. If so then enough Iv-B winners in business will get to the V canopy, overshadow their rivals and end much of the destructive competition.

Many pundits are in effect acting like I-O police themselves by sounding the alarm hoping that the real I-O police will take notice, but usually in this situation they are already too weakened to police the economy or the situation would not have arisen. Some pundits then might be Iv themselves and give disturbing rumors of fraud and liquidity problems passed on from whistleblowers, others might be seeing in economic data signs of Iv chaos that more mainstream economists are assuming is random and will be self-correcting on a normal curve.

Still others might be Bi pundits and represent an increasingly angry community, for example many saw Iv lending fraud targeting B borrowers and demanded I-O regulators take action on this. These Bi pundits are more likely to be predicting contagion from Iv and Oy as a kind of crime wave because their role in the colors is to watch out for this much like a neighborhood watch evolves to look for increasing Oy petty crime.

Despite large amounts of Bi community anger they had little insight into the opaque Iv-B market and underestimated it because they were mainly in V-Bi and disconnected from Iv-B. They did understand better than people working in Iv-B the pernicious nature of this kind of crime wave because these communities were relatively transparent, also they were used to defending their communities as Ro from Oy criminals.

By the time the US I-O police were prodded into action though they were often corrupted, underfunded, deceived into inaction themselves by this opacity or in many cases banned from acting because of Iv federal lobbyists preventing the state I-O police from preventing this Iv looting from continuing.

Others saw this color imbalance as being from the Iv bonuses and stock options as a form of leverage being paid on Wall Street, they represented a corrupting influence where Iv agents would be deceiving their V companies for short term gains and leaving them with losses later. In effect these bonuses and stock options represent leverage because relatively small share price gains or sales of stocks and bonds by traders might result in disproportionately large profits for them.

These profits can then flow like a wave through the system as liquidity or higher pressure steam money but if this money suddenly falters in a downturn it can be like a shock wave that generates tsunamis though Iv-B. For example large bonuses from Wall Street propped up much of the New York economy with their taxes and sales of goods and services to them in the V-Bi community, when this money suddenly stopped in the GFC it led to a tsunami of government debt and layoffs in industries depending on it.

When people realize there is a liquidity crunch they begin hoarding money themselves causing more deleveraging and more shock waves with collapses as they overwhelm areas with few reserves against chaos. Hoarding is hard to detect in an opaque market, it can sometimes be a competitive advantage to pretend to be trading in a dangerous situation. It may cause others to be more foolhardy and those hoarding money might be able to take advantage of their collapse.

This is like in the Roy animal kingdom where Oy predators might pretend to attack so others dive into a dangerous situation as well, then they might pull back and watch them get hurt while wounding the prey at the same time. Iv agents then can gain from pretending to be overconfident but then folding early as in poker, however when everyone does this they start to get a false feeling of overconfidence from watching each other which can lead to the whole structure collapsing.

Some people that foresaw the GFC realized that the subprime crisis would be caused by these B deceptive liar loans as well as the deceptions of the Iv lenders, the deceptions by the actual Iv-Oy salesmen altering loan documents was probably not known about by anyone but the salesmen and perhaps their sales managers. This then would have been a major cause of the crisis because the lenders had often been investigated and were known to be sometimes dishonest, the B borrowers could be seen to be borrowing too much or claiming too much income.

If the salesmen in between these two altered enough documents however no researcher could have known the true picture prior to the GFC. This shows again how important I-O policing is, these alterations could have been discovered by snitches and random audits. None of the people involved however had all of the data to see what was coming because of the sheer opacity of the Iv-B system, disconnected so much from the V-Bi investors without strong I-O policing.

A better way to predict the crisis was by looking at the strength of I-O police and how opaque the economy was. With chaotic growth in a bubble without random audits a collapse is usually inevitable.

As the advanced economies started to run out of their own Gb resources such as with oil, they also lost much of their manufacturing base to overseas economies such as China, Taiwan, Japan, and South Korea. This caused the B workers in the advanced economies to become weak as their ways of making money were cut off. As these B workers became more desperate they resorted to secrecy and deception especially since the I-O police had been weakened.

Iv agents started making lots of extra money from these deceptive but often desperate B workers, the I regulators had become weakened by Iv lobbyists against slowing the Iv-B real estate boom. These B workers started acting like R prey in the Roy animal kingdom desperate for food or water and started taking chances and so Oy predators become fatter by catching food more easily, for example Oy predators might stay around shrinking waterholes and pick off the prey as they need to drink.

In the same way Iv subprime lenders had a monopoly on one the few resources able to stave off disaster for these B workers, their credit ratings were not good enough to go to ordinary V-Bi banks directly and even when they were they could often be tricked into a more expensive subprime loan anyway because of weak I-O policing. This is like Oy predators hiding around a waterhole so some R prey come and drink even when they don’t need to, or can wait until they get to a safer waterhole.

In such a situation the R prey are also trying to deceive the Oy predators, the B workers then were willing to trick the Iv subprime salesmen as well. For example even if they caught the salesmen falsifying the loan documents they might still go ahead because it was a way to get the loan. In Biv then this is mutual deception for mutual profit as a deceptive Positive Sum Game.

Such as Positive Sum Game can be an overtone of a Roy Negative Sum Game and a G-Gb Zero Sum Game. For example in Roy the predators might be starving as well, catching R prey near waterholes might stave off starvation for a while longer and so is the lesser of two evils. In the Biv society this often happens like this as well, the Iv salesman might be staving off getting fired by making a sale at any cost or the B worker might be after some cash to stave off bankruptcy after losing his job.

In this case then the subprime loan would be a Roy transaction because both are only reducing losses instead of making a profit. In effect then this is a G public property situation where the government and the O police should be policing this properly to prevent criminal behavior. Both parties for example might be charged with defrauding the bank behind the loans.

Also a situation this dire might be handled more efficiently with G public money such as a government owned bank arranging these loans along with stiff criminal penalties to keep the parties honest. If not then the economy can degenerate into excessive amounts of fraud because I civil fines are not going to deter people in this desperate situation. Both the Iv agents and the B workers for example might go bankrupt without the loan volume continuing and so fines are not going to stop them.

When the situation is less dire and resources are more abundant then it is still a Biv economy and so Gb private property such as privately owned banks and private employees are more efficient. In this case the loans are a Positive Sum Game which is worked out by adding the Negative Sum Game and the Zero Sum Game. For example when the Oy subprime salesman and R borrower are both staving off disaster by arranging the loan then one is also usually doing better than the other.

With the waterhole example then the Oy predators might be winning and the R prey are decimated as they come near a waterhole with a lot of vegetation for the predators to hide in. With an open or larger waterhole the R prey might get water most of the time and escape leaving the starving Oy predators to lose energy each time they try and fail to catch them. When this situation is in a Biv society there is added to this a Zero Sum Game so one side is winning an equal amount to what the other side is losing.

For example the Iv subprime salesman might be making better profits than his clients are getting from buying and selling houses. So he is like the Oy predators winning around the waterhole with an equal amount of profit added to each, the Iv salesman then is a successful predator compared to the B worker but both are still profiting. For example in terms of energy both the Oy predator and R prey expend calories or kilojoules around the waterhole. Say the Oy predator expends a 100 calories and the R prey expends 100 calories also and they happen to be about the same size and run about the same speed.

When the waterhole favors the Oy prey they might expend 80 calories and the prey 120 calories so over time the R prey become more exhausted and get eaten more often. The waterhole favoring the R prey might have the situation reversed, the prey expend 80 calories in getting a drink and escaping while the predators expend 120 calories. In a drought these might be offset by the food taken by each, if the predators need 1000 calories a day and are only getting 800 then they are slowly starving, if the prey also need 1000 calories a day but are only getting 800 because most of the grass has died they are also slowly starving in a Negative Sum Game.

However the Oy predators might get a 1000 calories from catching one of the prey so this would stave off starvation for some time depending on how much energy they waste in chasing the prey. If he catches 10% of the prey he might break even on an average waterhole but on the more open waterhole he uses up 120 calories each time and only catches 10% of them, he will then starve to death depending on his reserves of energy and if the conditions change.

If he only expends 80 calories each time he chases a prey and still gets 10% of them then he is getting 1000 calories back for each 800 expended, he is then surviving and might even get enough prey to breed. However if the R prey weakened under this assault and only averaged 900 calories each then the Oy predators would still be in a Negative Sum Game and be starving to death though not as quickly as the R prey. Relative to the plummeting numbers of R prey the Oy predators might seem to be doing well but they are just starving at a slower rate and then this rate will increase chaotically when the R prey numbers drop over time.

As can be seen this situation is highly unstable, when either the Oy predators or R prey are losing less quickly then they still face an unbalanced ecosystem later and even worse starvation. This however can be prevented by a strong O center of the food chain which reduces this chaos, in the same way the O police prevent crimes waves of destruction like this in a Roy society where thieves chase their victims and each color faces eventual starvation. This might happen after a devastating war or natural disaster for example, with few resources being rapidly used up the only way to win is to stave off starvation longer than the others and perhaps the situation may change.

Compared to each other then either the Oy predator or the R prey is coming out 100 or 200 calories a day ahead, however this is still a Negative Sum Game because the R prey might get wiped out this way and the Oy predator starves later. Alternatively if the R prey is ahead then the Oy predators might starve and R prey have a boom in numbers and then crash later from overeating in the drought as the Oy predator numbers rebound.

However in the Biv society there is still a Zero Sum Game because the Iv agent or the B worker is getting a better deal than the other, the Negative Sum Game is still going on as well because both are still trying to stave off bankruptcy. If the economy is good however this bankruptcy is a remote possibility and so both are still making a profit, however there is still a potential color oscillation because one is making more profits than the other. For example at the waterhole the R prey might get wiped out over time and the Oy predator then starves, in the Biv society the Iv agent might be doing better than the B workers but this creates a transfer of wealth to Iv that makes them grow faster than the B workers.

This still seems ok because both are making profits but this will cause more and more Iv agents to enter the market trying to get this B worker business.

Eventually as often happens in real estate booms there is a real estate agent on every corner and subprime agents renting too many offices in these areas, all then are trying to make a living from these B workers who cannot make profits as fast as the Iv agents need. Eventually then like the Oy predators running out of food the Iv agents have decimated the B workers in a relative sense, they start to lose money and real estate agents start to default on their office leases as do the subprime lenders.

This is what happened in the GFC, the subprime lenders made so much money that the transfer of wealth to them was unsustainable and when this growth was interrupted there was a crash. The other possibility was the intended one, that the B workers make more profits from these loans than the lenders leading to a transfer of wealth or trickling down, like in trees of sap, to the poorer parts of the US economy. This would have led to a boom among B workers by comparison to the Iv agents who were also making money, then there would have been overconsumption by the B workers like too many R prey overeating. Then as the B workers consumed too many resources this would strain the economy and so they would have a crash which would then percolate up later to cause the Iv subprime lenders to have a crash as well.

This also happened prior to the GFC, the money pouring into the B poor neighborhoods caused them to make profits from rising real estate prices and more jobs were created in construction and selling consumer goods to B. This grew unsustainably as more B workers got these loans to get in on the action, like R prey overbreeding, and then there were too many of them for the resources of the economy to sustain their repayments so they started to default.

Different scenarios happened in different parts of the global economy, in some areas the Iv agents did better than the B workers and this created a boom for them that eventually hit a ceiling and crashed. In other areas the B workers did better creating a real estate boom and profits for them, this caused them to consume too much and then start to become desperate. In this situation like the starving R prey some Iv agents used their lifeline of cheap and easy credit to make large profits and this caused another part of the Iv agents to boom with profits and then collapse.

The middle of the Roy food chain acts as a buffer to some degree from the color imbalances of Oy and R but it also moves with this imbalance by strengthening or weakening like I-O police do. For example in Africa there might be R gazelles, Ro Impala stronger and moving more in herds, O wild dogs that are too weak or few in number to easily attack Ro herds but can sometimes take their R young or catch isolated R gazelles.

Along with the O wild dogs there can be some humans acting as O shepherds themselves in a primitive way. This example is not meant to portray the African ecosystem accurately because of a lack of in depth knowledge needed to do this. However it can illustrate the color imbalances involved.

Oy hyenas are stronger than the O dogs and shepherds, then there are Y lions as alpha predators. As the R gazelles become weakened in a drought they might be easier to catch and O wild dogs along with their human shepherds might not be able to protect them as much in this weakened state.

When O tries to protect the R gazelles they might tend to be eaten themselves by these Oy hyenas who start to become more numerous and confident in going after the weakened R prey. The O shepherds might be domesticating some of these wild dogs to help them hunt and protect some of these animals, for the sake of this example some hyena might also be domesticated to protect the Ro-R prey in exchange for the shepherds feeding them.

This might seem unlikely in Africa now but the household dog was domesticated in this way, Oy predatory wolves for example were slowly made into guard dogs in exchange for a steady meal. Over time then hyenas might also evolve into being domesticated like dogs if they were needed for this.

This is like O police who have a territory or precinct and feed off Ro-R people in the community by taxation in exchange for protecting them. Some Oy petty thieves in society might become domesticated by these O police into acting as snitches or guard dogs against more violent Y criminals. Over time then these Oy thieves become less dangerous as they are paid off by the O police like the way dogs became domesticated.

The O wild dogs along with their shepherds would sometimes get more food from the Ro-R prey themselves and then would be less aggressive in chasing away the Oy hyenas, this is like the O police sometimes being well funded and becoming lazy. So at some stages in an economy the I-O police can become lax, they seem to have been successful and start letting some crime go because there is little pressure on them to perform. This happened at the SEC prior to the GFC where they tended to take only the easier and less politically connected cases against Iv agents, in the same way the O shepherds might take on the weaker Oy predators and let the stronger ones attack the Ro-R prey.

The Oy hyenas might then increase in numbers as they eat the weakened R prey and attack the O dogs and shepherds weakening them as well as deterring them from interfering as much. The imbalance then of animals from the drought is moderated partially by the O dogs but not completely.

This is then like a Roy crime wave developing where the I-O police are being threatened and intimidated by the stronger Oy criminals, it is also like prior to the GFC where the stronger and richer Iv agents could intimidate the SEC.

For example Bernie Madoff was able to scare off the SEC from investigating him because of his standing on Wall Street, also wealthier Wall Street banks were able to scare off the SEC because many regulators wanted to work on Wall Street later. This is like O dogs that are partially domesticated but under pressure from Oy predators might run away or even join in attacking the prey themselves.

This model ecosystem illustrates how the Oy predators caused these fluctuations by acting in their own interest, at times they might cow the O shepherd and his dogs and eat too many of the R prey. This would then leave both to starve for a while until the R prey numbers revived. A strong shepherd or just dogs by themselves as the center of the food chain then can benefit these Oy predators over the long run by moderating the cycles of boom and bust, or fast and famine. In the same way a strong I-O police such as the SEC can help Iv agents in the long run by preventing them from profiting too much and causing a collapse.

In most Roy ecosystems there is usually a much longer food chain so the situation is much more complex, the same principles apply however. Generally each animal in the food chain tends to eat the ones below and be eaten by the ones above, the ones around the center of the food chain tend to act like O in that they want to preserve a territory for themselves and so either warn off predators above them if they can or make enough of a commotion to frighten away the prey below them.

In the same way each Iv agent might tend to profit from those below him and protect his territory from other above him. For example Iv subprime salesmen might have a good territory of B workers to sell loans to, the company though might try to add extra salesmen to this territory so more sales are made but the B workers will be sued up more quickly. These Iv agents then have an incentive to resist this and might even warn the B workers about the other agents, they are in effect starting to act like I-O police themselves to protect their own interests.

Over time these kinds of Iv agents might get together with the SEC and snitch on the others, in effect they become like the guard dogs mentioned earlier in exchange for some leniency from the authorities with their own sales. The situation become more difficult when the B workers are more desperate for loans or are more gullible like R prey that are too trusting with predators. Then there might be such a rush to get at these B workers that the Iv agents have to decide between snitching on the worse agents or joining in before they miss out.

This is like the guard dogs deciding whether to stick with the shepherd or join in attacking the prey. This was the situation prior to the GFC, the B workers were either desperate for loans because of losing their jobs or gullible in believing they could speculate in real estate. This caused the snitching system of the financial industry to weaken as there was more money in exploiting the B workers.

Iv agents in other parts of the economy also became part of this rush to exploit the B workers for profit instead of snitching on each other, this caused a general collapse of people warning about problems in the economy. Because there were so few snitches the I-O police took this as a sign that the economy was well behaved and became weak as a result, the SEC for example was doing very little investigating on its own. As a result then they had few ways of knowing what was going on in the economy, they still had complaints from the Bi-Ro community where people acted as a team and discussed when one of their own was ripped off.

This is like in a Roy society where the Ro neighborhood watch might complain when one of their members is robbed to the I-O police. Without these complaints the police might not realize their network of snitches has collapsed in favor of robbing R people, they might also however get direct complaints of crimes from R they have to follow up. Prior to the GFC then the stronger regulatory agencies still functioned well but noticed a wave of fraud building, they also received more complaints from Bi-Ro community groups. However because the Iv-Oy snitches had stopped informing to a large degree they did not understand what was going on.

This is also like in the Roy animal kingdom where as mentioned earlier the O shepherd uses guard dogs to protect the Ro-R prey, when these dogs start to desert to get the prey themselves the O shepherd is no longer warned about attacks taking place. He might see the evidence of these attacks with dead carcasses, however many of these might not be seen as the R prey hides and is thus caught in a place not easily found. This is like the B workers taking liar loans and not wanting to complain to the police because deception is their hoped for path to making profits.

If they start turning in these Iv-Oy agents then it might damage their own chances to profit in the real estate bubble, this is like the R prey hiding from the Oy predators rather than attracting the attention of the O shepherd with crying for help. For example the B workers also might not trust the I-O police because some of them would be Iv-Oy themselves, the SEC at this time had many agents wanting to move to Wall Street and were not wanting to make themselves unpopular their by prosecuting someone they later wanted to work for.

This is like the O shepherd with his guard dogs, the R prey might see sometimes that they are protected from Oy predators by them. However they might also sometimes see these O guard dogs being allowed to eat some prey themselves, in the same way the I-O police often have Iv-Oy people that join them but they also still have the Iv-Oy instincts. So it is not just a matter of SEC staff wanting to move to Iv-Oy Wall Street but that people who would usually belong in Wall Street get jobs in the SEC to do favors for V companies to get a better job later.

This is a variation on political lobbying, often Iv agents might get a job as I-O regulators when the V-Iv part such as the Republicans in the US win. They might not intend to regulate in a neutral way, just to loosen regulations or squelch prosecutions to do favor and then be rewarded with better jobs in these same V companies later. In this case the Y predators come into the equation, for example there might be a pack of Y lions that the O shepherd and his guard dogs fears most. When they are around the O shepherd expects the guard dogs to snitch on them by barking, he might also domesticate hyena to do the same thing or the hyena might do this anyway because they also fear the lions and want the shepherd to chase the lions away so they can feed more.

So the O shepherd relies on this snitching by his guard dogs and the Oy predators to keep the situation under control, however when the Y lions are too strong the Oy predators might work with them to catch the prey. For example the hyena might catch some prey or corner them and the Y lions finish them off, the Oy hyenas then get their commissions by eating the scraps. So when the O shepherd weakens too much the Oy predators ally with the Y predators, when the O shepherd is stronger they ally with him as being a better deal for them.

In the same way when V Wall Street is too strong the Iv-Oy agents ally with them rather than snitching to the I-O police such as the SEC. When the I-O police are strong enough the agents make more by snitching because while they make less from the V companies they make more from getting at the B workers themselves or trading with the Bi community in the I-O market. This is why it is important for the I-O police to remain strong, however like the shepherd losing control when the Y lions were strong sometimes the criminals win for a while. When they do like any crime wave there is a lot of damage to be cleaned up as with the GFC.

The situation can be more complex when the Ro and R interactions are added, however the snitching problem prior to the GFC was mainly because of Iv-Oy agents. There does not seem to have been much snitching from the B workers, this can be because like V they are the colors furthest removed from the I-O police. However the police often have snitches in this part of the economy as well, they can monitor other B workers to see if they steal goods from a factory for example.

This is like the R secret police in communist societies as well, when R people are competing with each other for survival it can be an advantage to denounce each other to the authorities or even to Oy criminals. For example R prey survive by running and hiding, if they can make noise and still get away safely then they might warn other R but also cause the Oy predators to take them instead. In the same way R people in the Soviet Union sometimes prospered by denouncing others falsely, it made them seem more patriotic and they often got rid of competitors for a job.

In the same way B workers might snitch on each other to the Iv company managers where they work because they might get a promotion, they might also get rid of workers they consider to be a threat. In a Roy society R people might be prostitutes or drug addicts and they might protect themselves by denouncing others secretly in exchange for extra police protection if they get arrested. The interaction is then similar to the Iv-Oy snitches for the I-O police except that R and B people are more defensive rather than predatory.

Usually then B workers would have complained about these subprime loans to the I-O police or even to other Iv agents they considered to be more ethical, they might then have alerted the I-O police about these predatory salesmen. However the B workers were willing to play this game of secrecy and deception because they thought they were gaining on the deal, this then cut off a second type of snitch from the I-O police.

Because of this the I-O police didn’t realize the extent of the liar loans and the damage they could do to the economy, like the R prey not complaining to the O shepherd when attacked by the Oy predators. Often then the I-O police have a secret group of these R-B snitches to watch the Bi-Ro community, for example there might be corruption in a Bi union and some B workers might feed the police or the Iv agents of the company information in exchange for a reward or promotion.

An O shepherd then might have an unstable flock that he tries to protect, some can be Ro animals that tend to protect each other while others can be R prey that run and scatter from danger. The Ro herd might complain loudly when there are Oy predators around but the shepherd must listen more carefully to the R animals to know when there are problems.

The nature of the various warnings about the GFC often varied according to the philosophy and degree of pessimism of the experts. This was understandable, in Iv-B a game of mutual deception and secrecy was being played out so often these warnings were a kind of intuitive or based on statistics that indicated the economy was no longer normal.

This normal concept is V-Bi in the sense that it is random, there should be a normal transparent economy and when it deviates from this then it makes V-Bi people complain. There are then two kinds of warnings of an economic problem, the Iv and B people can snitch secretly on chaotic problems while the V and Bi people can openly complain as a team that something is not normal.

For example with a recession this can be viewed as an abnormal period in an economy but it begs the question of what causes the abnormality. Like with medicine some contagions are temporary like a cold and fix themselves with the I-O immune system of an animal, often then the economy seems to fix itself in the same way and economists might get credit like the doctor often does for really doing very little.

Medicine can be practiced in this way to some degree by ignoring the concepts of chaotic germs and contagion completely, rather a normal pattern of behavior is worked out by transparent communities where diseases usually heal themselves. For example many people have germs in their bodies but don’t get sick, it is not then that the germs always hurt people but that the I-O immune system is weakened sometimes. A consensus then might evolve in such a community to eat well and exercise as a statistical way to improve someone’s chances of survival along with perhaps not drinking or smoking.

This understanding of a normal health of a person or an economy means V-Bi experts don’t need to understand what goes on in these secretive and deceptive areas, for example long before anyone even knew germs existed people understood that many diseases seemed to fix themselves often with some herbal medicines and rest. This developed into a kind of philosophy of inaction, that if the economy is transparent then wrongdoing will be spotted and the offending companies boycotted into being honest.

This is like the Ro neighborhood watch concept where if people work together as a team and remain vigilant then eventually Oy criminals will give up and become honest as being more profitable. In the same way diseases might also become more domesticated, if people look after themselves and are vigilant to signs of disease in others then these germs might evolve to become less virulent over time.

Sometimes this works but as with the Black Plague it is often necessary to investigate this contagion and the very openness of a V-Bi society can cause this contagion to spread more easily. For example like a wolf in sheep’s clothing a thief might join the neighborhood watch as a cover, in the same way a disease might spread by concealing its symptoms until the open transparent society allows it to jump from one person to another.

In the same way a V-Bi economy can become infected with a financial contagion because the perpetrators pose as highly visible supporters of the community, Bernie Madoff did this for example. He has said his business became a Ponzi scheme when he lost money and had no way to make it up, he then had to maintain this pose of transparency while concealing the growing contagion within.

In the same way the Bi communities became infected with the subprime contagion because so many of its members became deceptive B people with liar loans. The V communities also became corrupted because many of them were making too much money using secretive and deceptive Iv agents to make money for them, they could then pose as pillars of the communities but these pillars as roots and branches were being infected with this financial contagion.

This makes it difficult for V-Bi communities to protest because of the hidden hypocrisy, the situation might have to get serious before their anger is strong enough to out this hidden chaos. The other kind of warning comes from Iv and B people snitching on each other for profit to expose this contagion, however they might not do this until the profits from these deceptions start to disappear and then it can be too late. The I-O police then need to balance the defects in these two kinds of warnings, the V-Bi communities are checked by the Iv-B snitches because V-Bi becomes too trusting with their team nature.

The Iv-B communities are checked by the V-Bi communities by becoming angry when this contagion is exposed, by watching for this V-Bi vigilante action the chaos can be detected at an early stage. This is like looking for an epidemic in a society, the V-Bi people might have some hiding their symptoms because they fear being isolated from the others and losing their jobs. They might then be spreading the disease because they can only expose it by exposing themselves. The Iv-B people are very secretive, they might also hide their symptoms but the I-O doctors can detect this when the V-Bi public discovers isolated cases and gets angry.

For example with AIDS some people hid their symptoms or were symptom free, even though they knew they were infected they were able to move in the V-Bi open gay communities and spread the virus. Others were Iv-B and more secretive, when they were exposed the V-Bi gay community tended to name and shame them and so the I-O doctors were able to see that the epidemic was secretly spreading.

Without any I-O doctors watching for epidemics however AIDS might have gotten far worse, the isolated cases might have been handled by V-Bi vigilantes attacking or killing those spreading it. However there would have been no one looking at the pattern of these vigilante attacks to see the overall spread of the virus, also the V-Bi communities would have had no way to make people snitch on each other about their being infected. This then would be an Iv-B and V-Bi disconnect that the I-O doctors try to prevent, in the same way the I-O financial regulators stop financial epidemics from spreading.

Saying that I-O regulators are needed in markets then is like saying they are not needed with diseases, as said earlier though many people survive in V-Bi with transparency and acting normally rather than looking for Iv-B germs. Because this is an evolutionary strategy people have survived this way and are probably genetically predisposed to continue doing this.

For example the urge to be in the center of the normal curve and to be suspicious of deviants from that would tend to have excluded homosexuals, drug users, and even hemophiliacs to some degree. This then is why V-Bi communities thought that AIDS didn’t need to be treated as it was only in deviant communities, they thought their transparent society would keep secretive transmissions from occurring and so it would be a waste of money for the I-O government doctors to try to police and eradicate the epidemic.

In the same way the Iv-B communities didn’t see the need to police the spread of AIDS because they tended to deceive each other and often lived in the secretive closet, they then had no way of telling how it was spreading. Occasionally someone might be outed by the V-Bi society and be attacked by vigilantes, without the I-O doctors monitoring these attacks though no one would have known how it was spreading.

V-Bi people then have evolved to think they don’t need the I-O police because they can watch out for themselves, this is how the subprime virus tended to spread in the global economy. Because this works to a large degree people tend to evolve into either V-Bi or Iv-B families that disconnect from each other allowing both human and financial diseases to spread. It is only because some people from each side tend to come together as I-O police that the economy retains some stability.

Some diseases then not only don’t fix themselves and return the situation to V-Bi normality but sometimes they completely collapse V-Bi and the Iv-B chaos reigns as in the GFC. People however cannot permanently adapt to this reality because their genes are always disconnected into either a V-Bi or Iv-B strategy weakening the I-O police and threatening the economy with epidemics, wars, crime, etc.

Even when this disconnect is serious people tend to not change because of this genetic heritage, Ro gangs might still think they can protect their neighborhoods from crime and don’t need the police. Y neighborhoods might have their mafia that keeps crime down and they also want to keep the police out. R people might be secretive and shy away from the police, in the same way Oy thieves also tend to shun the police when they aren’t needed. The I-O police of all kinds are then always facing an erosion of their power, when this happens and crime or other forms of contagion explode then they are allowed to strengthen again only reluctantly.

In the same way people in the financial community and even economists tend to not think I-O regulators are necessary, the different areas of these groups tend to have the same kinds of reason as to why deregulations should work. For example prior to the GFC V companies like Lehman and Bear Sterns thought they didn’t need I-O regulators because they could protect their businesses from problems, they were like a V community believing their transparent team strategy would stop a financial contagion because it would seem so abnormal.

However these companies started using more deceptive trading techniques as well as hiding debts from regulators, this is like the Y mafia neighborhoods hiding their problems from the I-O police because the mafia was expected to take care of it. The problem was seen as a few bad apples as deviants to the normal business, these should have been exposed and fired or boycotted keeping the V system stable.

The Bi communities had Fannie Mae and Freddie Mac to use teamwork, by pooling loans together the bad ones should have been easier to weed out before they could threaten the companies. They could use their financial strength to cow Wall Street and make small Iv subprime lenders behave themselves, they didn’t think they needed I-O regulators and usually told them to stay away.

## However they were also seduced by the profits of subprime secrecy and of hiding their losses out of guilt, their transparent system then had no way to root out this growing contagion either.

People then tend to have a genetic or learned adaption to a particular color code and this can be very hard to break, to understand Aperiomics properly it is important to be able to think like each color. Many experts also have this habitual or predisposition to a point of view and rarely change it, this can be because their color code gets its turn eventually to appear to be right in some circumstances.

There is nothing wrong with this though, it is just the way the various color codes manifest in society. For example if animals could understand the color codes they would not change anything they would do. In the same way people with a V-Bi attitude would probably prefer a normal transparent society even with its occasional flaws. Aperiomics then doesn’t prove any particular color code’s characteristics to be wrong, it just shows them to be incomplete to describing societies and economies.

So when a particular economic policy is tried it is usually favoring one color code over another, there is then going to be a pushback from the other colors and often the color code that is no longer on top just bides their time rather than acknowledging their ideas are incomplete.

This was seen in the Great Depression for example, the different theories about why it happened cover all the different color interactions. This is because any chaotic collapse involves all the color codes, if it occurs in Biv then it also affects all the Roy colors as well. Consequently there is a validation of each color’s point of view when a collapse occurs which allows various schools of thought to continue as being important to the debate surrounding the collapse.

This debate then is the same color codes that caused the collapse creating the debates between the colors, people then are creating models that seem to conform in part to the collapse and assume they are understanding the collapse when they are mainly understanding a system of which the collapse it part along with their own school of thought.

Consequently these different experts know they have some value in these debates and usually feel little desire to compromise with other schools of thought, this is also natural because only I and O are meant to find a middle path between alternatives. Just as the I-O police are not intended to play other parts in the economy, such as being criminals or businessmen, the other color codes are under no obligation to be moderates in a debate.

So when a hands off economic policy in the Great Depression didn’t make the economy self-regulate and fix itself, then V-Bi experts can blame the doctors for making the disease worse and say they should have regulated or interfered with the economy even less than they did.

One problem is this need to leave the economy alone to let it return to normal became mixed up with the idea of deregulation, that because inaction in a recession seems to lead to a recovery that maybe inaction in regulating or policing an economy will do the same thing. This is like believing that because a cold might go away by itself with medicine and some chaotic epidemics of the flu also dissipate safely then there is no point in having I-O doctors monitoring epidemics at all.

Sometimes this attitude will be right as with the common cold, sometimes it will be very wrong as with AIDS and Polio. However this attitude can then become like a religion or dogma where medicine is thought to be against God’s will because he would have stopped all of the epidemics if he wanted to. In the same way when V-Bi economists believing in a normal self-regulating market then when this works with small recessions it implies their theory is correct, when it doesn’t work as with the GFC and the Great Depression then it means that it should have been given more time not that the theory was incomplete.

For example the Black plague largely went away like this without anyone at the time understanding what was causing it, eventually people developed enough resistance to the disease without trying to understand the chaotic growth of the epidemic. In the same way V-Bi economics tends to think that economies will always heal themselves sooner or later as long as they are left alone, Roosevelt according to them prolonged this financial contagion by strengthening I-O policing such as by forming the SEC.

Often then this V-Bi attitude is correct and it is difficult or impossible to know when Iv-B chaos is so strong that it has to be confronted rather than ignored. However that judgment is up to the I-O police to make, doctors don’t try to investigate every epidemic. They like the police try to work out when chaos is dangerous or not and when it is relatively minor then it might be left alone as V-Bi people want. The system however includes the I-O police as part of it, no color stands outside of it and is immune to the influences of the others.

## The police then will tend to weaken and strengthen, move to the left and right, etc and this will cause economic problems to occasionally flare up.

V-Bi also get some support for its attitude because the policing is fixing the economy semi-invisibly like the immune system does, because the I-O police are not usually seen doing their job in society then people who believe that V-Bi transparency gets rid of crime can point to not seeing police as evidence for their views. In the same way V-Bi economists can say the economy is self-regulating because the I-O regulators are rarely seen doing their job, however one reason for this is they need to remain secretive and deceptive themselves to some degree so criminals cannot anticipate their movements.

For example police have a Bi-Ro aspect where they patrol neighborhoods openly like vigilantes in some ways, this makes people feel secure and tends to scare away some criminals who see this show of force. However they also have an Iv-Oy aspect which is secretive and deceptive and this catches the criminals who think they can just watch for the police and evade them that way.

## This is like O animals and shepherds in the middle of the Roy food chain, they can show themselves openly to deter predators from going after their food or they can hide and catch them that way.

For example this chaotic fraud in the US Savings and Loans crisis caused many financial institutions to fail because they thought the system was transparent enough to spot the crooks before they could do much damage, the policing aspect of I-O eventually tracked most of these Iv-Oy crooks down and stopped the chaos spreading further. While this chaos occurred because of Ronal Reagan weakening the I-O police with deregulation when a crime wave erupts this tends to strengthen the police or at least it makes it obvious they are still to be feared.

This deterrence then likely dissuaded others from trying fraudulent schemes for some years. If people don’t hear about this behind the scenes policing though they might assume it didn’t do anything, then when V tries to undermine the I-O policing system to make more money with some Iv disinformation this can eventually persuade voters. Everyone gets annoyed at O police or I bureaucracy at some stage, when economists and businessmen say they are causing economic hardship then people sometimes agree with this.

For example people might resent getting speeding tickets because they don’t believe their dangerous driving would cause an accident, however the problem is when everyone thinks they can drive dangerously and that the others will be driving more slowly and safely. This is the Iv-B economy, everyone thinks that they can do business much more quickly with high momentum, the I-O police to them are just slowing things down with red tape instead of actually protecting people. Even if they concede some policing is necessary they might think that the benefits of financial anarchy outweigh the pitfalls, for example people might think they will save so much time from no speed limits that an occasional accident is a small price to pay.

In the same way Alan Greenspan believed that pricking these Iv-B bubbles was more damaging that letting them run their course, like allowing traffic to speed up without limit and regulate itself by having occasional crashes. The problem is this might work in some cases and lead to even less policing until the road can become so lawless that eventually there will be accidents so horrific that people will be afraid to drive at all. That is like after the GFC where deregulation created a business environment so unsafe that V-Bi stagnation resulted as people are afraid to participate in Iv-B business again.

## This call for less policing however is more of an effect than a cause and so the police cannot be blamed for people wanting to be rid of them, when I-O weakens it does so because of attacks from other colors, because it is not fully stable by its nature, and because it may be part of a life cycle of the economy such as following the baby boomers into a decay phase.

Like the roads becoming more dangerous with less I-O traffic policing, the economy was also becoming more dangerous with deregulation and this caused many experts and pundits to give isolated warnings of potential disasters ahead. However usually they had become used to the deregulation or did not realize it had happened, they were like drivers who did not realize the traffic accidents were increasing because of the lack of police and sometimes assumed the police were causing the accidents.

For example people might get held up by speed limits and then speed up dangerously to make up time, if the speed limits had not existed then each person might have driven to the maximum each part of the road would have allowed and not have been late. However if this made people get to their destinations faster then they would just schedule more appointments with the excess time because Iv-B tends to get faster and have ever more momentum until it crashes.

In the same way Iv-B businessmen got used to the lower regulation and took this greater efficiency as evidence that the slowing down of regulations was wasteful, however this efficiency just made them schedule ever more meetings and schedules that had to be met. When other things delayed them they would do business even faster and so when a major external shock hit the economy people like being caught in a major traffic accident missed so many appointments that the whole system which needed this timing to be maintained collapsed.

Many of the warnings from experts and pundits were also urging action that would have been ineffective, for example William White from the Bank of International Settlements warned about credit bubbles but the problem was not the Fed allowing an easy monetary policy but that the shadow banking system was agreeing with Greenspan’s judgment that productivity increases would not cause inflation. Iv-B increase productivity dramatically but has the drawback that missed appointments can cause this productivity to rapidly decline. For example an assembly line might be highly efficient but as it gets faster the chance of someone being late or making a mistake can cause the whole line to have to be sopped and restarted, this is like an economy crashing as it become too productive.

For example with increase Iv-B competition workers started missing holidays and working later, wives also had to work as well to support the family. The system then since the 1970s as it left behind V-Bi stagnation became faster and this momentum started causing not just economic crises but personal crises in people’s lives from the pressure to compete. This was outlined in the book Future Shock by Alvin Toffler which not only describe exponentially growing technology but that it would cause an information overload as people had learn ever more to cope in this economy.

With this Iv-B productivity increasing then businesses were doing more with less, this made the economy seem more efficient and produce more goods which in turn needed more capital to expand. Both the Iv-B shadow banking system and the V-Bi traditional banking sector along with the Fed were adopting an expansionary monetary policy, the V-Bi sector was being dragged along with this growth though for a long time they thought they were controlling it.

This is like people driving without traffic police, initially they might think they are trying to go faster for their own needs but over time they will be dodging other driver’s dangerous actions more and more. This becomes like a country driver in the city for the first time, the speed of people driving seems shocking to them and might cause them to have an accident.

In this Iv-B road competition some drivers will be better than others, just as in poker where bluffing grows exponentially and collapses in each hand the drivers will bluff each other into avoiding collisions so they can get through the traffic faster. Sometimes this bluff doesn’t work and an accident can happen. In the same way the Iv-B economic boom relied more and more on bluff and deception because people had to keep appointments and make payments to avoid disaster, eventually there was so much disinformation that like on the freeway people no longer understood what other people were thinking.

Greenspan then kept interest rates down in the 2000s but if he had tried to raise them he may have found out even earlier that it made little difference, like reducing a police force can create a momentum of crime the deregulation of the economy created a momentum that the Fed lost control of. In the same way the traffic police might have found that had they tried to reassert control on this deregulated freeway driving then they would have been ignored or resisted.

The Iv-B market was growing on the Japanese carry trade to lend money into the US, also sovereign funds such as China, Japan, Taiwan, and Korea tried to keep their currencies low to increase exports and wanted the US to borrow their trade surpluses. This kept interest rates low in the US and created the credit bubble, if however the Iv speculators thought there was inflation coming then this would have raised interest rates early and would have cut much of this carry trade and made it at higher interest rates.

However they didn’t expect inflation either so perhaps Greenspan had the same idea from reading the same market signals and economic papers as the market had. Inflation however means something different in Iv-B to a V-Bi or balanced Biv economy, in Iv-B prices tend to either grow or decline exponentially and might hit a floor or ceiling and reverse direction often with a catastrophe. For example the Iv-B real estate boom was asset inflation and other parts of the economy did not experience inflation because the pressure of money was being fed into a few areas rather than diffusing into all prices.

Allowing bubbles to grow because inflation is low elsewhere means the situation is becoming deceptive for setting monetary policy. To measure the real rate of inflation the bubble prices should be added to all other prices, for example real estate prices should have been added to the Consumer Price Index to get an average indication of the inflation caused by this influx of foreign money.

However this presents another problem, if this indicates inflation is high and monetary policy should be tightened then starving a bubble often starves the V-Bi areas around it feeding money rather than the bubble itself. As money becomes tight people might even try to speculate more to rescue themselves from this situation, such a bubble is based on secrecy and deception so trying to make people act logically in response to tightening money tends to fail and causes a recession or collapse rather than people coming to their senses.

For example when money is tightened pundits in a boom might still tend to encourage people to invest as the bubble seems to be resisting the tight money, however other parts of the economy gets starved for money and this might make other investments collapse first. Then people might put their money into the bubble to recoup their losses. To make a bubble deflate in a rational way the I-O police need to act like with speeding in traffic, where people are investing dangerously such as trading while insolvent or fraudulently they can be fined or jailed which deters other people from doing the same.

Like traffic slowing back to a safe speed a bubble can then slow and reconnect with real prices even without tightening monetary policy, it may even be necessary to inject more money into the economy as the bubble weakens like after the GFC to ease the effects of the crash. For example with the traffic example as the I-O police slow the traffic some people start missing appointments and this causes chaotic collapses in their lives and businesses as some economic efficiencies are no longer possible by using the roads like this.

In the same way slowing a bubble will cause some economic inefficiencies to increase along with the risks of crashes decreasing, for example if the subprime boom had been reregulated then this would still have caused some crashes with people who could not get loans they could have afforded. Some might have been able to use liar loans to buy and sell homes in the boom and when this was banned by making liar loans fraud then some real estate deals will become impossible to do, construction workers might be laid off, and so on. This can be preferable however to a crash when the Iv-B boom hits the ceiling from a lack of policing, this is like the freeway traffic speeding up until it reaches a ceiling where it can go no faster.

The pressure to speed up will then run into this ceiling where people start having accidents all the time, for example the limit of brakes and tires to stop cars in time might be reached and people cannot slow down because of the pressure of cars behind them. It becomes like a panicking crowd trying to escape a burning theatre or trying to get into a department store for a sale, without policing their movements people can get injured or killed and overall they are not moving efficiently.

Ultimately it would have made little difference whether the Fed had tried harder to tighten money prior to the GFC because Iv-B is secretive and would have found ways around this, it is like police trying to slow traffic and people becoming more skilled at avoiding radar traps by taking alternate routes. Once the momentum has been built people tend to have crashes one way or another if they cannot maintain it, people might crash their car getting to an appointment or crash in their finances if they are late.

## By allowing this momentum to build the I-O police will then have to cause some financial crashes in a controlled way to regain control, however Iv-B people will usually not appreciate this and think they should be the exception to these new rules.

The exponential increases of Iv-B in Biv societies and Oy-R in Roy then keep speeding up and increasing the momentum of societies, this pressure tends to disconnect Iv-B from the slower and more cautious V-Bi parts of society. For example a freeway without I-O police might become so fast and dangerous that many people prefer to take slower side streets, they then would tend to separate because those Iv-B people in a hurry would hardly ever meet or shop at the same stores as V-Bi.

For example shops, bars, restaurants, gyms, etc would have to choose whether they catered to Iv-B or V-Bi people over time, Iv-B is always in a hurry and so they will pay more for fast service. It is like the saying “Cheap, good, fast, pick any two” where businesses try to specialize in one or two of these. Cheap and fast is more Iv-B because there is often a deflation in prices because of intense competition but the quality is often deceptively missing.

Good and fast would tend to be found only in expensive shops because Iv-B keeps trying to cut the quality for more profits, wealthy people might then pay exorbitant prices for what should be average quality in a well policed state. For example some suburbs might be very expensive just to get away from crime, the high price might stop poorer people and criminals from moving into the area.

With the example of the lawless freeway people might have to pay high prices for a good and fast way to travel such as with helicopters or very well built and safe cars to survive accidents. Iv-B then can create a competitive urge not just to survive on slim profit margins but to escape collapse and chaos. For example where the I-O police are weak many suburbs might have R thieves and Oy con men so people might have a dishonest cut throat competition to get out of these areas.

Cheap and good can be a V-Bi business where customers might get a quality product at a low price but they have to wait a long time for service or delivery. This can create a stagnant economy because people have to wait for so long they miss other appointments. Cheap, good and fast can be a well policed economy where Iv and B interactions are still fast but not in an unsafe way, the quality is good because it is policed against counterfeiting and fraud, and the lack of expensive collapses makes goods. Cheap by comparison.

Money is the easiest way to get what people want, an Iv-B boom in finance then is likely to be the most deceptive. Also because money and securities such as derivatives are more digital entries in computer networks than actual paper transactions they can change in evolutions and revolutions much quicker than other kinds of assets. For example houses might evolve over time to be larger or might have revolutionary changes such as being wired with computer technology, derivatives however can be created as quickly as people or even Artificial intelligence thinks of new variations.

Without strong I policing a financial crisis in a virtually paperless society can resemble computer software becoming infected without antivirus programs and network security.

When O police are weak in a Roy society there can develop two wars going on separately, a Y-Ro war of attrition between gangs or teams and an Oy-R deceptive war of bluff and secrecy. In the same way software tends to disconnect into these two kinds of conflicts without enough computer security, there is a Y-Ro war of attrition such as denial of service attacks, and an Oy-R war of deception with trolling, phishing, dictionary attacks on passwords to overcome their randomness with chaos, looking for exploits or defects in software which is like looking for weak panels in a house to secretly break in, mutating viruses trying to outwit heuristic programs that look for generic definitions to describe viruses, CAPTCHA programs to stop spam program deceptively impersonating humans, spam email, and so on.

In the same way finance also breaks into a Roy Y-Ro and Oy-R pair of Negative Sum Game conflicts and a Biv V-Bi and Iv-B pair of Positive Sum Game transactions. Derivatives then tend to mutate much like Oy-R software, they are usually designed to deceive people for profit much like trying to get people to click on an infected link in spam or phishing emails. Just as viruses can mutate and grow explosively only to collapse as antivirus programs or software patches catch up to them derivatives can also grow and collapse as people wise up to their complexities and stop getting ripped off by them.

There can also be wars of attrition in finance though these are rarer because the exponential growth of computerization tends to tip the balance to Iv-B. For example short sellers might have a war against a company to bankrupt it by depressing its stock prices. To survive a company needs to be able to get loans and the low share price makes this more difficult.

## This is like a denial of service attack where so many packets of data are sent to web servers that they cannot process legitimate requests for web pages and a site becomes unusable. In the same way short sellers send so many sell orders at a company that the business becomes unusable for investors.

When this mutating and increasing momentum of derivatives and finance found a V-Bi source of credit it was able to grow much faster, particularly as it competitive and deceptive nature meant it did not need to devise plans to pay it back except as a ploy to get more credit. In this way the boom prior to the GFC was like a Ponzi scheme as Hyman Minsky describes, the difference is that this occurs from Iv-B people deceiving each other and so there does not need to be an actual intention to create a Ponzi scheme.

Iv-B people then when they found the carry trade money was available at cheap rates they wanted to use it up before other agents got to it first and outgrew them, perhaps even growing to the point of overshadowing the whole industry. For example this arguably occurred with Goldman Sachs and Morgan Stanley as they grew so quickly prior to the GFC and then were able to take over weaker companies to cement their V overshadowing of the market after it. For example they have the capital to create the best artificially intelligent software to act as their Iv agents to maintain their dominance.

If an investment bank didn’t want to expose itself to the risk of collapse with this carry trade then other banks would jump in, take a larger market share and perhaps get a permanently dominating position from it. I call this getting to the V canopy where large trees spread their leaves and interlock with each other forming a team to stop other trees growing from below getting much sunlight. Because this transparency is in effect restricted to the V team and the Bi below gets transparency from pooling Gb resources the other colors of Iv and B have to work more in the dark with less information.

In this competitive market there was an opportunity for small investment banks to rival and perhaps overshadow each other, so Bear Sterns and Lehman in effect didn’t make the cut of becoming too big to fail as part of the V canopy and getting bailed out though that was their aim . This is like in a forest when a tree is large enough the other trees tend to support it as part of the V canopy rather than trying to cover it with leaves, so Bear Sterns and Lehman were like trees not quite big enough to avoid this overshadowing and so tried more risky trades to keep up.

When the GFC hit then the smaller Iv agents were more vulnerable to the waves of chaos like smaller trees being unable to withstand a large storm because they were already straining to grow into the canopy. They were using a strategy of becoming more fragile because they devoted more of their resources to growth instead of resilience. This competition meant that the system would have been very fragile anyway, usually this doesn’t make much difference because a recession is usually caused by a relatively minor external event more like a weak storm knocking down some trees rather than a hurricane like the GFC.

The expectation of a minor recession then was based on past experience like with contagions such as colds with a relatively sharp period of sickness which was purged by the I-O immune system and then a rapid recovery. The problem though was this idea of deregulation which was necessary for Iv-B to mutate faster in effect removed the I-O immune system of the body so even a cold in someone with a compromised immune system can be deadly.

There is no alternative to this however, like with the freeway of the system is trying to do things with increasing momentum then the I-O police will stop unsafe business and so one or the other must weaken or break.

Overall then there was little in the GFC that was unusual, it was just that fraud reached the levels of a crime wave because of weak I-O policing and regulators unable to follow where the contagion was getting into. It is easy then to blame those who believed in deregulation but they were only in control because the system allowed them to be there, so this extends into the whole field of economics, then the political atmosphere, and what the voters wanted.

For example the economics papers and conferences themselves have evolutions and revolutions according to these colors so at various times there might be a strong I-O belief in policing and regulation. Usually this is after an Oy-R or Iv-B crime wave and people are reminded of the dangers of being without the police. It can also happen however with Y-Ro gang or mafia wars and V-Bi financial wars where companies try to damage each other such as with greenmail and short selling.

The Iv-B crime wave might lead to too much Bi supervision with a chilling on effect on innovation and possibly stagnation which allows others to argue that regulation is bad for markets in general. The V-Bi wars of attrition might lead to an Iv bias to the police where both of these are prosecuted for anticompetitive behavior, for example Bi unions might be broken up with B secret ballots and V companies might be forced to compete with each other more and not make price fixing agreements.

It is important then to distinguish between an economy growing and moving with a safe momentum and one stagnant from suppressing too much growth to avoid all I-O crime. Iv-B and V-Bi people will tend to argue this point over how much growth is desirable, this however is the way plants and Roy food chains tend to regulate themselves. Animals of course do not actually argue but their predator and prey relationships are like the arguments that occur in politics, this is seen for example in Biv societies where this discourse is more civil while in Roy societies politicians and journalists are regularly killed over economic policy.

The debate about I-O policing has two sides, one is how strong they should be and the other how visible they should be. Some might argue for example that police when they are too visible on the roads and in shopping areas tend to scare people into driving too slow and staying away from shopping from paranoia and therefore that policing itself is bad for business. This may not be a problem in policing but that it is too biased towards the concerns of the Bi-Ro communities of deterring Iv-Oy agents and criminals with a visible presence. Because some people are scared of police because they have some Iv-Oy or R-B aspects and are a little secretive and deceptive by nature just seeing regulators can take the energy and momentum out of an economy.

This has happened to some degree since the GFC for example where the media is often reported on something the I-O regulators are doing, complex rules might mean many businesses cannot afford to check all of them and so don’t expand.

This may even have happened after the Great Depression with so many new I-O regulatory agencies such as the FDIC and SEC that businesses were fearful of being prosecuted under vague laws or even made an example of.

This attitude tends to reverse itself when there is a wave or momentum of deceptive crime, then people complain that police have not been visible enough. There is no way to measure the amount of policing accurately because I-O represents at least a minimum of uncertainty, also problems might be caused by the police being too biased towards the right as Iv-Oy or the left as Bi-Ro so the problem might not be their strength or funding at all.

A spate of car crashes from dangerous driving and shoplifting in stores might then cause the I-O police to either be funded better or to do their job more efficiently, they might have been around for example but as Iv-Oy like plain clothes detectives. Because they are secret it is hard to tell if they are doing their job or are corrupt, this is then the same problem with Iv agents when they are expected to police themselves.

After the GFC many of the regulations that had been watered down were seen to have been offering more protection than their inconvenience caused problems. If the system then is innately unstable at times then the idea of avoiding this by counter cyclical policies can also fail because those policies will themselves not be enacted by an unstable system. This then is the same problem as disbanding some police in good times and adding more when there is a crime wave, the criminals in effect watch for this behavior and adjust their activities to it.

## In the same way counter cyclical economic policies also don’t work because the economy adapts to this counter cycle like a counter revolutionary Iv-Oy ideas, then it comes up with new innovations to get around it with weak I-O policing.

For example if a government tries to run a deficit to stimulate the economy in bad times and a surplus in good times to pay for it then this might work with an average family like an insurance policy. Instead of insuring themselves against loss of work or unexpected bills by paying a premium they in effect self-insure by putting their own premiums into the bank and withdrawing a payout from it when there are chaotic problems. Often this can work but it is much more stable with V-Bi teams because larger numbers of people can pool their resources and overcome bigger chaotic problems.

For people to do this on their own is like an Iv-B solution to an Iv-B problem, what happens is competition forces them to cut their savings down and so they have no self-insurance when the collapse happens. In the same way free trade tends to undermine this strategy because economies are competing more and saving less, this tends to create winners and losers with the losers having chronic deficits.

A cycle implies randomness because a sine wave, which is basically the desired pattern of surplus and deficit is based on pi and so is a V-Bi strategy. A normal budget then might be where government expenditures equal its income, then it might fluctuate into deficit or surplus like a family’s budget according to some capital expenditures like a government building infrastructure, paying off some debt or getting a new loan like a government having a special bond issue for a building program, wages like a family paying someone to mow the lawn or a government paying its workers, and so on.

When the family is out of work then they might draw out of their savings, this is like a government running a deficit in times of high unemployment. However in an Iv-B economy this family is unlikely to be able to do this, they will instead either teeter on the edge of bankruptcy or become wealthy. This is because balancing finances like this requires V-Bi randomness and it doesn’t work in Iv-B chaos.

In the same way when the economy has a disconnect between V-Bi and Iv-B because of weak policing then this counter cyclical strategy fails because of Iv-B booms and busts. For example in the 1990s the US moved toward a budget surplus because of tax receipts from the tech bubble not because of a self-regulating economy naturally going into surplus after a deficit in a previous recession.

These receipts grew exponentially and governments tended to spend them because they thought they were the new normal situation, however with the chaotic collapse the tax revenue went off a cliff in the first Bush presidency. Counter cyclical policies of all kinds then tend to fail with weak I-O policing.

Even if deregulation is bad in some ways such as the rising levels of subprime fraud in the US in the 1990s then it will still sometimes be advocated after a long period of low economic crime where the cost of these regulations were seen to be hurting innovation. This is because policing is uncertain so some criminals are always getting away with I civil and O criminal infractions of the laws.

Because some subprime fraud occurred then did not tend to raise many alarms because as most economic statistics show crime occurs all the time. The real problem was this crime was rising exponentially in a wave but this was not seen because the I-O police were not randomly auditing the system, like police not randomly walking the beat or patrolling in cars.

The actual range of this waxing and waning of I-O policing is not usually known to criminals, local police tend to have reached a stable level of policing but they often surge their forces in a crackdown which amounts to a waning then a strengthening and then weakening again. So not only do they wax and wane in strength according to funding or political pressures but they also do this as part of their strategy of policing. They then keep some reserves of manpower and funding as Bi-Ro and vary their responses in a complex and uncertain mix of chaos and randomness that criminals cannot predict.

When the police wane in overall strength because of pressures from the other colors this allows some criminals to predict them better because they know the police cannot surge in strength as much when they need to. In the same way though when the police become too strong such as after a crime wave then they might have too much funding and tend to overuse their strength causing resentment rather than holding larger forces in reserve.

In the same way economic policing may work better with occasional blitzes where banks and other parts of the financial system are hit with random audits much like taxpayers are. This is intended to create a panic in Iv-B because they tend to run and hide their deceptions rather than fight about it, this fear will last for a long time and then ideally another blitz should occur before they become too confident again.

A blitz or surge in forces then is like a chaotic exponential increase in energy with the regulators but targeted randomly so it is a mix of randomness and chaos, they are in effect growing and collapsing their responses chaotically towards random targets. They might also randomly patrol some areas or do random breath testing for drink drivers. They are then patrolling randomly so chaotic criminals cannot anticipate where they will be and then aiming for deceiving people by growing these patrols chaotically.

The police may also reverse this so that they move chaotically and then people can easily anticipate where they will be, for example they might have a police presence at their stations or patrol in malls at the same times each day. However they might vary their responses randomly, some days they might let many minor offenses go unpunished but on other days they might book everyone do the same things.

So Iv-B and Oy-R people might get used to seeing these police and because of their competitive nature they cannot afford to always do nothing when the police are around. If some did this then others might commit minor crimes and gain a competitive advantage because most of the time the police would not be doing anything. So for example prostitutes and drug dealers might usually be secretive but when the police patrol at known times they get used to plying their trade near them. Sometimes though the police will randomly arrest them and this keeps them under control because they never know when it will happen.

This is like Oy predators in the Roy animal kingdom that act in predictable ways, R prey might get used to them being around but most of the time they are not hungry and do not attack. So the R prey need to eat and drink and they find it is better overall to take some risks rather than starving because they are afraid to ever let the predators near.

Because whether the Oy predators have eaten or not is random then the R prey cannot anticipate when to let them close or not. In the same way the I-O regulators can police an economy by having known patterns of their movements or even vary these chaotically in surges. For example the SEC might surge its monitoring of the stock market for insider trading or have investigators working more inside some companies looking for fraud.

However if they find it often they don’t do anything, this is a source of some frustration with the Bi-Ro public after the GFC. Because often the I-O regulators don’t prosecute or use small fines then the Iv-B traders find it is not worth their while to hide all the bad things they do, the I-O police then get a better picture of what is going on while still being able to vary their responses randomly so the traders cannot be sure whether they will be charged or not.

A health inspector might have a blitz on various restaurants, they open areas and used traps like a sting operation where R mice have become used to secrecy and so for a time they might clear out of a building completely. It can also cause some chaotic collapses in their numbers so this combination of creating panic in Iv-B criminals, tricking them with sting operations making them more paranoid for a while, and taking away a lot of their built up profits in collapses and fines can deter them for a long time.

However if the health inspectors often do not set traps or disturb the R contagion such as rats then like the R prey mentioned earlier they quickly come back thinking it is a false alarm. This allows the health inspectors to randomly demand the contagion be treated while catching more of it.

Warnings by experts and pundits of chaos assume the Biv economy is in a state to listen and respond to them, sometimes it can respond enough to Iv whistleblowers to temporarily strengthen I-O policing but at other times it might fall on deaf ears as Iv-B sometimes makes so much money from deception it can pay off and suppress the I-O policing. Also the I-O regulators vary their responses to these warnings chaotically and randomly whether they are strong or weak. For example pundits might claim that an Iv-B boom in the economy is going to bust with devastating consequences, this is the same as Iv-Oy whistleblowers claiming a crime wave is in progress generally or at a particular company. The police might handle this chaotic information with random responses, sometimes it doesn’t crack down on the problem because this causes these companies to hide their crimes less and overall it might allow more whistleblowers to emerge than if they cracked down on every warning.

For example if companies assumed that whenever they did something openly wrong that some Iv whistleblower would turn them in and the I-O police would prosecute then they would just be more secretive. So while ignoring pundits and economists prior to the GFC turned out badly in this case in the long run it works well because in the aftermath it has been relatively easy for the police to accumulate evidence about these frauds. If the police had been weak but also highly predictable in prosecuting everything then the same collapse might have occurred but they would have no evidence later to catch those responsible. While the system failed in having the GFC Aperiomics is not about fixing the system but in describing how it works, this includes how at some times it becomes more unstable and even collapses completely.

Whistleblowers being ignored can then be part of the system of policing itself. It might also be that I-O is waning in strength and cannot respond to some complaints because of their bureaucracy and low funding but because people get used to some crimes being ignored they might not take this as a sign of problems with the policing of the economy, this is part of the uncertain nature of I-O.

Usually as a crisis is building many different kinds of whistleblowers will see different and possibly even unrelated parts of it because one contagion growing because of weak I-O policing might also be a good situation for other contagion to grow. For example a dirty restaurant might have growing numbers of cockroaches and rats but this does not mean they are allied with each other but that weak policing allows different contagions to grow.

As these whistleblowers complain then they might also come together and see a grand conspiracy behind the economic problems, however usually Iv-B and Oy-R people do not conspire because they do not trust each other. V-Bi and Y-Ro people do tend to conspire but they are so transparent that they cannot easily hide anything, this is why successful conspiracies are so rare. Instead Iv-B and Oy-R work alone but can grow chaotically and make it appear they are working together because they form fractal patterns, for example the branches of a tree need not know what the others are doing as long as they all grow around the same rate the pattern will be self-similar at different scales like a fractal.

The I-O police then have learned to discount most conspiracy theories even though the events might indicate there was one, instead people deceiving each other and competing can appear to be working together much like Adam Smith’s invisible hand in the market. However just because there may not be an overall conspiracy does not mean the chaos is safe, people can work together in a company or even an economy that acts just like a Ponzi scheme and because they don’t conspire it can continue on until it collapses with a lot of damage to the economy.

As many different whistleblowers and economic doomsayers grew increasingly strident about the global economy prior to the GFC this was probably cracks opening up in many different areas that eventually started to join and cause a major collapse. Because these people were reporting chaos the I-O police should have investigated using randomness, the various conspiracy theories and warnings about the economy then should have been randomly audited to see how much was behind it. However often in these situations the I-O police have themselves become more Iv-Oy and so they cannot use randomness or transparency easily any more, instead they tend to become part of the growing fractal structure of chaos themselves.

## These warnings prior to the GFC should have worked like the I-O immune system in an animal, when enough have been received the body might pay attention just like I-O doctors might ignore small outbreaks of illness but when it gets large enough they should investigate it as a potential epidemic.

Some economists prior to the GFC warned against unsustainable current account deficits but this went against other economic theories, these said that the deficits were only happening because the Iv-B invisible hand of the market was finding so much opportunity in the US. Because there were economic opportunities capital flowed into the US making its deficit worse, however much of this opportunity was really trade surplus economies trying to leave this surplus in dollars to keep their exchange rates low.

It would seem though that these trade surplus economies were losing some money with this strategy as they might be better off investing the money in their own economies, even though this would hurt their export industries. However this can be an underlying Roy Negative Sum Game where these exporters are predatory and looking to destroy manufacturing in the advanced economies.

A Roy strategy is innately predator and prey, it would then be aiming to lose less money that the advanced economies so it would not go broke until it had captured enough market share in manufacturing. This is then a strategy to become a Y alpha predator in manufacturing, once it gets this position then like the V canopy in Biv it can maintain this domination and make back the profits it lost earlier.

The underlying Roy strategy then is like an earlier example of how Oy predators might be starving more slowly than their R prey, even though it seems to be a losing strategy the future can always have other opportunities. For example as China and other Asian trade surplus economies have pursued this strategy many new industries have become theirs be default as they are now the only ones who have the capital and infrastructure to operate them.

The Roy strategy then has a G-Gb strategy overlaid onto it to give their Biv strategy. For example new industries might be on the verge of being uneconomical in some areas, this is the fence between G public property and Gb private property. A new computer design might be too expensive for the market and so the opportunity to make it might be in the G public domain. The problem is how to make this design Gb or economical to make for the Biv market where it can be sold.

Otherwise it might be made in G for the Roy parts of a society, for example it might be useful for defense and so the government might fund it even though it could not be sold at a high enough price to recoup this investment. It might become useful however to intimidate other economies with a military weapon to give a favorable trade deal to an Empire. This then would give a return on the investment because the Y Empire building it might raise more in taxes from the extra business that came indirectly from this new computer.

This happens a lot in the US, for example DARPA often funds new technology with potential military applications. This is also like in China for example where the government might use Roy financing to subsidize its fledgling Biv industries so formerly G public ideas become economical. They have done this with solar energy for example, the government funds are often available because China is not a democracy and so can use force to compel people to pay taxes for things that do not want.

This is how Roy societies work, G pubic property is controlled either by the O police in a neutral way or other colors such as a Y Empire or Ro communist state might control it according to a political leaning to the right or left. China can also do this with manpower, it might have prisoners manufacturing some goods for export at a price which would not be achievable without being able to force these prisoners to work.

Even without this Roy government support companies can still make Biv products more economical with an underlying Roy strategy that exploits this G-Gb fence between public and private property. For example they might allow more polluting of G public air and water that the advanced economies would not be allowed to do, this might make some goods cheaper for export and so they make more profits.

## Such a strategy depends on how resilient the environment is, if an economy does not compete to the edge of collapse of its ecosystem with free trade then it might have its industries collapse compared to others that do.

It also depends on whether one ecosystem is innately more resilient than another, for example some Asian economies might have more forests and be able to tolerate more air pollution than some of China’s cities and so they have an Iv-B competitive advantage by using an Oy-R predator strategy underlying this. For example Oy manufacturers might bribe the Roy government to allow this pollution because it hurts R people more.

Roy labor laws might also be a competitive advantage so companies can act like Y-Oy predators on the advanced economies, for example the government might jail Bi unionists on the basis that they are Ro communist sympathizers because of bribes from Oy businesses, this would keep wages artificially low and make some products that would usually be G and uneconomical for the Biv market Gb as viable businesses.

All businesses tend to use this to some degree, Karl Marx saw this in England during the Industrial Revolution where the Empire and the aristocracy could protect Y monopolies in business and punish resistance to this. After slavery was abolished in the US after the Civil War many businesses were able to use a de facto slave system by having the government arrest blacks as vagrants or other trumped up charges so they would have to work for these businesses to pay for the fines levied on them. This system then was not so different from in China using prison labor to make exports goods.

## The global economy will always tend to do this where I-O policing is weak enough because those companies and economies that have this opportunity lose a competitive advantage if they decide not to use it.

Even without this Roy government support companies can still use an underlying predatory strategy in Biv economies. For example Biv companies in China might run some businesses at a loss or spend money on research for new products that cannot be profitable with the current market. Often they receive Roy government money to supplement this research as did Japan in the 1980, in this case however it might not be available perhaps because of I-O international trade laws or Roy government pressure from other economies.

They might then start making these goods and selling them as Gb at a loss, this might then cause Biv industries in the advanced economies to go bankrupt or lose market share. Then the loss making product allows these companies to make other profits because of this increased market share so overall the company might have grown or even increased its profits overall.

## For example some poker players might win by draining their opponents of liquidity with high bets, then they win more bluffs as the others cannot afford to challenge them.

This is like in the Roy animal kingdom where Oy-R animals often find it is worth having offspring that are likely to starve or be eaten before they can have offspring of their own. For example Oy hyena in Africa might get a competitive advantage by having too many offspring that starve because these take food away from other predators such as wild dogs and cheetah which reduces their numbers in a Negative Sum Game.

In the same way R prey such as gazelles might get a competitive advantage by having too many offspring because they eat V grass in a Negative Sum Game that denies it to other R prey such as Impala. These strategies can be critical when the food chain is very fragile in a drought, some animals are likely to starve and weaken more as a result of this making them an easier target for predators.

This then might make the R gazelles stronger by comparison and in effect grow their market share as the other prey get decimated. In the same way the extra Oy hyenas while often starving might take food away from the wild dogs and cheetahs causing them to weaken and catch even less food so the hyena increase their market share. When the drought ends then the gazelles and hyena might be more plentiful compared to the other animals.

There is nothing new in this strategy, companies use it all the time if it is legal. For example Japan dumped semiconductors onto the US market for a long time to bankrupt US companies so it could raise prices later and recoup the costs. So while running a company at a loss or not taking the optimum profits seems counterproductive in the Iv-B short term the system is so chaotic that a loser can quickly change to a winner after a tipping point is reached.

This can also happen with B workers as they gain a competitive advantage with an underlying R strategy as prey, for example workers in England after the Black plague paradoxically strengthened their bargaining power and won legal freedoms with the Magna Carta because the disease made the survivors so rare and hence valuable. This is like R prey in a drought dying off and leaving Oy predators without enough food, they then become more valuable in the Roy food chain.

In the same way B workers in China are getting higher wages and an improved bargaining situation because of this R exploitation, this has allowed many uneconomical G industries to establish themselves by bankrupting their competition in the advanced economies. By exploiting these R workers with Oy predatory business then this has caused a rebound in their value later allowing them to claim higher wages.

This can also occur with Y-Ro interactions underlying the V-Bi business in Biv economies though this is a random interactions rather than chaotic. For example a V business might be negotiating with Bi unions in a Roy war of attrition where they close factories trying to break the Bi union financially. This is like Y predators such as lions trying to keep a Ro herd of buffalo from eating or drinking to weaken them. The Bi unions might have a strategy of wildcat strikes or banning some businesses from doing deals with unionized companies, this is a war of attrition targeting V.

In the Roy food chain then the Ro buffalo might aggressively attack Y lions with their horns if they get too close trying to chase them off so they starve, this might be more successful than losing an occasional buffalo to them after prolonged sieges. If it succeeds then the Y lions will weaken in numbers or tend to avoid the buffalo who will then increase in numbers.

This can rebound on both of them however, if the V companies do too well by breaking unions then this is like Y lions overeating the Ro prey and then they have to make do with chasing the much more hard to find and deceptive R prey such as gazelles. In the same way many V companies might break the Bi unions and then find the B workers less reliable and productive though they might work for less, they could also steal more and leave the job more easily than those under a union contract.

This could cause chaotic disruptions in an assembly line, for example critical people in parts of this line might suddenly leave shutting down the whole business until others can be trained for the job. In the same way Bi unions might break some V predatory businesses and then find they can only get chaotic jobs with Iv businesses that break apart the unions. This is like a Ro herd chasing off or killing enough Y lions that their place is taken by Oy predators like hyena. These would chaotically attack the Ro herd and might even eventually break it up into becoming more like R prey to survive.

Biv companies then usually need to have a combination of underlying Roy strategies to manipulate this G-Gb fence to make money even from G public property or uneconomical ideas. Also however Roy societies usually need Biv strategies like this to make some money from the Biv societies, for example the Soviet Union used to sell some goods to the West for some needed imports. It was able to do this by the power of the state to force people to work cheaply enough to undercut the competing goods in the West.

The Soviet Union was able to sell oil to the Biv societies in exchange for needed wheat imports, this oil was taken from their publically owned G oilfields. This system is also common today in OPEC where most of their oilfields are G publically owned even though they could be run as a Gb privately owned resource. The reason for this is often because of this Roy predatory Negative Sum Game underlying the Biv oil business.

For example a country might be threatened militarily in what is often called the Great Game to offer better deals to Biv oil companies, many believe this was the underlying reason for the Iraq War. Other believe the Afghanistan War is in part be fought because of plans for an oil pipeline or mineral riches recently discovered there. So this Roy predatory system of wars is intimately associated with the Biv businesses that gain Iv competitive advantages from it, they might also divide the Y spoils from Y team military actions in V partnerships.

Much of these oil intrigues have been detailed by Greg Palast in Vulture’s Picnic, oil companies might team up as V to use their combined might to compel a better deal from third world economies to privatize their oil. Many of these countries are Roy dictatorships but find it economical to Gb privatize their scarce G resources to give a corrupt flow of money to the government. When oilfields remain G public property this is often more efficient in Roy societies so the money is more evenly distributed such as in Venezuela.

Just as companies have to play this underlying Negative Sum Game so too do politicians in Biv societies, this is why there is a predatory aspect to politics where candidates might be attacked by the media and other politicians unfairly just as predators attack their prey. In this situation the Negative Sum Game means that both political parties have to minimize their losses or pick the lesser of two evils, this can cause them to elect bland candidates that are hard to attack even though they may lack the ability to run the economy effectively. This situation becomes worse when the economy has substantial amounts of Roy areas or demographics because they might end up being the swing vote in the election.

For example in the US the debate on Hispanic immigration is primarily a Negative Sum Game where both sides try to avoid voter losses if they say the same thing rather than trying to build a more sensible policy.

To tell the difference between the Oy-R and Y-Ro underlying Negative Sum Games it is necessary to see whether events tend to change chaotically and rapidly with booms and busts or slowly in a war of attrition stabilizing around a normal position for long periods of time. Because Hispanics tend to come from marginal societies or Roy governments in South America and settle in Roy poor areas in the US their needs are also dominated by Negative Sum Games.

For example they might support the political party that is less likely to deport them or their relatives as a first priority rather than one that offers a path to wealth for them. Black voters might support the V-Iv Democrats in the US because of this underlying Ro-R Negative Sum Game where the see the V-Iv Republicans as Y-Oy predators after their welfare rather than as an opportunity to build a career to get them out of poverty.

Foreign policy can also be dominated by this Roy Negative Sum Game, for example the US responded after 9/11 by aiming to hurt some countries more than they were hurt rather than trying to create a mutually beneficial arrangement to lure poor people away from supporting terrorism. This can lead to supporting the underlying Negative Sum Game with multinational companies such as in oil because they are trying to minimize the chances of losses from an oil embargo or shortage by propping up Y dictators in many middle East economies.

This can also occur with economic policies in a Biv societies particularly with many poor Roy areas or being weakened after a recession or near depression such as the GFC. The desire then is also to play a Negative Sum Game of minimizing losses such as when the financial system was propped up globally rather than trying to fix the banking system to better serve both itself and its customers in a Positive Sum Game that benefits both.

This extends through all of the issues in economics, for example inflation and deflation are both seen as things to be avoided and minimized rather than looking for sustainable growth by examining what industries can best regrow after the GFC. Unemployment has been a target for minimization where for example GM was bailed out to reduce the domino like effects its collapse would have had on unemployment. Often the calls in the US to reduce extended unemployment insurance are to force people to keep looking and take any job by using the specter of starvation, it needs then to be reduced rather than a Positive Sum Game of investigated how to increase employment by retraining.

The crisis in the Eurozone as of 2011 and 2012 has been mainly about minimizing losses such as with mounting Sovereign debt causing some interest rate rises on these loans, the crisis in Greece has also revolved around minimizing the chance of default rather than increasing the chances Greece might be able to export enough to avoid default benefitting all parties in a Positive Sum Game. This is why the 1930s economic collapse in Europe led to another world war, it became increasingly a Negative Sum Game where each country was trying to minimize the chance of bad things happened which led to war because of the lack of effective O policing between nations.

No one of course wanted another world war, Germany was looking to slow its economic collapse as part of the Great Depression and found a Roy government with Nazism reduced unemployment and inflation. It also sought to rearm as a way to get out of reparation payments from World War One and to protect itself from other nations. In the same way Europe risks backing into another war by trying to minimize losses and picking the lesser of two evils rather than a policy of growth. For example to minimize the chance of Italy, Spain, Portugal, and Ireland defaulting it is trying its own version of quantitative easing but little effort has been made to understand why the GFC happened and whether the policies being used are more than a slowing down of further disasters.

The Arab Spring of 2011 was mainly a Negative Sum Game rather than an urge to grow into Biv societies and democracies, most of these countries initially experienced unrest because of rising food prices that people were trying to find a solution for.

Rather than trying to find a model of democracy that would work in these Roy societies they usually were trying to minimize their losses from Y dictators propped up by the advanced economies to minimize their chance of oil shortages.

The responses to this Arab Spring were mainly a Negative Sum Game as well rather than helping them to become democracies even if this led to a more peaceful region, Israel for example was mainly worried about whether the situation would become even worse than it was with new leaders. The US and others were worried about minimizing the growth of Al Qaeda and the Muslim Brotherhood, in Libya the US was trying to minimize the costs of helping the rebels after all the expenses in Iraq and Afghanistan spent to minimize the losses from Al Qaeda in another Negative Sum Game.

Economically the global economy has also been managed as a Negative Sum Game after the GFC, the collapse of international trade was seen as a disaster and minimizing the losses from trade has been more important than resolving unsustainable trade imbalances. In all these situations then political leaders as well as CEOs of corporations are sometimes being confronted with an increasingly bad set of choices to minimize losses, this is because of rising Roy chaos.

## Because of this the underlying Negative Sum Game in free trade is usually Oy-R because it is increasingly driven by exponentially growing technology such as computerization and Artificial intelligence.

Free trade after the GFC remains chaotic because the advanced economies have not tended to cooperate in V-Bi such as with B unions boycotting cheap imports or V companies using their influence on the government for tariffs and quotas. Instead they continue to embrace the competitive nature of this trade often because each side is deceptively benefitting from this gutting of the V-Bi savings of these economies. For example B consumers get cheap imports and they would usually not be allowed into the Bi unions anyway so they have little to lose by not unionizing. Iv agents can make large profits from importing goods and reselling them for higher prices than local V companies can make them, they have a vested interest in lobbying against tariffs and V companies often get the lion’s share of these import profits.

These colors then have little incentive to protect the economy just as in all other situations they tend to make the system less efficient or even collapse rather than work together. The reason for this is the I-O police are supposed to address problems of injustice from free trade such as these unsustainable trade deficits and the GFC which partially resulted from it.

However the strength of the other colors is too strong and so the Iv-B and V-Bi disconnect is unable to be bridged by the I-O police until the situation becomes dire enough for the police to be obviously needed.

Sometimes this system works as it prevents the police becoming too strong, however if it is chaotically deceptive enough or there is a war of attrition such as with imports battering many manufacturers then the police may not be able to revive in time.

So the trade imbalance may not return to an equilibrium or normal position, instead it may keep rising exponentially, hit a ceiling and then crash as it arguably did in the GFC. As was seen with the carry trade this influx of capital need not be a Positive Sum Game overall where all parties benefit like with the manufacturing examples, it can be a combination of an underlying Negative Sum Game where all parties are minimizing losses to be the last one left standing to pick up the pieces.

Some economists say that since each transaction in Biv is theoretically considered to be a win for both sides then the US could only be gaining in wealth somewhere from these trade deficits and that Mercantilism was only hurting those economies with trade surpluses, they pointed to Japan as an example of what this strategy can lead to.

This is true in Biv as a Positive Sum Game where both sides gain but not only can the underlying Negative Sum Game affect this but one side can also gain more than another and lead to wealth inequality.

This has happened in a US with the top 1% increasing their share of both income and ownership of assets, this has also occurred with large wealth transfers to China, Japan, Taiwan, etc. When the products purchased are quickly obsolete with such as plasma TVs then this double win is asymmetric in time, for example one side might no longer have its gain from the transaction when the TVs stop working while the other side might invested this money and maintained its value.

This is like in a game of poker where the better players might all be making profits from the weaker ones, but some of the better players will be making more money than others. When the weaker players give up then the ones with more money will be able to use this extra liquidity to force the others out by raising the bids higher than they can afford. While they might lose some money with this strategy those will less liquidity will not be able to compete and might get wiped out on one big hand.

Even in a Positive Sum Game then this can set the stage for disaster, this also happens in the Roy animal kingdom where Oy predators such as wild dogs and hyenas compete to eat a rapidly diminishing pool of R prey such as gazelles. When this prey becomes very rare the predators that became fatter earlier or had more offspring will be more likely to win the fight between them even though both had been benefitting earlier.

In the same way a Positive Sum Game can be benefitting both sides of a transactions but this can only be viewed over a longer time scale to see whether it really was benefitting both sides. This is because time itself can be fractal like in Iv-B and Oy-R and can then be looked at with different time scales in a self-similar way. For example with the plasma TVs made in China being bought by US consumers by refinancing their homes with loans from China it appeared that both were benefitting from the transactions.

However when looked at over a twenty year period then the underlying Negative Sum Game seems to be more important because the TVs don’t last long enough to appear in the graph and it appears like a strong momentum of transfer of wealth from the US to China. In a fractal time of one day however it appears the US was doing better because the TVs are still as new while the loans on houses with subprime loans had not even reached their first repayment. While this Iv-B business would have a momentum towards collapse of US manufacturing this does not appear in the daily fractal time scale.

On this shorter time scale the chaos is harder to see as a trend, this is because with shorter time periods there appears to be more energy and so there seems to be a lot of business activity even though this is averaged out with perhaps millions of purchases of consumer goods in the early 2000s prior to the GFC. Looking at the situation with fractal time is not the same as with V-Bi high or longer time and lower energy because fractal roots and branches are still self-similar at different scales. For example looking at a small part of a tree the roots and branches are in a Fibonacci pattern that looks similar to the pattern of a much larger part of the tree.

In the same way over a larger time scale Iv-B does not become V-Bi but just that the momentum of the economy might become clearer as the shorter time scaled transaction like the smaller view of branches disappear compared to the larger view. The 1990s and 2000s then taken as a whole appear differently and the momentum of these Iv-B transaction is more clearly showing the underlying Negative Sum Game where people often bought goods to minimize losses rather than to make profits.

For example if someone buys a cheaper TV they don’t make a profit because they spent money, rather they minimize their losses because the TV will wear out one day but they still have some money left over. Depending on how prosperous the Biv economy is then consumers will tend to look more at the Positive Sum Game of investing for profits or gains on transactions or the underlying Negative Sum Game of avoiding or minimizing losses.

The loss of manufacturing in the advanced economies then is easier to understand with this Negative Sum Game where people bought imports to minimizes their costs rather than strategically planning to pay more and perhaps keep more manufacturing jobs for an overall stronger economy. Companies also often opted for a Negative Sum Game strategy of cutting costs and quality of goods as well as reducing wages though this tended to create a downward spiral of less desirable goods as well as lower wages locally to buy them. Instead in a Biv prosperous economy companies are usually more concerned with improving their products or innovating while workers are more concerned with buying quality that will last rather than saving in the short term.

On the other hand the trade surplus economies are increasingly playing a Positive Sum Game as they have increasing profits which can be reinvested to improve and innovate rather than trying to cut costs. China for example has embarked on many bold plans to improve its infrastructure with dams, railways, highways, building entire cities that look towards a positive future.

The advanced economies however are increasingly driven by this Negative Sum Game of saving money on government budgets, cancelling infrastructure such as railways to save money at the cost of future expansion, consumers cut back on purchases and hoard money to reduce the chances of losing their homes, even in war the US in Afghanistan is concentrating more on stemming losses rather than trying to win the war because of budgetary problems.

At each point the difference between using a positive or Negative Sum Game strategy is the G-Gb fence, for example the consumer might buy a cheaper TV that will sooner be worthless G public property as it might not be worth fixing after the warranty runs out while the more expensive TV would have been worth something as Gb for much longer.

## The more the decisions become a Negative Sum Game the more goods and services will become G public property as uneconomical to use just as a losing war will eventually produce large amounts of G war materiel that is abandoned.

Even in the short term a transaction is dominated by a Negative Sum Game, a Zero Sum Game, and a Positive Sum Game. For example a car dealer might be trying to sell a car to a customer. Both have a Positive Sum Game to play in the Biv society, for example the dealer wants to make money to buy consumer goods and expand his business and the customer wants to drive to interesting places in the car. So both benefit from this transaction, however there is also a Negative Sum Game being played here. For example the dealer might be trying to get rid of stock before it costs him money from taking up space in his dealership compared to better selling models. The customer is trying to not spend much money and is hunting around for the cheapest car that will do what he wants.

The Zero Sum Game here is a net transfer of wealth from one side to the other over time scales, for example if the dealer is spending money on expanding his business and the customer on a car that will quickly depreciate then over time the dealer wins by comparison to the customer. If the dealer is struggling to survive then the customer might get a car that lasts a long time when properly serviced while the dealer goes out of business and so the customer wins the Zero Sum Game.

Over time then some economies and areas or demographics in an economy can win this Zero Sum Game while the negative and Positive Sum Games are being played, for example the rising wealth inequality in the US and other advanced economies indicates the wealthy are winning the Zero Sum Game.

This can be an asymmetric situation like growing a top heavy tree which can becomes so inefficient with the tree eventually being top heavy and falling over chaotically like an economic collapse. When the customer wins the Zero Sum Game too much then the tree might become bottom heavy with a large root system and lower trunk but it might be short and stunted, such a tree is likely to become overshadowed by others.

The advanced economies are then becoming unbalanced in this Zero Sum Game particularly after the GFC, this has been because of the underlying Negative Sum Game where they have been the victims of predatory business which decimated their export industries. It also has been from the Positive Sum Game where people and corporations thought they were benefitting but were not over the long term, for example people thought they were making money in the real estate boom and were wise in refinancing with subprime to free of capital to home improvements and college funds.

The underlying Negative Sum Game can produce disturbances in the underlying Roy food chain where predators or prey might get the upper hand causing a destabilization or collapse, this has happened for example as consumers made short sighted decisions to reduce costs by buying imports while companies reduced costs by moving their manufacturing plants outside the advanced economies. Now just as the decimation of Ro-R prey can cause starvation later for the Y-Oy predators the V-Iv companies that initially seemed to be winning this Negative Sum Game by moving overseas are now finding they have decimated their own buyers of their goods.

The view of trade deficits is affected by the random model of V-Bi markets, that there is a normal balance of trade and that a deficit represents a deviation from it that will be self-correcting. This is also like the idea of a normal level of economic growth with a normal budget deficit where money is borrowed in line with normal population growth for developing the economy for such as new roads, dams, as well as for abnormal expenditures like wars, etc.

Keynes advocated a counter cyclical policy of running a surplus in good times and a deficit in bad times to stimulate the economy, like a policy of feeding a fever when sick compensated for by a diet when recovered. One problem with this is the concept of normality is based on a normal curve and so ultimately the idea of counter cyclical surpluses is based on the idea that recessions are not really random and so can be predicted.

If so then the idea of sometimes running a surplus follows, but if the economy truly is random then no one can know when to run the surplus and how much to save. This is then like trying to work out when to raise and lower bets in Roulette to make a profit such as with a Martingale system protection.

This is like the example of a family mentioned earlier that tries to save money to cover random accidents and bills, if they are truly random then they cannot know how much to save. It becomes a variation of the Gambler’s Ruin in mathematics where a random run of bad luck could theoretically wipe out any reserves or savings.

The other problem is that normality implies a trade deficit will correct itself like budget deficits, but it may be normal for some economies to go broke and for others to rise. For example if there are two economies with mineral deposits and one has much more than the other then normally the one with less deposits will use them up and become poor. This could happen even in a self-regulating economy because normality does not necessarily mean the same as wealth creation.

Our world however shows that it is not all random with deviations from a normal center that always return to it. For example the concept of normality in modern society is different from fifty years ago and will be different again in another fifty years. Chaos then tends to drive random events to a new version of normal.

This is why we only see probability working properly in a situation specially adjusted for it such as games of chance and surveys where the kinds of responders are carefully checked for bias. In an economy we cannot adjust data to use for probability without repercussions because we are trying to make the economy work as a whole. Removing this nonrandom data to make a statistical model of the economy work can then create the problem of this excluded data building up like a contagion and suddenly creating a highly nonrandom situation such as happened in the GFC.

The idea then that a trade or budget deficit is unsustainable can then be like a warning that this deviation from the center of the normal curve is getting large and so the correction back to random normality might also be large. The data might then be forecasting a sharper than usual V shaped recovery as a random deviation returns to normal, it might also be a chaotic collapse that will take the economy to a lower level like a vase tipping over and hitting the floor.

It was mentioned earlier that a normal curve when applied to the stock market often seems to have a higher peak and fatter tails than it should, this is because of the effects of chaos in the center and on the edges of the distribution. When this curve is used instead of a standard normal curve then it can also determine to some degree the amount of chaos in a situation and thus the chance of growth or collapse as well as random movement.

For example when Value at Risk models were used on Wall Street prior to the GFC by assuming these areas have higher levels of chaos then it would automatically point to a greater chance of economic collapse at these times. Also in the center of the adjusted normal curve it indicates more chaos from the influences from both sides, for example in arbitrage there is pressure from both sides of a stock price to keep it at an estimated normal price and these pressures interact chaotically as dependent variables.

When there is a crisis then it can be caused by the chaos in the fat tails or in the center of the adjusted normal curve. Generally with Y-Oy animals for example there is a random team of Y predators with chaotic predators on its edge so this accounts for the fatter tails of chaos where the Y team can fragment and become chaotic. This is like a Y pride of lions that might attack a Ro herd of buffalo and initially they work as a random team, those on the edge though tend to become separated and start to move chaotically.

In the center of this Ro team of buffalo prey there can also be chaos and competition as the weaker young might be protected here to keep them away from the edges of the herd where Oy predators or the edges of the Y team of lions might get to them. This chaos then tends to be buffered by randomness between the R young and the Oy predator so this can look like the adjusted normal curve with chaos in the center and on the edges.

It may also be that Y also has some chaos in its center as the leaders compete with each other to be the alpha predator of the pride, they might generally act as a team with some competition at the very top. This adjusted normal curve also works in Biv where for example a Bi union might protect its more vulnerable chaotic members such as those weakest or youngest from being exploited more or fired by the V management. In the same way the V management might also act as a random team with some chaos on its edges where the Iv agents blend in with those on the edge of V, in the center thought there can be some chaos where some compete for the highest jobs.

When there is an economic collapse then this can be a V shaped, U shaped or even L shaped recovery depending on the ratio of chaos and randomness involved. For example when the situation is highly chaotic the Iv-B economy might quickly collapse in a V shaped recession like the stock market did on Black Monday in 1987, then it quickly came back with more chaotic growth because there was enough liquidity in the system for the shock waves of the crash to not cause many bankruptcies amongst traders. It can also be like a vase that is nearly knocked over but does not reach the tipping point of falling, instead it rocks to one side from an external shock such as an earthquake. Because little energy is lost from the chaos the economy rights itself with little damage.

A U shaped recession is a random deviation, the economy might suffer from problems by the accumulation of random unlucky events like the stock market happening to have many companies with problems at the same time or consumers randomly having overspent and cutting back on their purchases for a while. As these independent events tend to not line up together after a while, like a roulette wheel suddenly showing a string of black numbers and then going back to about half red and half black, the economy rights itself back to the normal center. A V and U shaped recession are both not serious because the chaos and randomness are both mild by comparison to the L shaped recession.

An L shaped recession is more like the GFC or Great Depression where the chaos reached a tipping point like a vase being knocked over and the collapse caused shock waves that destroyed business because of high leverage and not enough liquidity to weather the storm. This then causes energy and momentum in the economy to be lost like potential energy in the vase and when it lies shattered on the ground it cannot quickly come back up like in a V shaped recovery. It could also be caused by randomness if the events are unlucky enough.

When the chaos of an Iv-B or Oy-R collapse gradually subsides then randomization tends and stagnation tends to take over as V-Bi reserves in the economy are rebuilt. It then depends on how much damage is done as to whether the old V-Bi normal will be regained, the damage from hitting the floor might be so severe that the economy will never recover, or it might grow back in a new revolutionary way because so much of the old infrastructure was obsolete and would not be worth rebuilding as it was.

The economy of a country can be run in three basic ways with different advantages and disadvantages. The first and most common way is to assume everything is random until proven otherwise, then get through the chaotic times without understanding them. This approach is very common because of the development of statistics that assumes everything is random, or based on independent variables.

For example when a normal curve is applied to statistical data it can only give information about how random the data is. It might give a skewed or distorted distribution compared to a standard normal curve than this implies that the data is nonrandom in some way. The differences in this data compared to the normal curve doesn’t really indicate what this nonrandomness means, for example it doesn’t point to any chaotic aspects such as reaching a tipping point and collapsing.

Because of this there is a tendency to assume the deviations from the normal curve mean the data was tainted or inaccurately acquired in some way rather than that it might be following a different kind of curve. For example smoking took a long time to link to cancer because the process showed that some smokers got cancer more than people who did not smoke. However this correlation did not necessarily mean there was a chaotic causation between the two.

For example it might have been that cancer prone people were drawn to smoking, or even that people under stress got cancer and they smoked to relieve this stress. Schizophrenics tend to smoke more often than the general population but this does not mean that smoking causes schizophrenia. Eventually a cause and effect relationship was established between smoking and cancer with genetic data, this is chaotic information that shows some people smoke causing genetic damage which causes cancer.

Such a process is highly chaotic because of the dependent variables involved, for example chemicals in the smoke cause some genes to turn on or create mutations in them that become cancerous cells. There is nothing random about this process but the cells that get enough of these toxic chemicals might be randomly positioned.

There is a tendency in statistics to adjust the data to fit a normal curve and this can remove the chaos to make it easier to analyze. For example political surveys go to great lengths to make sure each person asked is independent from the others and that no particular demographic is over represented. However this runs the risk of giving an answer that is normalized as V-Bi because of the Iv-B kinds of people that are excluded.

For example people without phones or with unlisted numbers might be more secretive and it might not even be possible to estimate how many there are, this has always been a problem with mobile phone owners who did not have a land line. Also many people might not answer a survey honestly because of the reaction from the person asking the questions, the questions might imply something bad about the interviewee if they answer in some way.

For example an answer might imply the person is racist, they might well be but do not want to admit it because it may hurt them alter in some way. Also people often say they want particular features in a product and then don’t buy it when this product is put on the market according to their specifications. These features might sound important in a survey but when it comes to paying money for them then people change their mind, in effect the survey might be acting like a sales spiel itself swaying someone temporarily when there is no money at stake.

However the most interesting part of a survey might be how people lie in it, for example it might be more important for a political campaign to determine how secretly racist people are than how they answer this question. To work this out similar questions about people of different races might be asked which would show people are more deceptive in some questions than others. Some tests in psychiatry such as the Minnesota Multiphasic Personality Inventory are designed to catch people in deceptions, but this is to catch malingerers rather than to investigate what motivates these deceptive people generally.

This is an important point because the GFC was largely caused by deceptive conduct, Iv-Oy subprime salesmen often lied to their clients and falsified the loan paperwork while the R-B customers often used liar loans with little relation to their actual finances. A statistical analysis of this situation would give a completely misleading account of the economy, in fact this data was used to create some top quality subprime bonds that defaulted a majority of the time.

Since Iv-B and Oy-R are based on secrecy and deception and V-Bi and Y-Ro statistics is based on transparency then any disconnect between the two will quickly give data which needs to be defined as chaotic, random, or a mix of the two. If this is not done then the data is likely to deceive people or to hide some activities which is the idea behind Iv-B behavior. Statistics does have tools to measure some of this deception, however they need a desire on the part of the statisticians to use them.

For example a company doing political surveys has little interest in finding out why people are telling lies to them, they just want to find out which questions avoid this or to exclude people like this. Neither of these strategies would have helped with subprime bonds however, excluding people telling lies from the data about subprime loans would just give misleading answers if the majority of people were lying in their loans.

For example say a political survey determined that half the people it talked to were lying or being deceptive in some way, they might exclude them from the results but never find out who these deceptive people were really intending to vote for and so the survey would always be inaccurate. The test of the situation is the election because over time these companies can see where their surveys are inaccurate and adjust them until they minimize these problems, for example it might be the honest responders are a good enough model for the dishonest ones or they might estimate the amount of lying as a rule of thumb such as with racial questions.

However this approach doesn’t work with an Iv-B or Oy-R boom and bust because the chaos is growing exponentially, a similar situations might be to ask people racially loaded questions when race riots are escalating in severity in an area. The problem is chaotic people like to be secretive and any survey that potentially invades their privacy goes against their nature, for example with race riots they might think the chances of being outed and targeted as a racist might be increasing with the numbers of riots and so their lying is also growing exponentially.

To resolve this problem an approach similar to the MMPI psychiatry test mentioned earlier might be needed, the idea is to apply the principles of random auditing to behavior that is not in response to a desire for transparent information. For example it might be a more accurate gauge of racist sentiments to monitor anonymous posts on forums or to infer racist ideas from survey questions without actually asking about it. So an interviewee might be asked their opinion about well-known people of different races to see if race is implicated in the answers.

To find chaotic data then it is important to also be secretive and deceptive, in the last example people might be deceived as to the nature of the survey when the real object is to determine how racist they are. In the same way to determine how much Iv-B contagion was in the subprime loan market it would have been necessary to deceive the respondents of any surveys, for example the I-O police might have been checking liar loan documentation and then seeing random numbers of these R-B customers to determine their income for a different reason. Some might be randomly surveyed about their taxes, about their subprime loan applications, employment history for a census, and so on.

If people are answering differently overall depending on the reason for the survey then it indicates deception that would be hard to find otherwise. In the same way the loan salesmen might be interviewed about salesmanship techniques, taxable income, with questions to determine their overall honesty or empathy towards others, and so on. Accumulating data like this need not be difficult, the main point is that the surveys are done to find discrepancies between the answers people give.

Many of these ideas are already implemented with various forms of I-O policing, for example tax departments might look at the tails of a probability distribution for improbable circumstances in tax returns. Police also have systems for detecting suspicious behavior, this is also done in computer security on networks where unusual data might be a Trojan or virus.

In the same way looking at people living in poor neighborhoods with liar loans stating unusually high incomes might find many are deceptive because Iv-B tends to be found on the edges of the normal curve. For example many Iv-Oy agents on the edge of the normal curve such as salesmen from average backgrounds with high numbers of sales might be falsifying loan applications or lying to their clients.

Ignoring chaotic data can then be like building houses for normal weather and ignoring the need for special construction methods for hurricanes and earthquakes because they are not understood and so there is no way to consistently build to protect against them. This can work reasonably well as long as the damage can be quickly rebuilt, economics often uses a similar strategy because the causes of recessions seem mysterious and because they do not fit well into any models then they prefer to stick with models that are mathematically precise even if sometimes inaccurate.

Like houses damaged in a chaotic hurricane they can hopefully be fixed up more cheaply than planning for the unknown stresses of natural disasters. We of course don’t get this problem in building because individual components of a house can be stress tested for chaotic fractures, in the same way we may be able to stress tests businesses and consumer finances to determine how well they would hold up in a recession.

For example companies could be randomly selected for audits and their situation tested for various tipping points such as a 10% decrease in turnover or increase in the costs of materials they use, a terrorist attack shutting down their machinery for an extended period, being robbed for a large sum that insurance does not pay for, and so on. Consumers sometimes live from paycheck to paycheck so any interruption in this such as from being fired, laid off in a recession, wages reduced from overseas competition, etc can show whether people would default on loans, turn to crime themselves to make money, lose some savings by having to sell assets quickly at reduced values, and so on. In the same way as individual parts of a house can be certified to survive a hurricane the different parts of an economy can be examined to see how well they would survive a recession.

Avoiding this problem in building materials and construction of houses until the chaos happens is the strategy used in many third world economies because the I-O policing such as with building inspectors is weak. Sometimes then houses are built poorly but sometimes they are fraudulently built to look strong to save money because of this weak I-O policing.

In the same way economics sometimes avoids the problem of chaos in their mathematical models from necessity but also these models have often been built up unrealistically because the data available is deceptive because of weak I-O policing. For example many financial models were used prior to the GFC to analyze risk in the markets but because they were based on this deceptive data then they often led to investments in fraudulent securities such as subprime bonds.

These models then have evolved over time because of this persistent deception in economic and financial data, the models work well enough when this deception is making profits in a boom and then when there is a collapse the cause is written off as mysterious or a black swan in the hope that the situation will resolve itself. In the same way someone analyzing third world housing without actually testing building materials might get a different view of their problem, the houses might be reliable in normal weather and even in the strengthening wind and rain of smaller storms and the early part of a large one.

Then there is a mysterious mass failure of many roofs coming off the houses, however without I-O police investigating this there is no incentive for anyone to find out the cause. The housing damage then can be viewed as a statistical deviation from the normal state of houses that is quickly repaired, insurance companies might take this view and not be interested in finding out how to prevent the damage as it would reduce the amount of premiums they could charge. In the same way V-Bi banks might prefer to have chaotic collapses sometimes in the market as they can just increase the interest they charge to cover any losses or get bailed out by the government.

The US and Europe followed this strategy until recently, the Great Moderation of low inflation and high productivity was a mysterious but welcome event in economics much like calmer weather made houses appear to be stronger than they really were. The GFC however has now led many economic theories to be questioned, they worked well in the absence of large amounts of chaos just as house often survive better in the absence of hurricanes.

Because they didn’t understand what causes recessions or what had caused the Great Moderation they instead hoped they had the resources to clean up and rebuild after they occurred. From this point of view the GFC was just a bigger unknown kind of earthquake, like with the weak level of building inspectors in third world economies the real problem was deceptive data and the lack of police strong enough to check it thoroughly.

For example in a third world economy building inspectors might be easily bribed or rarely do random audits and so most houses might give deceptive data to the housing authorities and the public. People become used to thinking the quality of the concrete in their homes is much better than it really is, that there are more nails holding the roof on, and so on. Using this data in statistical models the government might determine a city would survive a large hurricane when in reality it would be devastated by it.

In the aftermath it can be very difficult to determine the real problem because the hurricane would have destroyed most of the shoddy construction, in the same way reconstructing the deceptions of the Iv-Oy subprime lenders and R-B borrowers is difficult after the GFC when most of them have defaulted. There is a tendency to assume the mathematical models were sound however until they are done with a well policed economy then there is no way to tell for sure.

When chaos is ignored in these models as a minor inconvenience then they are based more on randomness and the normal curve, when this eventually leads to weak I-O policing from complacency and a collapse then the model is questioned as mysteriously wrong. This is how financial models evolved prior to the GFC, Value at Risk algorithms calculated according to the normal curve the chances of losses on any given day for a portfolio of securities. When the chaos was minimal it could quickly rebound because of the high amounts of liquidity available, because there were many of these V shaped fast recoveries with little loss of momentum then their cause could be ignored like the occasional housing collapse in fine weather.

In the same way Credit Default Swaps evolved models based on the normal curve using the Gaussian Copula, a three dimensional version of the normal curve to compare the odds of a pair of bonds defaulting compared to each other. This was based on their being independent of each other, that the chance of one defaulting was completely independent of the other like the idea that one falling domino was independent of another failing.

This is like assuming that one house losing its roof is independent of another house losing its roof as well because this is unlikely to happen in calm weather, in fact a high wind is likely to blow material off one roof and damage another like falling dominoes. The models then evolve based on randomness because with calmer financial weather as with the houses there is little interaction between the different elements of the data.

There is a strong momentum but this is just seen as a trend to this data and not as chaos, for example houses might be getting built with less material over time with moderate weather and the financial system became built with higher and shakier leverage over time because of the Great Moderation. The chaos of the situation then is disguised as a momentum of growth and so this is ignored in the purely random calculation, with stronger I-O policing however it would have been impossible to not see the deceptions that were making this data less reliable over time.

So this is the V-Bi and Iv-B disconnect in pure mathematical models and data, the V-Bi models evolve by ignoring the Iv-B data altogether or calling it growth or momentum without enquiring further about what is actually behind it. The Iv-B data is not understood by many people because they are all secretive and deceptive, people in these colors tend to be deceiving each other so much that even they do not really understand the nature of this distortion in the data except in retrospect after some crash.

## This might manifest like with Nassim Taleb as a healthy distrust of economic and financial models but when they try to quantify the problem they find it mysterious as well because secretive people are not willing to pool their information enough to understand it. This is why then only the I-O police can moderate the situation.

Instead of assuming that the economy is random and avoiding the chaotic data some try to assume that it is chaotic and avoid the random aspects. This creates a lot of problem as mentioned earlier because it is trying to get people to pool their ideas about this invisible hand of the economy, often it is successful in predicting crashes but they often underestimate the chances of a recovery. When confronted with the secrecy of Iv-B they often don’t try to delve deeper but just assume the invisible hand of the market will somehow work everything out.

This can leave them with some interesting insights into the Iv-B economy and able to give warnings about it, however when they try to go too deeply the deceptive nature of their own data tends to make their predictions fail as well. Their aim is usually for a V shaped recovery just as random models aim for a U shaped recovery, the problem is that this V shape assumes there is enough liquidity so momentum is not lost. For example prior to the GFC there were some small shocks in the financial sector that quickly rebounded, this was seen as evidence that the market could regulate itself if left alone.

However this is also the reasoning about V-Bi models, that there is a normal economy and that deviations from it should return to the center if left alone. The V-Bi system of a U shaped recovery is very different from this V shape because of the different mathematics involved, because each is advocating they be left alone this places them in a collision course with each other where randomness and chaos need to be resolved with each other or one will dominate.

This must occur in the I-O market with strong policing or else the disconnect between them causes economic problems where both are allowed to wreak havoc in the hope each will self-regulate. The problem with both V-Bi and Iv-B is they need not self-regulate because each can interfere with the other, this as well as uncertainties that must exist with an unknown future means that sometimes the Iv-B economy collapses and doesn’t regrow and the V-Bi economy deviates into stagnation but does not return to normal.

This clash of philosophies has been seen since the GFC where the Iv-B Austrians and related theories gave the opposite advice to the V-Bi Keynesians, just as their ideas are incompatible with each other so too are these forces incompatible in the economy. For example V-Bi insurance as a concept goes against the idea of letting parts of the economy collapse when they make mistakes rather than trying to prop them up, after a hurricane V-Bi insurance might try to fix houses and prevent people from losing money while Iv-B Austrians might advocate saving the premiums and rebuilding the houses stronger afterwards.

According to this Iv-B philosophy then any kind of randomizing process like insurance just gets in the way of the momentum of growth by making people complacent or stifling innovation, this can give rise to the concept of moral hazard being a danger in the economy rather than occurring because of weak I-O policing. The name moral hazard indicates that it is a hazard involving morals and immoral activity is normally against the I civil or O criminal law, it then becomes a problem with weak I-O policing.

Unemployment insurance has a similar reputation among Iv-B advocates, by providing a safety net as with acrobats it is said to make people complacent and careless because they have less fear of falling. However Iv-B chaos is not strengthened by removing V-Bi safety nets because by nature it grows quickly in a boom and collapses in a bust, the issue is not then whether V-Bi safety nets will prevent collapses or not but whether they will retard regrowth.

For example when companies collapse people get thrown out of work and the companies can lose money, unless they planned the collapse after having made their profits. With unemployment insurance workers might be less inclined or desperate to get back to work quickly so this to some degree reduces the fast momentum towards regrowth. In the same way government pensions might reduce the incentive of people to work harder because they have a guaranteed income regardless when they retire. Bi unions can also reduce this momentum of regrowth by making wages more expensive, the same can also occur with teams of V management supporting each other rather than using cut throat strategies.

## Competition then is the essence of Iv-B just as cooperation is the essence of V-Bi, the two then are fundamentally incompatible which is why they need to be resolved with compromise in the I-O market.

One of the reasons the Iv-B competitive philosophy is stronger in recent years is because of the Nash Equilibrium which many took to mean that competition was always better than cooperation economically. However in Aperiomics these situations don’t tend to arrive at an equilibrium but instead there is a mix of randomness and chaos that means sometimes competition is better and at other times cooperation wins.

For example the Prisoner’s Dilemma is considered to be an example of how competing interests outweigh those of cooperation because a prisoner might gain more by ratting out others than by trying to unite against the police. This was described more in my first Aperiomics book but because the prisoners can belong to teams or gangs then then often find it more profitable to keep silent. They might then be rewarded by other members of a Ro or Y team or even punished for talking.

According to the situation then the prisoners might be better off with a chaotic and competitive strategy of ratting on each other or a cooperative strategy of partnership with each other against the police. Which strategy is best often depends on their rivals, for example R or Ro prisoners might change their strategy according to whether their enemies are Y or Oy. Oy thieves might go into a Ro neighborhood and be assaulted by gangs acting like vigilantes, in this case both might go before the police who attempt to separate all of them from each other.

The Ro team would tend to not rat on each other because they will need to defend their neighborhoods from other Oy predatory incursions, the police might engage in a war of attrition against them to some degree by wearing them down in long interrogations and with the threats of long prison sentences. This might make them slowly break apart as a team and then there could be a sudden collapse into R where each tries to sell out the other.

By contrast the Oy thieves have no loyalty to each other and would tend to rat each other out quickly as their best strategy. However they usually work for a Y mafia team or gang which might punish them for ratting them out. They might then be caught between this desire to advance themselves by putting their competitors behind bars and their fear of being found out that they were snitches. The O police then can use this evidence of snitching to blackmail them later into working more against the Y mafia.

The Oy thieves then would tend to cave quickly and chaotically as their best strategy, the Ro gangs tend to hold together and this team spirit randomly absorbs the chaotic attacks of the O police. Sometimes also there might be R people associated with the gang who are also criminals or victims of the Oy thieves, the O police might try to make them testify about the Oy thieves but they fear reprisals and might deny a crime by Oy even occurred.

## This is a very basic analysis of the dynamics of the Prisoner’s Dilemma in Aperiomics, it can be seen however that the idea of a Nash Equilibrium where competition is always the best answer is not always true with these colors.

In Biv the color relationships are similar as overtones of the Prisoner’s Dilemma so this illustrates the problem in assuming that competition is always best and that an equilibrium exists where V-Bi and Iv-B interact in I. In this case the I market is like the O police in the Prisoner’s Dilemma, instead of trying to imprison someone they are trying to make business deals in a Positive Sum Game where both sides benefit.

In the situation of Oy thieves attacking a Ro neighborhood this becomes like Iv agents doing business in a Bi neighborhood in the I market. It is usually best to refer to this as the I-O market because O criminal police are often needed to keep it safe, however in this case I civil law will be considered on its own. The I market then is trying to broker deals between the Iv agents as overtones of the Oy thieves who might be working on commission to V companies that are overtones of the Y mafia.

Whereas the Iv agents get a commission from the V companies and sometimes get the better of them in business the Oy thieves get in effect a commission because they give the lion’s share of their stolen goods to the Y mafia in exchange for their protection. The Bi community works as a team discussing the Iv deals, this is like the Ro neighborhood fighting the Oy thieves in a Negative Sum Game where each tries to minimize their losses. The I market then must break down Iv and Ro to make deals just like the O police must do this to plea bargain deals of prison sentences.

Instead of Oy and Ro people trying to minimize their losses in prison time the Iv and Bi people are trying to maximize their gains from the deals being done. The Bi group then try to hold together and not take a bad deal in the I market with low profits just like the Ro gangs not taking a bad deal of higher prison sentences. The Iv agents are more willing to sell each other out and rat on each other’s dishonesty for profit, this is like the Oy thieves selling each other out to reduce their losses.

The V companies might penalize Iv agents that sell each other out by not doing business with them, this is like the V mafia hurting the Oy thieves that rat on each other. The B workers in this are often the objective of the Iv agents as they are also loners and highly competitive, because they are not part of a team they are easier to make profits off sometimes. This is like the Oy thieves aiming for the R weak and isolated people not protecting by the Ro gangs. The B workers then might not want to participate in the I market but deal directly with the Iv agents, sometimes also the B workers are dishonest and rip off the agents.

This is like the R people sometimes being thieves as well and avoiding the O police, they might also make a deal with the Oy thieves to not talk to the police in exchange for no reprisals. This is like B workers making separate deals outside the I market in exchange for no comebacks on them if the Iv agents are not happy later. Both sides then in Iv-B are foregoing the protections of the I-O market for justice as well as using the teams behind them to enforce some parts of a deal.

Competition and a Nash Equilibrium then often do not apply in a balanced Biv economy, however when there is an Iv-B and V-Bi disconnect because of weak I-O policing there can be many Nash Equilibriums where Iv agents and B workers compete to deceive each other as in a game of poker. To assume then that all relationships in business should be competitive then means that Iv-B is superior to V-Bi business, however as in poker this gives rise to booms and busts like rapidly increasing pots and then major losses when the cards are shown.

In such a situation then the V-Bi strategy of assuming the economy is random and transparent while ignoring chaos is like the Ro neighborhoods being concerned only with the Y mafia and ignoring the Oy thieves, this leads to rapidly increasing amounts of Oy deceptive crime and occasional collapses of their neighborhoods. Often this is accompanied by R victims of this thievery also tricking and stealing from the thieves.

The Iv-B strategy of the Austrians is to in effect concentrate on this Oy-R interaction like Adam Smith’s invisible hand where each is considered to be a knave that ultimately works for the common good. These secretive and deceptive Oy and R people are virtually impossible to follow in what they do, if they thought they were being observed they would be even more misleading so trying to understand them statistically to plan an economy is very difficult. The Iv-B Austrians then are often reduced to insights on their behavior which are quite perceptive but hard to replicate in controlled studies because these studies are based on randomized mathematics in statistics.

This is again like the default position of statistics where everything is presumed to be random and chaos or dependent variables, the essence of the Austrian economics, is left out. Consequently Austrian style economic insights are in effect excluded from V-Bi economic journals because they don’t give results consistently in times when there is no crisis. This is like Ro neighborhoods and Y mafia neighborhoods keeping statistics on what happens to their suburbs and ignoring these secretive and deceptive Oy-R people. Some then come up with anecdotal stories about what they do but because these do not fit in with the Y-Ro models of what teams do transparently this data is ignored or assumed to be wrong.

The same situation happens in many statistical areas, for example many people are cured by herbal and health food prescriptions by naturopaths even though these often do not seem to hold up in statistical trials or the trials are not done at all. Often this is because of the nature of people who seek out alternative medicine, for example people distrusting or being failed by these randomized trials of medicines might be deviant types that don’t work with these medicines. They might then be better treated by chaotic style medications.

## For example antidepressants have been touted by the V-Bi medical profession based on statistical trials done on them, however it has been publicized in the media that most work no better than placebos for mild to moderate depression. This then is an example of a trial which does not work well on people with chaos causing depression, for example they often do better exercising or taking some health supplements than with antidepressants because there is a cause and effect relationships between a poor lifestyle and their depression.

Another example would be where someone had had a death in the family and became depressed, it is hard to assume that this death is an independent variable to their depression and so it is more likely that counseling about this loss would alleviate the depression rather than trying to make someone happy with drugs about their death. The situation is similar to trying to prove that smoking causes cancer with statistics, the mathematics is set up to assume all variables are independent from each other and often ends up seeming to confirm this even when it is wrong.

Austrian economics then tends to look at chaotic but secretive business as an invisible hand that ultimately does good in the economy, however this chaos often exploits potentially dangerous situations for profits. For example when a bubble starts to grow a self-regulating market should detect that prices are becoming unrealistic and investors should find it more profitable to sell out reducing the bubble without damage to the economy. This is a long term view of what should happen but in the short term as in poker there is a desire to exploit a bubble like the occasional large hand to make money and get out before the crash.

For example people playing poker might make small amounts of money bluffing each other but they also hope for a large hand where the pot grows much larger where they might bluff out people and take it with a weaker hand. This is then like the bubble where Iv-B investors speculate in it knowing that it will probably burst eventually like the pot in poker but in the meantime they can profit from deceiving others.

Often these profits like the weak hand in poker are made with an inferior financial situation, for example an investor might use high leverage and bluff about his company to get more gullible people to buy investment advice or shares from him. Instead of regulators causing distortion in the market or perhaps a central bank interfering with interest rates these Iv-B people are looking for any changes to exploit to deceive each other. The central bank itself might also be involved in this mutual deception, for example they might be bluffing about future interest rate rises to slow a bubble’s growth when they don’t wish to damage the rest of the economy with these rises.

They might even be corrupt as Iv-B themselves, for example a central bank might lower interest rates and increase liquidity to create and maintain a bubble so their associates can profit from it while causing it to crash later with interest rate hikes when their associates are ready to short its decline. Without I-O policing then there is no reason for any part of the economy to be free of secrecy and deception even in the government, even without this corruption however there will still be extensive misallocation of resources in a bubble just as poker players misallocate their money in some unwise poker hands.

Austrian economics also misses from not investigating this invisible hand that crashes in a bubble are also part of Iv-B strategy, for example in poker it might be more profitable to cause a crash in a hand with a large pot where some players refuse to drop out and lose money to make others with less liquidity get wiped out. In the same way the GFC was useful to some companies because it wiped out their competitors so in the regrowth phase they had a chance to steal market share and perhaps achieve permanent domination in the market as a V company overshadowing the others.

In this case then fast regrowth after a bubble has burst might work for some Iv-B competitors and so the Austrians might say this is because of the invisible hand working better free of regulations. However it can also be profitable to delay this revival where each company tries to crash the markets with shorting, eventually when enough competitors have been wiped out the survivors might make more profits than if they had all allowed a V shaped recovery. This is like in poker where after a large hand has nearly wiped out many players they still try to have larger hands to finish the job leaving only a few of the best players victorious rather than allowing the weaker players to recover by winning smaller pots from the worst players at the table.

This is like in the Roy animal kingdom where Oy predators might fight with each other as the R prey numbers increase, when they overeat these R then Oy is starving. However instead of cooperating with each other to avoid overeating R so it recovers as well as avoiding more starvation in Oy they might attack each other even more. This is the chance to wipe out rival packs of predators permanently and so when the R prey recover the winners can populate the gap where their rivals have gone extinct. After the GFC then there may have been a time where the market was shorted each time it recovered to feed on the weaker investors until they went bankrupt, then the victorious hedge funds and investment banks might control more of the market.

V-Bi and Iv-B strategies are each attractive to their followers because they offer a feeling of certainty but this is at the expense of each ignoring the other. The problem is the time and energy based uncertainty in I-O which needs to be resolved as much as possible, it cannot be eliminated but can be minimized. However V-Bi and Iv-B both work by increasing their certainty in their models of the economy by leaving out information on the other. For example V-Bi Keynesian economics appears to be more certain by concentrating on aggregate demand where teams of people buy and sell rather than looking at what individuals do. The Austrians tend to think of the individual as more important than collectivist philosophies in economics, they then tend to ignore what V-Bi teams of people do to make their Iv-B individual transaction appear more certain.

In effect then it is possible to construct models that are more certain in their conclusions by ignoring data that doesn’t fit, for example political surveys ignore biased and deceptive responses by leaving some kinds of people out of their samples.

However this can lead over time to politics where Iv-B people lose faith in their government because it doesn’t seem to address their real needs. The problem is though that the pollsters don’t easily get to what people really want because often they don’t like to talk openly about it, instead they take their deceptive answers at their face value or exclude these questions and so both parties end up disillusioning their supporters. Another pollster might act more like a journalist and compile anecdotal stories from people who remain anonymous, these deceptive people are then more likely to be truthful.

A book of these anecdotes then might give a completely different picture of what voters want compared to the polls, however it does this by ignoring the open and transparent viewpoints that people give in polls to get at the stories underneath that are usually hidden. This is why exposes by journalists often portray a view of society where governments are seen as intrusive and dangerous, libertarians might appeal to these people more because they often do things against the law but tolerated if they are done quietly such as drug use. In each case the interviewers would feel more certain they were portraying the true feelings of the electorate even though they often oppose each other.

The economic strategy then is difficult to work out with these opposing V-Bi and Iv-B camps just as it is difficult to determine what voters want when they cannot be relied upon to be always truthful in polls. Often this results in a balance of misunderstanding the electorate where like the invisible hand these real beliefs of deceptive voters are ignored equally on both sides. For example it might be that a majority in an economy have smoked marijuana but because each has reason to be secretive about this the result can be criminalization.

In effect then people might want to be free to smoke themselves but vote against legalization to stop others going too far with it, the best solution then tends to be selective enforcement by the I-O police where people are free to smoke privately but not to have it affect others too much. Sometimes the libertarians try to build a momentum towards legalization but find that their own supporters often vote against it for this reason.

V-Bi and Iv-B then create their own models, arguments, philosophies, etc that give themselves more certainty by ignoring the contradictory ideas of the opposing colors. The next step then is to either compromise these opposing certainties in I-O or the two sides remain disconnected from each other doing things that tear down what the other does which creates economic inefficiency.

## Often a centrist course of action is worked out by the two sides arguing out these rival certainties and politicians getting elected as part of a V-Bi team or acting more like Iv-B individuals with their votes in their Congress.

This arguing between V-Bi and Iv-B is part of I-O itself and can be a good thing if compromises come from it, stable societies tend to enshrine these compromises and outcomes of conflicts into laws with precedents so the same argument doesn’t have to be revisited each time. These I-O laws then reduce the uncertainty and usually represent a middle position that both sides can accept or in the case of policing and armies not have enough allies or resources to fight against them in a long court case like a war of attrition. This however can change and so some laws oscillate from the left to the right over time or become more energy or time based.

In this case then the centrist response to hurricanes and earthquakes would be to have I-O inspectors make sure new buildings were stronger and to work out how strong they need to be to withstand the disasters. However these inspectors would tend to be strong after an earthquake but then as time goes by without a way to predict new chaos these inspectors will seem like a waste of money.

There can also be a renewed belief in the market to build better quality houses without building inspectors because buyers should in theory shun builders with poor reputations. However Iv-B business is designed for short term profits at the expense of long term credibility, usually it makes no difference to them whether their reputation is lost because they make money competing with each other in the boom phase and getting out first before the crash.

When there is going to be a crash because of fraudulent house construction this just means that the competition is to take advantage of this fraud, those people with too many scruples tend to drop like the with Gresham’ Law. Iv-B business never has to become more honest and transparent any more than poker will evolve to become a game where no one bluffs.

Eventually as the I-O building inspectors are weakened more flimsy buildings are constructed which make more deceptive profits until they are flattened again in the next natural disaster and then the I-O building inspectors regain influence. The V-Bi time based strategy might be where since the cause is unknown chaos it is cheaper to go back to not being vigilant and try to keep enough reserves and insurance to rebuild after it. Insurance companies usually make money from chaos so they have little incentive to minimize it, for example people made more money from Credit Default Swaps and this made it less necessary for investors to stabilize the economy if they could get paid out with defaulting securities.

Iv-B and V-Bi then profit from each other in a kind of cooperation and competition, while V-Bi tries to take advantage of the booms and busts to profit with randomness the Iv-B businesses take advantage of this V-Bi safety net to take even more risks. This then is a kind of moral hazard but part of the system when there is weak I-O policing, for example the subprime and derivatives boom was partially caused by moral hazard with the Greenspan Put.

This meant that the market assumed that Alan Greenspan would bail out enough of the markets so they could take on extra risk to compensate, this is also like someone taking more risks in where they park their car because they have insurance. While this is not an ideal scenario for an insurance company they still make money even when some people take more chances, for example they can raise the rates and penalize people who have had previous claims.

If an insurance company refused this kind of business then another might take it on and increase their market share as happened with subprime mortgage loans. Companies often go into markets that are more dangerous or toxic just as plants often spread their roots into poorer soil, the point is to build a large company because the V management can make more profits with the extra turnover and sell out before the company foundered.

This is the Iv-B desert plant strategy, if there are potential consumers to profit from, even though they may be dishonest and deceptive, then companies competing for market share will keep trying to expand into this areas even if they collapse over and over like the desert plants. Moral hazard then might be considered a crime but the nature of the I-O police is not to eliminate crime but to moderate it and stopping it from getting out of control.

When the I-O police are strong then companies will still tend to grow and collapse with deceptive competition as Iv-B and make V-Bi insurance companies pay out for their losses, if they don’t do this then the honest companies will be driven out with Gresham’s law again leaving those who will. The Greenspan Put then was only dangerous because of deregulation, the market might incur more losses because of this put but it will also make more profits and create more stable businesses by taking extra chances because of it.

In the same way insurance companies will lose some money because people park their insured cars in dangerous areas but often these cars will not be stolen anyway, this then creates some beneficial economic activity because some excessive risk taking is profitable overall. Sometimes this risk taking can improve an area just like plants growing on the edge of deserts can sometimes convert it into good soil, for example as more people park in a crime ridden area then more businesses might open there creating jobs and reducing the crime rate. Moral hazard usually breaks an I civil law rather than an O criminal one, it can then be putting more money into a Roy area and converting it to Biv.

In the same way weaker building inspectors might cause some flimsy buildings to be built and be regularly knocked down in hurricanes but this is part of the imperfect and uncertain nature of I-O policing. Insurance companies will evolve to take advantage of this flimsy buildings by insuring them and taking some losses in exchange for growing to be a larger company. Dishonest Iv-B builders will cut more corners with their designs because they know the insurance companies might pay out when the house collapses in a hurricane, if not then these houses might collapse in good weather when they would be liable.

## The market then works with some inefficiencies when I-O policing is not perfect, this is a way the market grows and shrinks like on the edge of a forest as plants make mistakes. The idea of a well-functioning economy is not to be able to predict the future infallibly but to reduce the mistakes each color makes to a minimum.

This is because events themselves happen with a mix of chaos and randomness, when they happen more randomly then V-Bi parts of the economy grow to take advantage of this and Iv-B shrinks. When these events happen more chaotically then Iv-B grows and V-Bi shrinks, one of the reasons the GFC happened then was that events were more chaotic and so Iv-B companies were better able to make profits from it.

For example with people parking their cars in dangerous areas if these cars are damaged randomly then V-Bi insurance companies can calculate out the premium costs and make profits. If they are damaged chaotically such as from occasional riots then the mathematics they used will produce more losses until they either refuse to insure in these areas or have exclusions in their policies for chaotic events such as riots.

The more chaos there is then the more this breaks down the V-Bi economy, for example when large hurricanes come too often and use up the reserves of the insurance companies and so the society seems to be saving up only for rebuilding after disasters. When this expense becomes too much for Biv insurance companies they might drop out and this insurance might become Roy government owned, for example with FEMA in the US after Katrina. Often though this insurance cover is insufficient and people might have to build flimsy buildings that do get knocked down in hurricanes, the very kind that I-O building inspectors would like to prevent.

However when the environment is too chaotic this weakens the I-O police and strengthens Iv-B, people might become more deceptive and be ready to loot whenever there is a hurricane, pull down their buildings when possible, and so on. This is seen in some third world economies when hit by natural disasters, the buildings are not designed to try and withstand these because it is often too expensive to build for the occasional chaotic disaster.

Instead they save money by building something that is not intended to last or the building industry becomes more deceptive as I-O building inspectors have little influence. For example a poor city might have frequent hurricanes but a strong I-O police has put in place strict building regulations, the cost of rebuilding puts a big strain on keeping up with these regulations and so more people bribe the building inspectors or the government decides to water down the laws.

The chaotic situation would make the I-O inspectors become more Iv and deceptive themselves, they might then become more like agents who take bribes like commissions from home builders to save money. In the same way as the global economy has become more chaotic, partially from the exponential growth and collapse of so many new technologies, the I-O police don’t try as much to keep it honest. They instead become like the self-policing Iv-Oy companies themselves, often they are covering up their own lack of policing rather than going after the fraud that grows and collapses regularly in the economy. This is like fraud around the I-O building inspectors that gets worse as there are more hurricanes.

Usually in this case as well the I-O inspectors gain in influence because the result of deceptive building practices has been exposed, then they wane in strength again. This might go on until the I-O inspectors become strong enough or the economy becomes wealthy enough in Biv, perhaps with some scientific research on how to build houses better, then few people want to go back to having their city destroyed over and over.

Sometimes then the benefits of a balanced Biv economy become obvious enough that people support the police more, they still weaken sometimes but not enough O cause systemic risk in the economy. For example most advanced economies have strict building inspectors in their cities because the cost of having them fall down has been reduced to a minimum of uncertainty this way.

However this can change if the economy becomes poor and becomes Roy again like a ghetto, buildings then become less efficient as Gb private property and unless building code infractions are criminalized in O there will be increased fraud in their construction. It also depends on the level of natural disasters, for example in some parts of the US earthquakes and hurricanes are very rare so the economy there is more V-Bi in building.

This can weaken building regulations because insurance is a viable alternative to a stronger construction to resist these natural disasters. For example under pressure from the public and business some building regulations might be relaxed because storms are so rare that the cost of them cannot be justified. It might be cheaper to pay insurance premiums for the occasional storm than to spend large sums making a house much stronger. The randomness of the natural disasters then also weakens the I-O police as with the chaotic nature of these disasters when they are much more common.

In the same way an economy needs an optimum balance of chaos and randomness in the challenges it faces to keep their I-O regulators strong and influential. In the 1970s the US and Europe experienced V-Bi stagnation and weak Iv-B growth because of few important technological innovations. As a result the financial sectors became very slow and stable, banks resisted excessive regulations because they had the insurance like liquidity to overcome most problems. It was cheaper to have some loans default because of the high reserves the banks had, they could average out these ransom defaults and just charge higher interest rates to cover them.

In the 1980s the economy started to become more chaotic and in some cases this caused collapses from a lack of I-O policing such as with the Savings and Loans crisis in the US. In this environment it became more obvious that regulations were needed and the Basel Accords for example were part of a comprehensive effort to make banks safer.

In the 1990s the economy became still more chaotic and the economy started to turn to a new model of Iv-B where I-O policing was again weakened. Instead of trying to keep up with banking fraud the financial system instead tried to manage this chaotic risk better. This is like in a Roy society where it might have Y-Ro stagnation which weakens the O police because Oy-R criminals are more rare. Then over time this Oy-R criminals increase in number and so the O police become more efficient B Y building up a network of Oy snitches. Then as the society becomes more Oy-R chaotic there are so many secretive criminals around that instead of having to rely on the police people protect their assets with deception themselves.

For example they get better at hiding their valuables or distributing them in many places so the chances of all these hiding spots being found is low. This is like the Iv-B financial sector trying to cope with the increasing amount of chaos by reducing risk rather than depending on policing, they would instead of placing their investment eggs in one basket use derivatives to spread the risk as widely as possible. So in the event of a chaotic collapse the theory was that most financial structures would survive and so most of people’s money would be ok.

As long as they received a high enough return for this risk then the system would appear to no longer need intrusive I-O policing so they weakened in strength again. This is like the city getting more hurricanes, eventually instead of using building inspectors to maximize the strength of houses people distributed the risk by spreading their valuables widely to avoid looting and collapses of homes and business in the hurricane.

This can work to some degree but over time as the hurricanes increase the houses become more flimsy until a large hurricane flattens the whole city as is often seen in the media in third world economies. In the same way as the global economy has become more chaotic with exponentially increasing technology this spreading of risk created a flimsy economy because everyone thought they were protected by spreading their assets in more flimsy investments.

This was seen in subprime bonds for example where it was assumed that real estate was unlikely to collapse in US cities a long way from each other, this is like a city where people spread their assets all over believing that no natural disaster would hit the whole city at once. When this large external shock does happen though it causes a greater disaster because with the risk spread so evenly it becomes possible for this shock to overwhelm this risk prevention everywhere. In the same way the GFC caused a near global real estate bust and so subprime bonds composed of widely separated mortgages also collapsed in value though they had been valued much higher because of this diversity.

The 1920s prior to the Great Depression then were chaotic like this, the US economy was innovating rapidly and to finance this Wall Street was making large profits even though many banks and businesses were being hit hard with fraud and failed business ventures. This is a natural state of affairs with rapid innovation such as with mass production at the time, however if the technological innovations are spreading through the whole economy such as with the automobile then this can cause chaotic cracks everywhere as jobs based on using horses for example collapse.

When these innovations are extensive enough they will keep undermining the V-Bi parts of the economy, companies then rely more on keeping up with this innovation rather than demanding the I-O police reduce waste from corruption. At the same time the recovery in Europe from the war would have led to more innovation as new technologies were used to rebuild infrastructure, the US would also have been innovating more rapidly as the war economy was converted for peacetime uses.

After the Great Depression the I-O police were strengthened by Roosevelt, for a long time after this recessions were much weaker because of so much I-O regulating, in effect the US economy was forced to grow as balanced Biv rather than in a V-Bi and Iv-B disconnect. Like a police state in many ways, the fear of the Great Depression and memories of World War Two kept most people obedient to this strong I-O system until the younger generation in the 1960s became more Iv-B and rebellious.

There developed an underground R-B society of drugs, R communist sympathies, promiscuity, and rock music which was investigated by Iv-Oy police undercover such as with narcs. Pressures like this began to weaken the I-O police, the result was an increasing Iv-B and V-Bi disconnect where the Iv-B new generation with its secretive and deceptive ways were growing rapidly in influence as baby boomers. The V-Bi older generation watched as this 1960s boom in culture such as the sexual revolution collapsed and encountered an Iv-Oy counter revolution where many turned to the right away from the left wing R-B revolutions.

While these innovations were mainly in culture and art there was also increasingly technology fuelled by the competition between the R-B communists and Iv-Oy capitalists. These innovations were only slowly coming into the business community however, even in the 1970s the global economy was stagnant as V-Bi.

According to Aperiomics this set the stage for a strongly growing and balanced Biv economy called the Great Moderation, I-O acts as a moderator to reduce the wild swings of chaos and randomness. The regulations from the Great Depression were largely in place and improvements in technology such as the computer were starting to lift the economy out of stagnation.

There came the belief that depressions were gone for good, that economists had stumbled upon the answer and so the building regulations were no longer needed.

Each root and branch of economics tended to claim credit for this moderation but the real cause was likely to have been this strong I-O policing, when this started to weaken with Ronald Reagan then problems such as the Savings and loans crisis started to tear apart the economy. This exponentially growing Iv-B economy caused disconnects in many areas but it was not until this mathematical disconnect became part of the money grid like software itself that contagion flattened the financial sector and caused the GFC.

In most parts of the economy until recently there has been a moderating influence where people’s consciences at as I-O police, as computerization has made many jobs too complex to be understood by the human mind this conscience has been replaced by computerized algorithms that do not emulate the human concern for justice.

The cost of preparing for a disaster can be a corrupting influence compared to making more profits from flimsy construction that may be obsolete anyway when it is destroyed, in the some ways the GFC will have damaged parts of the economy that were less efficient. For example with building houses in a hurricane prone area there is always a gamble as to whether money has been wasted by building them too strongly, this is especially true when the builders can have plausible denial if the buildings do collapse in a storm.

Some of the collapses in the GFC then were part of this exponentially growing technology making parts of the economy obsolete and uncompetitive, as with the 1920s this tends to cause businesses to try to balance the losses from obsolescence with viral profits as people rush to the latest innovations. This is seen nowadays with smart phones where each few months a seemingly must have improvement causes companies falling behind to lose money, Nokia is an example of this as of 2012.

The Iv-B balancing act then is highly unstable and many technology companies are in danger of quickly being crushed by the competition, usually these changes are slow enough for people to understand what is happening. However when these innovations are going on in software, especially algorithms used for trading and derivatives in the money grid, only a few programmers might have a grasp of what is going on in this secretive and deceptive software code.

A large percentage of the post GFC unemployed may have had to be retrained for new jobs anyway because of these constant innovations, much of this problem was cushioned by the rapidly growing leverage of Iv-B appearing to put more money in everyone’s pockets. Without this it would have become obvious much earlier that the loss of manufacturing jobs in the advanced economies would cause financial problems.

People then were in effect deceived by first the tech bubble and then the real estate and derivatives bubble prior to the GFC, this is no coincidence because the nature of Iv-B is highly deceptive. First the tech bubble fuelled this deception as people became euphoric about tech stocks, when these crashed the resulting viral growth of the internet and the money grid from this technology continued to deceive people because it was not policed.

## This then allows a way to predict the near terms future in regards to technology, generally the areas where it grows the fastest will be those where the results will be the most deceptive in some way. The Singularity for example is supposed to be the culmination of this exponential growth and so it is most likely to be not what we expect.

We see the same in any game where there are variations in the amount of hidden data, for example chess has no hidden information except for perhaps what people learn from databases and secret analysis. Surprises then are most likely to come from this hidden aspects of chess, poker however has hidden information with cards that are not exposed and so unpleasant surprises are most likely to be experienced by the players from this.

As technology grows then the most hidden research as well as the areas that grow faster will naturally surprise and deceive us causing more viral growth and collapse in their competitors. One problem is that if computerization and Artificial intelligence grows as Iv-B and Oy-R competing with human intelligence then this might result in deceptive situations and unpleasant surprises as it becomes more powerful.

For example arguably Artificial Intelligence was a major cause of the GFC because of powerful computers used in trading, as these are used more and more the drain of money away from human investment strategies to computers should only increase as they win the competition. It’s likely then that software might mutate into trying to make money for its own evolution directly by taking it from the global economy, we might then see financial software overlords running the world as one way AI will innovate deceptively.

There is then no right way to run an economy, these three options of Iv-B V-Bi and balanced Biv just give different results. It does not mean that we can necessarily pick which one we want to run an economy, economic pressures from the different colors will tend to select the system used just as computerization is forcing use to an Iv-B economy.

The strong I-O version is just the most stable one as a compromise between lessening competition and having some stagnation as a result, having more insurance against collapses and wasting some resources if the disasters don’t happen. Because this means foregoing some profits in the belief that avoiding collapse is worth it, some people are then made to forego profits they might make with weak I-O policing.

It is highly unlikely that each economy will take a balanced I-O course and so some will boom and bust in V-Bi, others will stagnate and be more stable in V-Bi while others will try to balance the two. This also happens inside an economy, for example some people in the US prior to the GFC resisted the temptation to refinance their homes, waste money on new innovations, expand their businesses with leverage, etc and were becoming overshadowed by those who did.

Some might have nearly paid off their homes while others were pyramiding their assets into many homes to take advantage of the boom, it turned out the conservative V-Bi people were right with the GFC but if it had been a minor recession they would have lost by comparison. The point is people did not know what was going to happen, most probably thought a recession would come sooner or later but the lack of I-O policing made the economy so opaque that those who guessed right were often just lucky.

The lesson after the GFC is like that of the Great Depression, for a long time people will be more conservative leading to economic stagnation from this loss of animal spirits but this will eventually change. In an opaque economy people often invest according to their temperament or color code, when they are by nature part of a transparent team then fear of being seen as deviant will prevent many from taking part in a boom and being caught in a bust. The Iv-B loner by contrast is more likely to try to make money in a deceptive boom and hide their losses in the bust.

Because chaos and randomness in effect take turns in dominating the economy even after the GFC then both these V-Bi time and Iv-B energy based aspects can claim victory and maintain their ideology as well as their grants, teaching jobs, writing papers and attending conferences, etc for the next crisis or stagnation. It is not just a matter of the I-O system being better, it just leads to a different outcome and derives much of its strength from the time V-Bi and energy Iv-B based ideologies in economics being roughly balanced and thus needing to compromise.

Prior to the GFC Steve Roach of Morgan Stanley and David Rosenberg of Merrill Lynch warned that Americans were living beyond their means, though in an Iv-B economy with so much opacity it is natural for people to be living with higher leverage and appear to be in trouble from this. People who did not take on this leverage such as with student loans in the US risked being overshadowed financially by those that did, in the same way people who did not use higher leverage in real estate risked being unable to afford housing in the future. Warnings are like a double edge sword, often people might be warned not to miss an Iv-B boom as well as to avoid it.

For example Iv agents and B workers in an Iv-B economy compete with each other in a very unstable way, often they use deception and secret strategies and manage to bypass the I-O policing system and the traditional markets. In this case then they know how much money they have and how much they think they are making, this may even be reasonably accurate if they are fortunate.

However they compete with other people like them in the same situation so those who can trim their profit margins and assets can gain a competitive advantage, this means that some people appear to be becoming poorer and having more leverage and debt as the Iv-B system grows but sometimes they can make a revolutionary leap with this strategy. For example those that made money in the real estate bubble and got out before the crash might have their families able to overshadow the losers for generations with rent seeking.

## This instability can be a bad thing because the Iv-B system is not stable and can utterly crash if the Gb resources or interrupted, there is a strong external shock, or even is it becomes investigated by I-O policing and this makes people panic into a crash.

So people living beyond their means is an Iv-B symptom but it doesn’t mean the system is close to a crash, this system might also have matured into more stable trees except for the strong tipping points it ran into. For example 9/11 and the wars that sprang from it caused an enormous strain on the economy as well as panicking Iv-B people who are more prone to this to running away at the first sign of trouble because they want to be first out in a collapse.

The momentum that drives of an Iv-B economy needs to be examined to see how unstable it really is, this can only be done by following the roots and branches and seeing how the liquid money travelled through the system. Most likely the Japanese carry trade created a large influx of money into the US and this was withdrawn fairly abruptly by Japan, because of the secretive nature of Iv-B there was no real way for the system to come to a realization of the problems ahead.

When the Iv-B economy started to suffer from having used up the B workers as a resource and this V-Bi carry trade drying up it shifted into a more manic attempt to compete to get the last profits out of the toxic residue of resources available, V fruit as the management team gets the lion’s share of the profits out safely, and then let their businesses collapse and prepare to buy into the wreckage. People living beyond their means can be a good indicator of Iv-B but it cannot easily translate into an action, for example even if that was acknowledged to be a warning sign by the Fed and other regulators then with such an opaque system where would they have changed anything to fix it?

Regulators like the Fed seemed to believe the boom was sustainable to a large degree so the debt in the system was secured by rising prices, and then this implied people were not really living beyond their means. In effect this is the same as the system growing to inflate away debts as eventually prices might rise to the point where enough people had permanent equity in their homes.

Economists often hope for a soft landing to happen with a bursting bubble, this is like a tree that has overgrown its Iv branches so they break in an external shock like a storm. A soft landing is when some of these branches break but in effect they are cushioned as they land, a tree is then more likely to survive if its damaged branches rest against other trees or its roots are held in place from being uprooted by other trees.

However an Iv-B group of plants might all tend to crash together because they have little strength to resist external shocks, they might be more likely to knock each over like dominoes. In the same way the Iv-B companies in a market crash tend to knock each over like these trees because their momentum gets directed at each other instead of towards more growth. For example in a crash a subprime lender might run short of liquidity and this makes its investors short as it misses some repayments, they then default to a bank that starts retrenching staff and cutting back other loans. This means the real estate market cools even more which causes the subprime lender to fall further, and so on.

Just like trees knocking each other down the lack of V-Bi stabilizers means the momentum is not randomized, it then moves forward knocking down other businesses. For example if each of the businesses in this example had some viable insurance then this would prevent them having to demand money from the next company like falling dominoes or trees. A soft landing after a bubble then is impossible without enough reserves in the economy so people don’t have to immediately act when there is a downturn, in the same way the V leaves of a tree hold them together from falling and the Bi upper root system stops the B roots form being torn apart as a tree becomes partially uprooted.

In the same way the Roy animal kingdom might get a soft landing when Oy predators and R prey swing wildly in numbers as long as the Y and Ro animals can cushion them. For example the Oy predators might be able to eat some Ro herd animals and the R prey can get some respite to rebound in numbers when this happens. If not then there can be a knock on effect where for example R gazelles decline in numbers which makes Oy hyena attack R Impala which go down next like the dominoes.

Then the Oy hyena might have exhausted the R prey and begin to starve, their actions affect the Oy wild dogs who find their food is going too, then Oy cheetah might also be affected and so on. To make this soft landing in the economy then the I-O police like the trunk of the tree has to be strong enough or in effect the economy snaps in two. The Roy animal chain can also snap in two like this with a weak O center of the food chain where Oy predators fluctuate in numbers chaotically along with their R prey while the Y predators fluctuate randomly along with their Ro prey.

Because the two might be disconnected there is little help from the Y-Ro animals to stem this chaos and so the Oy-R animals have a hard landing. In the same way the GFC happened also because the V-Bi companies which had plenty of liquidity were afraid to loan money to each other, this is why the TED spread between banks went up and so the buffering effect of the randomness was lost.

Another problem prior to the GFC was that though some whistleblowers and experts saw some profit in talking or writing about the coming crises others had no incentive to do so even if they did see some evidence. There was no lack of information that if pieced together could have stopped the GFC much earlier just as Bernie Madoff could have been stopped by Edward Thorp as a Ponzi Scheme and then much later by Markopoulos.

When an economic system of any kind crashes because people who know it is crashing or are supposed to know are ignored or have no incentive to tell anyone this means it is not a crime to withhold this information. For example this is like people on the Titanic having no incentive to give warnings about icebergs perhaps because they had their guaranteed seating on a lifeboat. In most legal systems there is some obligation to help other people in trouble, the Titanic was able to rely on each ships coming to its aid.

The financial system however had broken down in this obligation to help others with V-Bi cooperation, instead Iv-B people had more incentive to short the market as it collapsed or to speculate in Credit Default Swaps on securities defaulting. This then is a problem from weak I-O policing where people can legally profit from either encouraging a situation where others are hurt or failing to warn them.

The I-O police tend to balance the desires of Iv-Oy agents who want to exploit chaotic problems for profit, Bi-Ro communities however like with a neighborhood watch want to warn each other of danger particular from Iv-Oy people. The law then to be balanced should obligate people to help each other if they see a danger for a community, however people also have some rights to privacy and secrecy. The problem then is whether people who see strong evidence of an economic collapse are legally obligated to warn the I-O police about it, however even if they had it is highly likely there would have been little action taken because the police themselves had become more Iv-Oy.

The bias in the police then is an important part of the GFC puzzle, often a collapse in a building or bridge can be avoided by civic minded people alerting the authorities rather than placing a bet on their falling. For example a building might be owned by a public company, an engineer who discovers the building is likely to fall in a strong storm might either alert the I-O police or short the company’s stock and wait for it to collapse with loss of life. At some point then Iv-B competition stops being useful for economic innovation and just becomes destructive like the Oy predators wiping out their own source of food.

## To moderate a future chaotic event like the GFC then it may be necessary to address this problem in the legal system, for example some people who lost money in it might be able to sue those who shorted the market rather than warned of its collapse.

However this is the problem with Iv-B in that it runs on competition, secrecy, and deception and nowhere in this can warning others or cooperating with them be beneficial. At best it might help their competitors who might then reach a dominant position from it and perhaps bankrupt the whistleblowers, or they might be disbelieved as trying to scare off their competitors.

For example the whistleblowers in most societies can easily be discriminated against, these are Iv and B in a Biv society and Oy and R in a Roy society. To do this then they need protection with the I-O police who use them as a tool to monitor the secretive parts of the economy. When I-O becomes weakened though these whistleblowers are vulnerable to retaliation or losing money for publicizing this information. When Iv agents are competing with each other often their margins become razor thin, the winners might be able to perturb the business of the others by deliberately running at a loss for a while until the others go bankrupt.

If one Iv company starts warning clients in an opaque economy then the others will just deny there is a problem and offer the clients more profits by saying there are more opportunities ahead instead of a crisis. So any truth teller, even if they could see enough in this deceptive situation to be sure enough to give up some business, would be called a liar by the others. Only the I-O police can listen to these issues because only they are completely neutral and so have no agenda other than to grow their own influence and profits, they can only do that by exposing imbalances in the colors and creating laws in the middle ground so that enough people will follow them.

This can be seen from the various experiences of whistleblowers in the lead up to the GFC such as Markopoulos trying to get the SEC trying to investigate Bernie Madoff. Madoff had obfuscated his real financial situation but was also highly deceptive in showing a camouflaged reputation as a philanthropist and financial expert. His books were in order in many ways because they did not include some of the money he received and so no money was actually missing from that point of view.

His weakest point was the trades he was doing could not create the profits he claimed and often were physically contradicted by the evidence available on the days he traded. However he was often surrounded by other Iv agents just as deceptive, they didn’t care if it was a Ponzi scheme as long as it kept going and they got their commissions. Many others thought Madoff was front running, that he had inside information on trades just before they were made and was making a profit on buying before them and then reselling after.

For example if someone wants to buy a million dollars worth of a share this may make the price go up a little, so a broker might as they receive this order buy a million dollars of the share themselves secretly and then sell their own shares partially to this big order to make a small profit overall. If someone can do this consistently as has been alleged to be happening throughout Wall Street with computerized trading then they might make regular profits at the expense of their investors.

Just like the economy in general then Madoff had many people who could have blown the whistle on him but they either had no reason to, were ignored, or would have lost money by doing so. It is like the problem of seeing a crime occurring in the street, most people will do nothing about it unless the police happen to be nearby because they might suffer retaliation from the criminals and then no one would help them. In the same way if I-O police are not actively patrolling the economy then people making money who see economic crimes will often not do anything.

It becomes worse when I-O is weak because complaints are either ignored because of corruption, lack of funding, or lack of expertise as with Madoff. This is like Oy thieves try to snitch on the V mafia, they might suffer reprisals if the O police are weak or not interested in using snitches. For example the police might have a policy of looking for crime themselves and not rewarding Oy criminals by taking information from them. They might have direct links to the V mafia and inform on these Oy thieves when they snitch.

In the same way prior to the GFC the potential whistleblowers about the subprime crisis had to contend with the V Wall Street influence with the SEC, a whistleblower might have their allegations taken directly to the companies without action being taken and they might then lose their job.

The fear of retaliation can then reach into the Iv aspect of the I regulators, for example Markopoulos claimed that many SEC investigators were afraid of antagonizing Wall Street companies and then not being able to get a good job there later themselves. Whistleblowers then could expect no better protection from this V influence than the I police had to contend with themselves, in any case with so many pundits making money from their optimistic predictions in the opaque economy their warnings would be very isolated.

This happened for example in the media with Peter Schiff and Nouriel Roubini, the system was so opaque they could not point to any definite evidence of a pending collapse except to show that by looking at external forces going into the black box of the economy it could not be sustainable. Both were painted with some justification as pessimistic or cynical by nature which left the way open for optimists profiting from the opposing view so they were neutralized. They were however able to in effect short the system with their predictions, when the market did collapse their reputations increased so much they profited from it.

Whistleblowing is a color interaction and so will evolve an opposition to itself. This can be an opposing color, for example B would tend to oppose whistleblowing by Iv agents even though they are adversaries to Iv because they value profiting through secrecy. Being on the edge of the colors like V they are far away from the I-O policing colors and unlike Iv they have little relationship to it.

Bi teams of people tend to support whistleblowing but they are an adversary to Iv and might tend to punish them rather than reward them, Iv might find they are ostracized from business with Bi because they admitted some personal association to these deceptions and other Iv agents will also tend to ostracize them for spoiling some of their business by casting suspicion around all of them. So the appropriate venue for whistleblowing is only I-O, other colors have little incentive to encourage it and often punish it.

This is why when I-O is not neutral whistleblowing is often lost or weakened, then there is a bias towards Iv self-policing where they tend to keep their transgressions secret and deceive others about them while they try to reduce their impact enough to stay hidden. This process then merely causes this chaos to hollow out the system more deceptively and carefully but can cause a larger collapse from this later when it is suddenly realized in a collapse that the Iv self-policing system is completely corrupt.

## For example Iv self-policing was used prior to the GFC in most financial institutions but it did little to stop fraud, it often only made it harder for I-O regulators to keep track of it.

The same occurs when there is a Bi bias in the I-O police as vigilantes try to expose a problem then the Iv agents might get attacked unfairly with demands for draconian laws, this tends to scare them off and Iv are usually timid anyway and so the chaos is not exposed again. However usually I-O policing has a spread from Iv to Bi and so in the center of it, or even to one side if the overall police force is biased, there are usually some people who can be neutral enough to look after whistleblowers.

They however might receive resistance to this from their own I-O associates, for example if the police are biased to Iv then Iv whistleblowers will get little sympathy from them. The more neutral police might try to use this whistleblowers but get outvoted from the more numerous Iv police and so this process works only chaotically. If the police are biased to Bi then Iv whistleblowers might be quickly publicized when the Iv sections of the police want to ignore them. The neutral police then might be outvoted by their Bi leaning associates and so Iv can be treated unfairly where whistleblowers are divulging honest and secret information having a chilling effect on business.

For example with an Iv leaning police there might be a kind of office politics where the different kinds of police themselves are in conflict, they need the neutral ones among them to moderate their disputes. Some Iv-Oy police are seen as possibly corrupt or deceptive by the Bi-Ro police, the Bi-Ro police however are seen as vigilantes themselves willing to beat up suspects or chase them out of an area.

The problem that developed was that Iv whistleblowers were often ignored because of a belief that the I-O markets were self-correcting, but at the same time this I-O policing was being sidelined in favor of Iv self-policing in the financial industry. It was in effect like firing the police and ignoring snitches on the basis that a community didn’t need them as the people were honest enough. Much of this idea of self-correction comes from not understanding the role of chaos in I-O, V management have little chaos in their color and see this as the way all the colors should operate.

They see some chaos in their Iv agents in that they are subject to cut throat competition with each other while V people tend to forgive each other’s failing and help each other. V then tends to see the world as random but usually they have more wealth than other color codes, much like the French aristocracy prior to the French Revolution.

This is because they are overtones of Y like lions and usually end up with the lion’s share of profits in business, in the same way a Y aristocracy tends to build reserves of capital and seek rent for it. Some wealth inequality then is a natural part of society because people with more ability like with Y lions tend to win more and make more money.

They have their Iv agents who work chaotically for them and occasionally create some problems but this creates a world view that chaos is somehow subordinate to randomness. However this is not the case in the I-O market where they should be evenly balanced, V’s agents have to make money in this market for their V clients from the Bi community which is often not easy. I call this chaotic randomness where the two coexist forming uncertainty.

The other problem with this is that self-correction is a broad concept in markets and the collapse in the GFC can be regarded as the markets purging mistakes and misallocation of resources. So it is of little use to say they are self-correcting if this results in deep recessions and depressions, generally it is more desirable that these corrections take place with soft landings and not chaotic crashes in the economy.

However in plants some do reproduce in a boom and bust like cycle, others like desert plants reproduce so they collapse in the organic version of a depression.

Economists then tend to want a kind of ecosystem like a rainforest where plants are relatively stable but there is also some innovation in smaller businesses like trees that grow and collapse without threatening the overall integrity of the forest.

However the difference between a rainforest and marginal forests or ones on the edge of grassland is usually either enough Gb resources like rain and minerals or being safe from large Roy animals like elephants knocking down Acacia trees. When an economy has sparse resources then it is important that it not waste them with Iv-B and V-Bi disconnects just as a forest needs to not fall apart into Iv-B weeds and vines and V-Bi grass and shrubs.

Both of these tend to fail in preserving Gb resources and keeping Roy crime like large animals out of the forest. For example Iv-B weeds tend to grow and collapse quickly when they find fleeting amounts of rich soil, they tend to use it up but not produce good humus so it is preserved for others. The V-Bi grass and shrubs can allow too many Roy animals in to feed on them causing the vegetation to become more trampled and the humus broken up and lost.

A wealthy society then naturally tends to be stable like a forest unless some get too greedy like plants that favor one part such as the leaves over its other parts, once there is too much wealth inequality then much of the economy starts to act like a sparse forest with little rain or even a savannah where the large businesses like trees have collapsed completely. For example if a forest is dominated by trees that have leaves and fruit that are twice as large as normal then this takes more nutrients to support and often leaves other parts of the plants starving because of intense competition.

In the same way the Roy animal kingdom can be unbalanced if the Y predators are too strong, any prey can be easily caught and so the Y numbers grow until they keep all the other animals on the brink of extinction. In the same way wealth inequality shows the Y-V predators of an economy are doing too well, they might have some advantages such as better education, higher intelligence from being part of a separate race, be inheriting money from their parents which gives them a way to corruptly keep their taxes low, and so on.

Once an economy like the forest is like this then the edges are constantly growing and collapsing in trying to fight these problems. The GFC in part was caused by the economy like a Biv rainforest trying to take over very sparse forests and savannahs by helping the poor to own their own homes. It only worked in the short term by loaning the B roots nutrients like money to B workers for subprime loans and when this money ran out, the extra construction was just wasted as it could not survive in a sparse forest or savannah.

It is like these top heavy trees then trying to expand into grasslands but they keep short changing their B roots and so the plants keep getting uprooted by Roy animals or fall over chaotically. This is also like the Y predators mentioned earlier that are so strong they keep trying to expand their territories but they quickly use up the Ro-R prey and begin to starve themselves. In the same way economies with high wealth inequality keep trying to expand into poorer areas but because they won’t allow the Bi-B worker areas to have enough money these ventures usually keep collapsing.

Like a forest with weak roots Roy animals like Roy criminals can easily knock over parts of the economy, in the same way the GFC was partially caused by rampant fraud because the government was not willing to protect the weaker members of the community from being ripped off by this upper class. Ironically at the same time there was a Biv effort from V investors to build new markets by loaning money to B workers, however this was mainly done in such a predatory way that these new markets had to collapse as soon as the loans were exhausted.

This also happens when Y-V Empires try to expand, they might for example lend money to a third world economy to ostensibly build it into a new market for their products. However as outlined in Confessions of an Economic Hit Man this was accompanied by so much predatory business stealing this money back, like subprime lenders ripping off B workers with loans that were supposed to help, that when this money was used up the local economy would crash and the money was wasted. For example much of this aid and loan money usually goes straight back out of the third world economy into secret bank accounts in tax havens for the local Y-V people as well as for the Iv-Oy agents arranging the loans.

## In effect then the subprime crisis that caused the GFC was the same process that happens when aid money fails to help a third world economy, here the US and others tried to help their own poor with the predatory strategies that Empires usually reserve for other countries.

But even this is part of the self-correcting nature of Biv economies rather than a flaw, they tend to always be trying to expand even though this creates a loss of nutrients and wasted energy from these attempts. So the GFC was also this trying to expand into areas that were not viable for strong Biv economies as well as trying to hold onto areas that were becoming marginal Biv and even Roy areas in the economy from wealth inequality. Much of this inequality occurred from globalization, like mixing plants from many ecosystems into one rainforest and having as a result devastation of some plants and animals.

This is from cheap imports that local Biv industries could not compete with and made parts of the Biv forests as the advanced economies unviable, this spread like a contagion and created massive losses in the GFC as well as unemployment which is like Roy animals that no longer have Biv plants left to eat. For example Roy crime is usually tightly controlled in Biv societies, it is also minimized by the large mounts that someone might lose if convicted.

For example someone with a police record might be barred from employment and travel that costs them far more than what they could make from stealing. However weak I-O policing and deregulation caused more Biv people to act like Roy criminals in the real estate boom, usually honest Iv agents became fraudulent subprime salesmen, usually honest B workers used liar loans without consequences to try to innovate their way to wealth, etc. This was in effect like as Gb resources became sparse large Roy animals moved into a Biv forest knocking it down for a short term gain in the amount of food they could get, this was at the expense of destroying much of the forest and causing starvation later.

There is then an asymmetrical process that occurs in a marginal Roy or Biv society, even with areas like this inside a larger economy. For example there might be an ecosystem with some Biv rainforests where plants dominate and Roy grasslands where animals dominate, in between there are areas where different kinds of plants try to extend these forests while Roy animals try to either knock them down or feed on them. As explained more in my first Aperiomics book these marginal areas in between Roy and Biv can be highly wasteful with resources because they might be chaotically growing and collapsing, also they can be varying randomly.

## When a new Biv area runs out of Gb resources or gets invaded by Roy animals its built up humus might be blown away and wasted, in the same way when a new Biv area is only surviving on loans like with the carry trade and subprime loans then its built up infrastructure can be smashed when this money runs out.

In the same way when a Roy grasslands area tries to grow into a Biv economy the Roy animals might raid the fragile areas for food and knock down its infrastructure, in both cases there is enormous waste and the Biv plants might have to start again. They might even lose permanently if so much Gb resources are lost that the soil is no longer fertile enough to rebuild, this is how deserts and dust bowls can form. In the same way the GFC was an expansion of Biv infrastructure into Roy areas that was largely wasted in Roy crime and running out of money.

Self-correction of a market in economics is seen as a kind of equilibrium but there can be chaotic and random versions of this. For example a solution of chemicals and water is analogous to money as liquidity, as a solid like frozen ice as debt, and as a gas like a bubble of money in an overheated economy. There can also be goods and services that act like materials suspended in this liquid money, they can also be solids that money has to erode away slowly or move along like pieces of ice in a river, they can also be like a gas themselves where they exert pressure on the economy.

For example a bubble might form when money becomes gaseous and forces it way into some commodities making them more expensive until the bubble burst as money leaks away, goods and services can also become like a bubble without money where a glut of some goods forces itself into an area. Unemployment might be a glut of these services that forces itself into job openings and in effect lowers the wages around it, this has been happening after the GFC as being like the chaotic reverse of a money bubble where these services become cheaper.

Eventually this unemployment bubble will burst as people in effect leak away through ruptures in the situation to get other jobs until the businesses that grew on this cheap labor suddenly collapse as they have to pay higher wages. In the same way goods can form a bubble, for example there was a glut of imports in the US after the GFC that people could not afford to buy, the aggressive marketing of these by Iv agents facing bankruptcy forced prices down by making people who didn’t really want them unable to resist the bargains.

However this bubble can also collapse as other markets develop for this goods at higher prices, suddenly companies might find they built up on cheap equipment from the crash they can no longer afford to maintain and replace and so they collapse like those on the unemployment bubble. In effect then these goods and services bubbles can be the exponential Iv-B system gone into reverse after hitting a ceiling of growth, for example houses went up in the boom because of a glut of money forcing its way like high pressure gas into this market making the houses more expensive.

When this market hit the ceiling of what investors could pay the bubble burst, suddenly the houses were worth less money but often still had to be sold. The houses then became a bubble themselves where there was a glut of inventory forcing itself onto consumers who often did not want a house but could not pass up the cheap price and financing as well as the high pressure Iv salesmen. This bubble of cheap houses will crash when it hits the floor of the lowest price as investors start grabbing homes like ruptured cracks in the bubble, then people might have to sell because they cannot pay the rising property taxes. Also the glut of construction labor has made many building and renovation jobs cheap, when this bubble bursts then some people will be unable to maintain their properties with the higher cost of this labor and have to sell.

Goods and services then can grow and collapse as Iv-B without money, in effect money is just another commodity that can move chaotically. They can also move randomly in V-Bi, for example a normal situation in a Biv economy might be where they have plenty of reserves of money, goods, and services to handle a chaotic event like a storm or market crash. There can be a normal perception of what services are worth that can stop wages from growing, for example people in a V-Bi transparent society might become used t paying very little for cleaning work perhaps because of using minorities for labor.

There can then be a resistance to this price position changing up or down, for example even if this labor becomes scarce many people will simply refuse on principle to pay a higher price for cleaning and will do it themselves or cut back rather than increase the wages of the cleaners. This is like a price stickiness in economics except it is caused more by a consensus of people, they might think that if they give some a wage increase then everyone will want the same so all must be resisted. This is similar to the positions Bi unions face for protecting workers in unsafe conditions, V companies have a consensus in a transparent society of what these lowly workers are entitled to and changing their conditions is also resisted.

This resistance is like friction in physics and is V-Bi because it wastes Iv-B energy and slows its momentum like friction does or resistance in an electrical circuit. Just as it can stop wages from going up it can stop them from going down, Bi workers prior to globalization developed a transparent team attitude to what manufacturing labor was worth by comparing themselves to other workers in different jobs. Now that B workers in emerging economies are competing they are eroding this cooperative wage unionism but Bi workers still think this is unjust and often refuse lowly jobs in the post GFC recovery as being beneath them.

Often in the US then these jobs might be done by secretive B illegal migrant workers because Bi community people don’t want to be seen doing them, like with the B workers overseas this causes some resentment between Bi and B workers. The Bi community might press for a higher minimum wage as a cooperative policy as well as improved working conditions and higher wages overseas to protect their own wages as well as to bring them into the Bi team.

V management can also experience this feeling of normality making it harder for them to change in a transparent society, for example V managers might be seen as being a minor part of the economy and so in the 1970s in the US they usually made little money. When they tried to raise their own wages and profits Bi unions would protest and strike causing wage price inflation. With the Iv-B momentum of the 1980s these V management started to get the Y lion’s share of profits until now after the GFC they now see themselves as worth these multimillion dollar salaries and bonuses even when they give little more benefit than they did in the 1970s.

This resistance to downward change can create stagnation in the economy, the V elite demand high returns from rent seeking and if they fail to get it then they want to be bailed out by the government because their transparent society sees so many others as being worth this money. Like a housing estate with high prices people where people are reluctant to sell for less than the average on a V community these V people can become like a Y-V aristocracy impoverishing an economy like in France prior to the R French Revolution.

In the same way goods can also develop a normal price in V as with the housing example, it can also create a resistance to upward movement in prices such as with art for example. At some periods in history high quality art could be bought for low prices, V people were reluctant to pay much more than their friends for it so prices remained very depressed. More recently Impressionist Art experiences very high prices and there is resistance to this dropping, for example no one wants to sell a van Gogh for less than other ones on the market.

In the Bi community goods also have this price resistance, for example people might be unwilling to pay much for some groceries and if the price goes up they refuse to buy it because it seems like they are getting ripped off compared to the community’s consensus of what it should be worth.

For example bread might be assumed to be cheap, if wheat went up in price in an Iv-B boom then Bi consumers might refuse to buy it even if they can still easily afford it. In the same way they might be used to paying a high price for TVs and if cheaper versions come on the market they might prefer to buy the more expensive models, for example buying a plasma TV or modern computer was a status symbol to purchase that would be displayed prominently to Bi people’s friends.

It then became necessary to spend this money to maintain status in this community as a normally wealthy member, having a cheap TV or computer then would make them look like a deviate so this makes it easier for some businesses to keep prices high. This V-Bi price resistance can even extend to free goods and services, for example on the internet people have developed a consensus that information should be virtually free and so they often refuse to pay even small amounts for access to newspapers.

## Goods and services then can also move chaotically and randomly in price as can money, they can also do this without money such as with bartering.

These goods and services can move with money or they can move in an equal and opposite reaction. For example when someone buys a good or a service generally money moves in an equal and opposite direction, someone buys a car and they get the car and the seller gets the money. So in these kinds of interactions where money moves generally goods and services are moving in the opposite direction and so this can be like liquid money flowing into an area by moving the goods and services out of the area to make room for it.

This could be like a river that is growing by eroding away some of its banks, this makes room for more water and in place of some of the water there is now silt usually being carried along with it, these goods and services might be used as barter. For example someone might be wanting to buy a house in a boom and offer to do some work for the sellers, give a car as a down payment, offer part payment in gold or bonds, etc. When money has more energy or momentum it is more of a gas, it affects the goods and services by pushing on them more strongly and so can distort their shape rather than just making room for itself.

For example in a housing bubble money tries to force its way into the real estate market for better returns and this often tears or rips these houses chaotically out of investors hands by offering sharply higher prices they cannot refuse or even intimidating them in Roy. The investor carries off the money and the buyer has the house in an equal and opposite reaction but one that is highly unstable because when the bubble cools the lack of money pressure from its momentum will cause prices to collapse.

When money is a solid as in V-Bi debt it also gives this equal and opposite reaction, for example money is borrowed to buy a house and the buyer gets a house and the seller money, but the buyer also has a mortgage which at some time will require another equal and opposite reaction of giving the bank the money and the bank giving the buyer a release from the mortgage. If not then then this might be resolved by repossession of the house but it is still generally an equal and opposite reaction because the buyer and the bank agreed to this beforehand.

## This equal and opposite movement of money is in Biv a Positive Sum Game in that both benefit but usually unequally, the investor for example in a bubble might get badly burned compared to the seller by buying a house at the height of this gaseous money phase though both benefitted from the transaction.

There is also another aspect where the money moves with or against the goods and services, like going with the tide or against it. For example if a car yard sells cars then though there is an equal opposite reaction of money for a car the yard makes a profit while the buyer just gets a car they want and the profit is intangible if they don’t buy it to resell. For example they might profit from buying the car in an aesthetic sense but not actually make any money from owning it as a cheap car would have done the same job for them. So in this car yard the money tends to flow into it like a current with some voltage, in effect the car yard has a trade surplus and the buyers to some degree a trade deficit compared to the yard.

They might eventually borrow to overcome this deficit or just stop buying cars until they save up again, sometimes they are extended liar loans they cannot repay as happened in the subprime crisis. This can then be chaotic or random, the yard might experience some random swings around a normal turnover of cars, it might also have larger sales with a new model where people go into debt increasingly and then suddenly the sales collapse as people reach their limit of what they can borrow, many might even default like with houses in the GFC and then there is a slump in the car industry.

So random changes in money flowing into the yard is like Brownian motion of money but generally with a current flowing in, this has some pressure or voltage that would vary randomly. When chaotic there is an increasing pressure and more money flowing in to buy the new model, then at some point this pressure hits a ceiling as it cannot overcome the pressure of consumers needing to buy other things like houses and food as well as pay debts.

This chaotic current and pressure might then suddenly decrease as it hits this ceiling causing an Iv-B bust in the sales of these cars, then it might go into reverse where the price of cars plummet to pressure consumers buy them even if they don’t particularly want one. In both cases the exponentially growth and decline can be fuelled by V-Bi loans, when the car prices are going up banks might be loaning money to the car yard and the buyers. When the bubble bursts they banks might be loaning to get rid of this inventory, however if the V-Bi loan money has been exhausted in the boom as happened in the subprime crisis or the Iv-B system has been too damaged the banks might be reluctant to lend in the crash.

In physics there are many natural laws that can be applied to how money moves, this equal and opposite reaction is well known but so is the idea of solids, liquids, and gases moving in a current with a voltage or pressure. Much of this was discussed in my first Aperiomics book but the movements of animals or people is analogous to electricity in Roy societies and based on gravity and acceleration in Biv societies. Money then can move like a liquid or gaseous current in a Biv society and so can become concentrated in some areas with wealth inequality.

This is against the idea of equilibrium in a self-correcting market where it is presumed that wealth would trickle down to the Bi-B workers from V-Iv companies like sap trickling down in the trunk of a tree to eliminate this wealth inequality. There is indeed this tendency of random movement of money as a kind of monetary entropy where it would spread out to all parts of the economy much like blood in the body or sap in a plant should reach all its extremities to give good health.

In the 1970s this worked relatively well in the US and Europe when wealth inequality was lower often because of strong Bi unions randomly vying with V management in wars of attrition to get a larger share of the profits. However when blood moves through veins and arteries or sap through roots and branches of a tree they are like money moving through Iv and B parts of the economy and is chaotic not random. This is then more like hydraulics when money is a liquid, when a solid like debt it works less well because it can block up the conduits of the economy like cholesterol in arteries.

When money is a gas it can work well too but is in more danger of rupturing the roots and branches, it has more energy in that case which translates into more current and more pressure. This pressure can be alternating and direct like in alternating and direct current. For example in overnight funds money might alternate as it moves from the lender to the borrower quickly and then is repaid the next day, this works much like the beating heart in a person.

This process is quite common in Biv societies, for example a business like a café might have an overdraft and borrow money each day to buy stock in the morning and repay it that afternoon with sales. The car yard referred to earlier might have an overdraft or account with the car manufacturer, they might receive cars each month and repay the account as they are sold like an alternating current of money turning like an engine or pump.

A tax system in government receives tax from wages and then sends the money out again in purchases of goods and services, this might have a pulsing current if payroll taxes are collected weekly. This alternating current of money is more random because the loans fluctuate around a normal balance, sometimes a business might draw out more money and sometimes repay extra as deviations around this normal business position.

## The direct money current is more exponential as it grows constantly in Iv-B and so it is associated with e, the base of natural logarithms. It is useful then to use these 2 transcendental numbers of e and pi to describe these 2 tendencies in a Roy or Biv economy.

This direct current moves from one place in the economy to another with momentum as a pressure but need not return to a normal position as with a sine wave alternating current, this is like a trade surplus for example between China and other Western economies. A direct current of money is more chaotic and moves along roots and branches whereas an alternating current of money tends to diffuse into different parts of the economy as a loan.

The direct current to maintain its pressure needs to avoid leakages in the roots and branches like an electrical current needs to avoid short circuits and so in the GFC as these roots and branches ruptured, broke off and collapsed this direct current of money faltered and so money could not be pushed into areas that needed it. For example subprime bonds had a direct current of money from investors in Europe and Japan who bought subprime bonds and sent this money to those selling the bonds.

When this carry trade broke down it lost momentum or pressure because the investors stopped pushing money into the system and also because with mortgage defaults money was lost by the investors and dissipated randomly, for example in commissions paid to Iv agents on nonperforming loans. These currents then move goods and services around the economy, when an economy becomes Iv-B there is less of an alternating current of money where it is loaned out from reserves then repaid, rather this money is like a direct current that pushes its way around the roots and branches and makes goods and services move this way.

For example with building a car there would be roots in the economy going to the minerals needed for the car such as iron, aluminum, silica, copper, etc which are combined at various factories and then sent up into the branches to be refined into various components of a car and assembled. This is generally chaotic because there is a movement of money through these roots and branches that might be relatively small and changing hands quickly, someone might combine silica, copper and iron components to make a headlight, the miners are quickly paid and then the headlight when built is quickly sold.

This system can use an alternating current of money where at each point money is borrowed from V-Bi to create the car component and then repaid when the next company down the root or branch receives the finished product, the car companies around the world for example might outsource some components which are assembled like this. Just in time manufacturing created by the Japanese tries to make this process more Iv-B by reducing the amount of financing needed because each component is held for less time and only produced or delivered when needed in a higher energy process.

Such a system can be very vulnerable to external shocks, for example with the tsunami in Japan General Motors had to delay selling some cars because of parts made in japan that were delayed. This is also like the Iv-B chaotic economy mentioned earlier where as money became tight in the GFC people started missing payments on loans causing a cascade of delays and chaos along this assembly line of financial transactions.

Ideally then this Iv-B system might not need alternating current V-Bi financing at all as long as everyone pays their bills on time, the money just flows through the system as each company has enough reserves on hand as a float to pay for its components and receive money from its sales. It is highly chaotic because changes in cars can cause some components to become obsolete or more popular, these roots or branches then either lose money and collapse or make more profits and attract more competitors to make the same component driving its price down and reducing profits to a chaotic nearness to collapse again.

## So the system constantly pushes for innovation to avoid collapse, when a root or branch does collapse then money is lost there much like a vein in a person being cut and losing blood until a clot forms.

This Iv-B system as it innovates needs less money because it is a competitive advantage to be frugal with it. Because less money is used then the economy can be run on higher leverage, there is then a choice of either getting credit for goods and services such as a thirty day account or getting a V-Bi loan that ebbs and flows as bills are paid and new stock is bought.

This V-Bi alternating current of money speeds up the economy and increases its momentum because companies don’t have to wait for their accounts to be paid to buy more stock. They might solve this by having a larger float of their own money on hand but often companies are trying to rapidly grow in competition and being able to borrow is a critical advantage.

As the Iv-B system frees up more money to be used in other Iv-B parts of the economy there is a kind of boom because apparently many people have more money than before and there are also more goods and services available to buy with it from this assembly line style of production. A direct money current is difficult to keep going forever though because it eventually has to either reverse, run out of pressure or current, or rupture the conduit it travels on. Usually it ends up with a trade surplus in some area of an economy that collects more and more money just as a poker game eventually stops because a few players win most of the money. Running an economy like a poker game is obviously bad because eventually most of the players are broke and can no longer afford to play, this is like a depression after a speculative boom in the economy.

As some areas then start winning the trade war other areas then try to work with less money and thinner profits to catch up and often deceptively run up debts to try and trade out of an uncompetitive situation which can cause a larger chaotic collapse when the debts aren’t repaid. So problems here grow chaotically as for example a large part of the manufacturing chain might be insolvent because they can’t keep up with the competition of another car manufacturer, however they are still working with higher debt trying to develop a revolutionary or counter revolutionary product that will sell exponentially and save them.

Eventually a whole chain of component makers might collapse from being uncompetitive or from being more vulnerable to external shocks, because the car cannot be completed without those components everyone else goes bankrupt as well and the whole car company collapses as nearly happened with general motors in the GFC. For example as the car market becomes Iv-B competitive the manufacturers that are losing start cutting costs to the bone which means companies in their chain might suddenly go broke if there is an external shock such as a recession. So the car company might demand that car seats be so cheap that the manufacturers are making nearly nothing but are trying to avoid bankruptcy so they keep going, then when the recession hits they have no reserves to handle the lower volume of cars and so their prices must either go up making the whole car more uncompetitive or the whole car is unsalable without seats.

The alternative is to finance those components with new V-Bi debt but there is usually a panic when a company starts collapsing as the original debts have often been deceptively hidden and just exposed, investors then are reluctant to put alternating current money in because the car company is even less competitive now with other manufacturers now that it is stopped and other component makers are going bankrupt from idleness as they have few reserves. Even if the company is still operating consumers might become afraid of buying a car that is so uncompetitive and where spare parts might not be available later.

If the V-Bi investors do provide more finance then this can create a zombie company where money has to flow in like a continual transfusion in some areas but it might not get any healthier because of too much competition from other manufacturers. When the debts grow too high then there might be another larger collapse, for example a state government might subsidize companies with tax breaks.to keep them alive even though they are no longer competitive in a level playing field.

However other states might also do this as they also compete in Iv-B so eventually many of them are in effect losing money to have these companies running in the hope of perhaps making something back from worker taxes and multiplier effects in the economy. The situation then has become partially a Negative Sum Game where the states are trying to minimize losses as their competitive strategy, the companies might also be trying to minimize losses to stay afloat while some parts of their business might still be running a Positive Sum Game where the consumers and the company is making a profit. Such as situation can then become Roy in some areas so there is a big potential for crime to collapse these companies like large animals knocking down a struggling forest, for example a Y mafia might invest in these companies, politicians might be bribed to offer more subsidies, Bi unions might act more like Ro gangs using protests and sit ins to force companies to provide large severance pay, and so on.

## Money then moves like a direct current according to the pressure urging it along, it moves like an alternating current according to the random or sine wave like movements where it goes back and forth.

There are other terms in physics which are useful in describing the movement of money, goods, and services such as viscosity, friction, velocity, acceleration, the Bernoulli Principle, turbulence, valves, pumps, hydraulics, and storage.

V-Bi viscosity and friction with money refer to the loss of profits caused by goods and services, for example if workers have a lot of sick days and work erratically then this can create friction in the Iv-B money flow, it then moves with higher viscosity or more slowly because goods get made more slowly and so the component makers would get paid more slowly.

With an alternating current of money this is less of a problem because randomness and friction is buffered by reserves of liquidity, if someone pays a loan more slowly then they pay more interest which urges them back into working faster like on a normal curve with the tardiness as a deviation. Much of this viscosity is a good thing in alternating currents because they are more indirect anyway, banks make more money when companies are paying late as long as they don’t default.

This friction is more of a problem in Iv-B businesses because of the high energy low time aspect and so small amounts of worker friction can cause the loss of a competitive edge, bankruptcy of a component manufacturer and having their market share taken over by someone else with disruptions right through the roots and branches of the car assembly. This is why Iv-B businesses avoid Bi unionism so much, it can lead to a competitive disadvantage because unions often protect workers when they are temporarily weak so the company cannot fire them immediately.

For example a headlight maker tenders to a car manufacturer to build these at a low price, this might be close to a tipping point because of so much Iv-B competition and so they have little margin for error. Errors are usually a problem because the error curve is the same as the normal curve, errors then are usually random which works badly in Iv-B. For example in darts when someone aims for the center they often miss leaving small holes that become sparser further out from the bull’s eye, this pattern is approximately the same as a normal curve in probability.

These errors can be like friction with workers blowing up into a Bi strike, sabotage of equipment, key personnel quitting, etc and then the company loses money and defaults. To get the component made again they might need zombie funding by other component makers to run the headlight maker at a loss, be bought out by someone who then has the same problem in making a profit on the tender, or they have to rebuild a new way to manufacture the component. While this is going on the car assembly might be stopped unless there are multiple suppliers of each component, an example of this was when the tsunami in Japan knocked out car assembly in the US because of the some vital electrical parts which were only made there.

A more recent example in 2011 was where flooding in Thailand destroyed manufacturing facilities for hard drives which chaotically affected computer assembly around the world. So chaotic problems can cause this friction to quickly escalate into widespread failures in the roots and branches, this is like clumping in the blood or sclerotic veins causing friction in blood flow and potentially a heart attack or stroke in a person. By their nature then these Iv-B collapses caused by a lack of randomness in the system are unpredictable and with high energy and low time can be fleeting and quickly fixed if regrowth occurs.

This pent up energy and pressure can also be very destructive like high blood pressure in a person causing a stroke or deposits in an artery causing a clot, one small part of the Iv-B system is broken and the whole can become sick or die. The same happened in the GFC where this Iv-B monetary system was so chaotic that eventually some external event had to cause collapses through it, the innovations in finance had been so rapid they were more like mutations that could not survive in a different environment. This is like a car being made in a disruptive market where a new manufacturer with a revolutionary innovation sends other companies broke and then later it is found the innovation doesn’t work properly. The old companies and ways of doing things have collapsed and so the economy loses money overall.

Viscosity and friction then are randomizing influences because they slow down the Iv and B parts of the economy and can cause chaotic collapses.

This can be seen sometimes in the V-Bi banks and insurance companies with Bi unions and V management who work slowly, their team nature creates friction with anyone who works too fast or slow. This can create stagnation in the economy as with Bi unions in many countries in the 1970s and also with V management such as US banks with a protected monopoly. Profits were assured and there was little competition as other banks were part of the V team, it then took much longer to get anything done and the result was little growth economically.

This is also because growth is an exponential function and occurs mainly in Iv and B while V and Bi being random have little growth or decline. The Soviet Union was mainly a Bi society and so was highly stagnant with little energy to do much and a lot of time to do it. Even now in 2011 it remains highly stagnant even though it is more balanced in the colors, Vladimir Putin is more Y-V and has forged a good relationship with the old Bi economy but at the cost of much Iv and B innovation.

The velocity of money is usually higher in Iv and B, there is more energy in it and less time to do deals. This is shown in the saying “Time is Money” implying taking a long time to do anything cost money and so this is high energy, a similar saying might be “Energy is Money”. This is seen in chaotic businesses such as oil wildcatting where companies often either make fortunes or lose massively.

For example a steelworks might be high in momentum in business, because it has a high mass its business would be hard to turn around quickly much like an oil tanker. An internet startup however might also have Iv-B momentum but has lower mass because it would have fewer staff and a smaller infrastructure, it could then change direction more easily but its high rate of growth often makes this as difficult as with the steelworks.

The financial sector usually has both kinds of high momentum, large financial businesses doing subprime lending might have large numbers of staff but also large amounts of capital that is hard to change direction with like the oil tanker. Other businesses were smaller and faster growing like some hedge funds, however this also made it hard for them to avoid the same fate because investors expected them to keep performing at ever higher speeds even as the market became more dangerous prior to the GFC.

Both businesses had a lot of momentum but when there were smaller crises both were still able to change course quickly like Oy predators chasing an elusive and dodging R prey, for example hedge funds using high frequency trading could quickly exit parts of the market when they started to look fragile. However no matter how nimble they were as the market increased its momentum from Iv-B competition eventually to be successful companies had to give up their ability to get out of the market quickly.

If they did not then their hesitation would leave them behind in this intense competition, the market was so opaque that there really was no evidence that it would collapse anyway. Businesses like this can also fall into a Negative Sum Game in part without realizing it, many of their trades are then done to minimize the dangers in an increasingly shaky economy rather than aiming for profits. This makes it hard for companies to know what to do when the market starts to collapse, for example on a sinking ship passengers might get cornered or trapped by simply running away from water in the lower decks rather than having an aim of getting off the ship.

In the same way companies in the GFC were concentrating on salvaging their portfolios rather than trying to understand how best to get out of the market, for example investors started shorting parts of the market which drive down share prices minimizing their losses but creating more of an overall collapse for themselves. In the same way the oil bubble after the GFC was mainly caused by speculators trying to recoup their losses, this resulted in damaging the economy again making many of their other investments fail. The shorting of sovereign debt in Europe is also a Negative Sum Game where investors are trying to collapse the very economies they make money in for small profits.

In these cases of too much momentum it is difficult to turn around companies like this which is why the GFC was inevitable to a large degree even if there was an attempt to avoid it years before. They became like the cars racing on the freeway mentioned earlier to get to appointments, if they tried to slow down or even get out of the market then the pressure of other companies would in effect create a pile up and a manager that tried to do this would likely get pushed out by another who would deceptively call him reckless for causing economic pile ups rather than seeing he was trying to slow down to avoid a worse accident later.

This is the Negative Sum Game again, as the traffic gets ever faster the drivers spend more time minimizing the chance of a crash rather than looking for a better way to get to work as a Positive Sum Game. The same happens in many resources associated with cars, for example peak oil is being handled as a Negative Sum Game where companies try to grab dwindling resources at the risk of climate change. This is because Iv-B is so deceptive, an honest Iv manager then is more likely to be replaced by someone pretending everything is ok to get his bonus before the company crashes, this is because there was no I-O policing making this behavior against the law.

For Iv-B businesses then friction and viscosity reduce velocity either by reducing energy or mass, or increasing time, those that get slowed down by this V-Bi friction are more likely to go broke than to form a stable company. This is because with weak I-O policing most of the other companies would be Iv-B or V-Bi and not both together, it becomes then like an honest company being beaten by those with fewer scruples like with Gresham’s Law.

For example the selling of subprime bonds and CDOs etc was a high pressure highly energized sales presentation with much excitement and enthusiasm. If a sale takes too long to close then these energy might be lost in the viscosity of the process and the customer might select a faster transaction or cancel. A business losing momentum might start to downsize and lose volume, this is like reducing mass as a way to reduce its inertia. This reduction in velocity can be caused by random delays, for example an Iv salesman might be caught in traffic and be 10 minutes late, losing a sale worth millions.

So this chaotic velocity can be affected by random changes with friction such as traffic and reach a tipping point giving rise to much larger differences in profits compared to the cost of petrol for the car trip. As the Iv-B system starts to collapse random V-Bi stagnation then starts to gum up the works, people experience more frustrating delays like the freeway where enough accidents gets people caught in traffic jams causing the freeway journey to become stagnant as often happens at peak hour.

V and Bi however are low velocity, money can sit frozen in term deposits or long term loans for many years whereas Iv and B move money much faster such as in overnight loans between banks. This V-Bi money has some inertia in that it often takes a long time to arrange loans, for example to redeem bonds and reloan money. Inertia then is different from momentum here, a part of the economy might have a certain amount of inertia in that it is somewhat difficult to get it moving and growing and also difficult sometimes to slow its growth if the economy is overheating. Momentum however is more exclusively Iv and B because it relates to higher energy and velocity.

Associated with velocity is acceleration, this is Iv and B, once a direction is set and momentum increases in Iv and B then this energy can continue to increase giving an acceleration in the movement of money or goods and services. This momentum need to grow ever faster exponentially, this only occurs with Iv-B and Oy-R interactions where both sides bluff and deceive each other like in poker. For example in a game of poker the bets might keep rising until there is a crisis where people have to call, in an economy with strong I-O police however this feedback is reduced because the police supervise these kinds of transactions even though both sides would prefer they remain secret to keep bluffing each other.

This is because of chaotic growth being exponential which is a kind of acceleration, also like compound growth. For example if someone puts money in the bank at compounding interest then this interest on interest growth will eventually become exponential, obviously this could not go on forever because the account would eventually contain all the money in circulation. It would then have to either crash or slow in some way, for example there might be a recession or lower interest rates.

With leverage such as with the carry trade of loans from Japan at low interest rates, reloaning elsewhere at a higher interest rate and reinvesting the profits each year this exponential increase in profits could become quite large and eventually cause systemic problems in the economy. This is because the profits from the bubble have to come from other parts of the Biv economy like the exponentially increasing bank balance, eventually this has to hit a ceiling and crash.

Some of this exponential growth can occur with money freed up as Iv-B grows, like fractal roots and branches covering more area with less wood in a tree the increasing use of leverage can allow some investments to absorb this freed up money as profits. This is a common tactic in Leverage Buy Outs of public companies, they might be saddled with extra debt and money taken out as profits. Often these companies will not survive because they have been made Iv-B because of weak policing in this area, the predatory takeovers however can be highly profitable.

Often this process is also a Negative Sum Game because this kind of business increase before a systemic crisis as investors find that weakening the whole system is the only way to minimize losses, for example a conglomerate might keep growing to improve its cash flow from loss making divisions rather than aiming to make profits. Buying an asset rich company that is cheap because it is going broke is a common target, the idea is to fire enough staff and cut costs to minimize losses as a path for the company to survive. However when most of the companies in an economy are like this then the whole system is on the verge of collapse, this competition to throw workers out of these businesses and make fire sales of assets can trigger more shock waves on other businesses so everyone starts to lose more money than if this restructuring had not happened.

This is highly chaotic because like cars going faster and faster on a freeway momentum is also increasing and when problems appear it may be impossible to slow or change the direction of a business as happened with CDOs, CDSs, etc. In Iv-B the B part of the economy can also accelerate its momentum exponentially, for example B farmers might exhaust the soil with excessive use of pesticides and fertilizers. Oy big fishing boats using radar and huge nets found so much profit hunting R fish in the oceans that they quickly multiplied in number and are reaching many tipping points where the number of fish are crashing worldwide.

## R animals can also be wiped out from too many Oy predators, when their numbers crash the Oy fishermen then tend to starve just like Oy hyena after eating too many gazelle.

The B farmers are like the roots of the plants that they are growing, they use Oy pesticides which are trying to kill the R pests feeding on the V leaves of these crops. This is a potentially unstable situation because the B farmers might drive this process chaotically because of deals done with Iv speculators, they then overuse these Oy pesticides and then the R insects while being wiped out initially then rebound. So they become like the R prey being hunted too much by Oy predators so that some have a revolutionary leap to being able to protect themselves.

In the same way the R insects become resistant to the Oy pesticides which then must have a counter revolution to stop the new kinds of pests in an escalating war. Eventually this exponential growth of pesticides can crash causing devastation if these pests cannot be stopped, sometimes also the deceptive way they are created can secretly cause health problems to people buying these crops.

There is to some degree a brake on this exponential growth with natural Oy predators such as birds feeding on the R pests keeping their numbers down and protecting vegetation, but both their numbers can then vary chaotically if the O middle of the food chain is not stable. B workers can also have this exponential growth moderated to some degree by I-O police monitoring the health risk from pesticides and investigating speculators trying to deceptively manipulate the market.

Low fish prices from Iv competition can make much of this overfishing uneconomical, it may then follow a boom and bust where the early supplies of the fish create a booming market but then when the fish stocks crash many companies go bankrupt. Also some rare fish such as tuna might have a boom in price as it gets rarer from overfishing, some might even speculate on it by hoarding frozen tuna. It is possible that the whole tuna market might collapse from this boom in prices as it becomes too rare to find and the roots and branches of this industry collapse, then this might allow the R stocks of fish to recover. However international I-O policing agencies are also trying to reduce overfishing, these are then evaded by secretive and deceptive Oy fishermen like the O police in a suburb trying to moderate the Oy thieves there.

In the same way they can do this by getting at the Oy fishermen’s Y backers, when these secretive fishermen get caught with the fish then they might snitch on their Y-V buyers which can break the illicit business. For example some large V supermarkets might take fish from their Iv-Oy agents, if they make losses from a Bi community boycott as a result then they might stop supporting the Oy fishermen and the R fish stocks can rebound.

So as is usually with Iv-B this acceleration of the amount of fishing leads to more chaos and instability and almost always a tipping point and collapse. Often the R fish stocks take a long time to rebound because some fish are more like Ro moving in schools, this means that they have not evolved to grow exponentially after having being hunted too much by their natural Oy predators, instead they might be like Ro schools of fish that lose some in wars of attrition against teams of dolphins for example.

However Ro animals can react chaotically when the predators are too strong such as sometimes happens with Y fishermen where a net acts like a team of predators surrounding a Ro school of fish. They can then respond by evolving to become more like R and hiding from these fishermen but this takes a long time to happen genetically, in the meantime they would tend to stay together in Ro schools and be wiped out except for R stragglers.

These remnants then might eventually become a different kind of fish if they have characteristics that help them to survive, such as straying away from the Ro school. Other R fish might be mutated and so some manage to evolve an instinct to scatter when confronted by these nets instead of concentrating into a school.

This exponential increase in Oy fishing might be moderated then by randomness, for example random bad luck on a fishing boat might cause them to miss a big shoal of fish. With prices so low from overfishing this might put them out of business and the chain of processors of this fish might be disrupted until they can either find another supplier, create a zombie fishing boat by propping up its finances though it loses money as for example the Japanese did with Whaling in the Antarctic, or collapse much of the chain of fish processing because it takes too long to get the fish coming through again.

With this crash in the fish supply the price might climb again chaotically but as soon as they get the fishing boats going again it may well crash if the fish stocks have not recovered, the fish market then would be in a state of depression where any revival is pounced on until it is quickly exhausted sending the fishing boats broke again. In this state the government might bail out the fishing industry or prop them up like zombies with tax breaks even though the R fish cannot recover under these circumstances without I-O police monitoring the amount of fish caught.

## This is then like the near depression after the GFC where any revival in the savings of the Bi-B consumers is pounced on by companies trying to survive, often they are being propped up like zombies to stop the broke consumers also sending the companies broke too.

Randomness can also help these chaotic swings in the market after the GFC as with the fishing fleet, for example with an alternating current of money such as an overdraft from a bank they can afford to make losses on some trips and pay it back with successful ones This is the insurance based aspect of these V-Bi loans and can stabilize the whole chain of fish processing, however it is no substitute for I-O policing of overfishing or else these V-Bi loans will just cause the fish to be wiped out more completely and create a bigger crash.

This is also like after the GFC where creating zombie Iv companies keeps the Bi-B consumers short of money instead of letting them accumulate savings, these kinds of financial companies already helped to crash the economy by the equivalent of overfishing by selling subprime loans to B workers. For example in the US many of the large banks have been bailed out like zombies and so they have continued with the same kind of predatory tactics that impoverished the Bi-B consumers. If banks like this were allowed to fail then others coming up might be more considerate of the consumer and allow them to regenerate like with the fish stocks.

As an Iv-B grows in velocity effects such as with the Bernoulli Principle and turbulence.can come from this faster movement of money as well as goods and services For example as money velocity increases just as with a fast moving liquid this decreases its overall pressure and it can become more like a gas as in a carburetor, this is like cars going faster on a freeway where instead of putting pressure on other cars to go faster they go around them more quickly.

A bubble economy then can grow from this exponential acceleration but there can still be some randomness as friction which tends to reduce this exponential growth. Turbulence is chaotic and in liquid money can be like whirlpools and eddies in a river or like the movements of air around an airplane wing. Too much turbulence in money can be damaging to an economy as it is like high energy and momentum but moving destructively like a rampaging bull rather than smoothly.

This was seen in the GFC where the high momentum of money panicking and moving from one security to another looking for quick profits or a safe haven caused much more damage as it collapsed than if the process was more orderly. This is also like panicking people trying to get out of a burning theatre, they might end up injuring each other more than the fire hurts them. So this turbulence is different from the Bernoulli Effect, for example if the people are getting out of the theatre quickly then they might push each other very little and so they move more like a gas.

In the same way when money flowed at high velocity in the money grid prior to the GFC this resulted in low pressure, when there was some resistance from a buyer to a deal then instead of trying to push them into it the trader would be more likely to quickly move to another prospect as wasting time on pressuring him might cost more overall. However at other times the trading might be more chaotic with different momentums crashing into each other or moving apart like water molecules in a turbulence, in this case sometimes Iv trader might try to pressure B customers because the momentum of their deals needs a fast outlet and this turbulence prevents them from moving to another customer.

For example when the subprime bond market became more chaotic there was a pressure to move more and more toxic bonds, as these backed up in the subprime lenders they exerted a turbulent pressure where Iv salesmen were making more deals, some mortgages in bonds were defaulting and had to be replaced over and over, some salesmen might leave or be fired because of plummeting sales, getting new V financing for loans might have started to dry up, and so on. Out of these conflicting pressures then at some stages the Iv agents had to apply a lot of pressure on V-Bi customers, with weak I-O policing this may have led to fraudulent promises being made.

The chaotic movement of capital for example might have left businesses starved for money or high and dry in some areas, this would make them more vulnerable to shock waves in the economy and so this changing level of money in different areas is like different levels of water in turbulence. This would produce more pressure on businesses caught in this to get liquidity from wherever it was available, other areas would have too much liquidity like high levels of water as money moved to safe harbors or rushed into some temporary bargains in the crash.

## Just like turbulence around an airplane wing can cause metal fatigue, cracks and shearing this can also happen with high velocity money where these conflicting momentums of trades in effect create cracks and can tear the market apart.

When the system starts to crack these tend to widen even more as they are weak and this causes more friction on this high momentum money flows. For example as the subprime crisis grew more mortgages defaulted and some bonds could not be easily sold as they kept having to be replaced with new ones as they defaulted. This created a chaotic drag on the selling of these bonds and a shearing force where one part of the bond assembly was moving faster and then the other parts were getting bogged down with finding suitable mortgages leaving large numbers of partially completed bonds like a plane wing with parts missing out of it.

Money then had rushed into these bonds to assemble them, for example the Iv-Oy salesmen might have been pushing their R-B customers hard to make sales targets creating a backlog. Then much of this high momentum money got stuck in these partially completed bonds and couldn’t get out quickly, this created more drag on other parts of the market like for example subprime lenders couldn’t repay their loans as quickly causing them to be under pressure to keep their V-Bi investors happy and from panicking. The shearing force then spread through the economy with some parts still liquid and able to flee to safe harbors like US Treasuries while other parts became separated and bogged down with the economy disintegrating like a plane wing cracking and falling apart.

When this Iv-B increasing momentum is moving smoothly then there is this Bernoulli Effect of low pressure on the components of the market such as with the subprime bond assembly, however as the Iv-B market continues to accelerate eventually it begins to hit a ceiling which breaks up this smooth movement and creates turbulence and destruction, for example almost any plane if it continued to accelerate would eventual create so much turbulence in the atmosphere that it would disintegrate. When the plane started to break up this turbulence would then work on the chaotic cracks to widen them and tear the plane to pieces as happened with the financial sector in the GFC.

By reducing this momentum and acceleration with more time and less energy this turbulence is decreased, this reduction of energy can be similar to removing money from an overheated Iv-B economy with high interest rates which create more friction with the idea of bringing the accelerating plane in for a soft landing rather than having it tear itself apart with higher speeds. However this can also cause chaotic cracks and turbulence such as raising interest rates causing a tipping point to suddenly appear and creating more shearing forces and collapses, this is why recession can quickly follow interest rate increases.

This is like a speeding plane putting out air brakes to slow it down but the stresses around the brakes create cracks which tear the plane apart, for example where the interest rates go up some companies start going broke and then they default to other companies or slow their deliveries causing others to miss appointments and payments, etc. Often also when the Iv-B economy keeps growing exponentially despite interest rate increases the shearing force can be much greater when they finally do work especially if the rates are raised repeatedly and are secretly widening more cracks without the central bank realizing it.

For example Iv-B companies might be trying to deceive each other by pretending they are not bothered by the higher interest rates, this is like bluffing in poker where players try to pretend they are not hurt by losing some big pots. It can also be like a casino concerned at the boom and bust nature of high pots in poker games raising the amount it takes from each ante, this is supposed to make it harder for large pots to grow but it might make some players even more desperate and take more chances to survive. This then might cause more spectacular crashes where players lose all their money because it can turn the poker into a Negative Sum Game where all now have the odds against them.

In the same way raising interest rates or trying to burst a bubble can make speculators even more desperate as they try to V fruit and get their money out before the collapse like with desert plants. They might then put on this deceptive face causing the central bank to raise rates too much and then be accused later of being heavy handed and causing the crash. However raising interest rates can change a Positive Sum Game where companies are making mutual profits into a Negative Sum Game where they are trying to stave off bankruptcy, get out of toxic assets, trying to stretch diminishing liquidity with higher leverage, even shorting the market by forcing it to collapse in the hope of short term profits to save themselves first.

This then can be like two opposing chaotic forces, the momentum of the interest rate increases creates turbulence as some parts of the economy are suddenly slowed, which the central bank might approve of, while other Iv-B parts are still moving quickly because use more short term borrowed money which can sometimes remain at low rates if there is a glut of it. For example even if interest rates go up V-Bi banks will still lend it out overnight at low rates rather than let it sit idle and earn nothing, some parts of the Iv-B economy then keep growing but this has created a shearing force where cracks between the two markets will cause more damage in a recession.

They might also turn over money so fast the interest increases are not significant because all their competitors have the same problem so they all still grow exponentially getting closer to stronger turbulence. Iv-B will grow exponentially until it hits a ceiling and then it shrinks exponentially in a collapse, higher interest rates then might diffuse evenly in the V-Bi part of the economy but in chaotic areas they remain uneven. For example subprime and junk bonds might have much higher interest rates than the central bank sets to reflect their increased risks, the rate rises then cannot diffuse into these areas except by creating more shearing forces and turbulence.

## Also when there is an Iv-B bubble people are usually making more profits from rising asset prices than the small rate increases are likely to affect, they are also making more money from each other and so the rate increases draw money relatively slowly from the bubble.

These interest rate increases can then slow parts of an economy down dramatically while a real estate or tech bubble continues unabated, the shearing force between the two will be stronger because eventually the disparity in pricing between the now recessionary V-Bi parts of the economy and the Iv-B parts that suddenly run out of steam will mean their prices have to fall much faster as the bubble is pricked. For example the I-O market is weakened in an Iv-B boom, eventually though the Iv-B assets such as real estate in the GFC have to get back to sustainable prices in this I-O market instead of just speculation between mutually deceptive parties.

So these rate increases might put the V-Bi communities into recession and make them short of money just when they need more liquidity to pick up bargains to soften the collapse of the bubble. It is important to realize that the object of an Iv-B bubble is not always to make the most deceptive speculations and then get out before the bust, because of the opacity of this deception most Iv-B people don’t really know what is going on and many are hoping for a mature economy rather than a bust. For example the railroads as they were constructed caused an Iv-B boom but this matured into a well-connected economy, the same happened with freeways.

Many people no doubt thought the financial innovations prior to the GFC would stabilize into a new and mature kind of financial system just like computerization has to some degree with the internet. Some booms then do mature like this, the tech bubble arguably created many mature companies that formed a V canopy overshadowing their rivals and ending the destructive competition. Perhaps the subprime bubble might have ended with some lenders growing so large they overshadowed the rest sending them broke, then companies like Countrywide for example might have been able to lend more responsibly and bring the bubble to a stable soft landing.

It may have been then that the Fed raising rates before the GFC cur short this maturing cycle with the shearing forces and tightening liquidity, however it is more likely that the weak I-O policing caused so much fraud and instability that the system could not have matured into stable trees.

The test of a bubble then is whether the innovations behind it create a better kind of system, this happened with the railroads and with computerization, however the whole system of subprime and liar loans seems to have collapsed rather than adapted to the crisis. It’s likely then that it was not a genuinely useful innovation in those circumstances but was more a way to plunder R-B people as I-O deregulation gathered pace.

A better way to reduce a bubble forming and rupturing is stronger I-O policing, for example more auditing of companies involved to expose and prosecute companies for fraud, slowing dangerously fast business, mapping out the secretive areas of a boom to show the public whether it is a deliberate or self-forming Ponzi scheme, and so on. Also the roots and branches of the bubble can be published so Bi and V investors can trace them out from one end to another to clearly see which areas are fragile and where the real I-O price is likely to have to fall to, as of 2012 this price of real estate is only now being reached in the US.

This has the advantage of reducing turbulence faster because companies have a reason to slow down because they can see the dangers like traffic police slowing down speeding habits on the freeway to reduce the risks of crashes. Increasing interest rates can be an arbitrary decision and as Greenspan found out can be resisted by the Iv-B sector of the economy especially when the market is so deregulated that there are few penalties from getting around these attempts to slow the economy like slowing the freeway traffic.

For example if the I-O traffic police were trying to slow traffic to reduce crashes then only being able to give I civil fines might not work of the wealthiest drivers need to get to appointments to make much more money than the fine costs. They tend to think that if they slow down without having to then their competitors will get to some deals faster than them, this might reach a tipping point where they go broke because of driving more safely. However with O police penalties such as losing driver points or a driver’s license even jail time for repeat offenders the drivers can be compelled to slow down.

This is more important as the economy starts to totter because as more areas become a Negative Sum Game these drivers like traders are trying to minimize losses and so are thinking more of saving their business by getting to more sales appointments than of the chance of crashing their car. A Negative Sum Game then is policed by O criminal penalties and so when an economy starts to collapse unless the regulators can use these criminal penalties they will be ignored.

As money moves through conduits such as Iv and B roots and branches or storage areas such as V and Bi it is controlled by processes also analogous to devices used to control gases and fluids. Hydraulics refers mainly to liquids and can use storage tanks, valves, pumps, and levers to also move money around a Biv economy. This works better with liquid money because like water it is relatively mobile but incompressible, for example it does not usually make prices change much when it is moving in an area while gaseous money can. Frozen money which is usually debt or savings can bring prices down by sucking energy out of the economy to try and thaw it.

Feedback loops can cause destructive effects in an economy much as it can in electronics such as with a microphone and speaker. Any electrical process can be represented with liquids in hydraulics so the chaos of these feedback effects with money as a liquid can be explored. For example a valve allows a liquid or gas to flow one way but not the other, this can also occur with liquid or gaseous money in Iv and B roots and branches.

For example a mortgage on a house means that if sold the money can only go to the bank and not elsewhere before the title of the house is released, this is like a valve allowing money to go only one way. A company might make sales but not give refunds, its goods and services as well as money then tends to go only one way like with a valve or a diode in an electrical circuit. Subprime bonds were pumped through the economy because each deal was like a pulse of money in one direction and refunds or reversals were discourage, for example a B borrower wanting to repay a loan early.

In the same way a public company might issue new shares but rarely buys them back so money flows one way through this valve. These valves then create pressure in some areas of the economy and a near vacuum in others as money is prevented from flowing back, for example some people might go broke because they cannot get out of a loan they got or return goods they purchased. Some businesses might make more money with this valve policy for pressuring people into sales and preventing them from getting refunds later. Freeways can also act like valves, it is usually impossible to do a U turn on them, roads then are like roots and branches where to avoid turbulence the momentum is enforced to go on particular directions.

When these valves break then turbulence can increase, for example in the GFC there were valves of deals being done and backed by Credit Default Swaps, when some of these swaps were not paid or bonds lost value many large V-Bi investors demanded their money back or cancelled deals. As of 2012 many of these deals are still being litigated which shows how weak I-O policing can allow Iv-B pressure to eventually become so intense that it ruptures the valves that make the system work.

A bank account typically allows deposits and withdrawals like a kind of storage, you can put as much money in as you want, also take out your own money so this acts like a storage tank and is electrically like a capacitor. This storage tank might be a common pool to many depositors with a metered valve on each conduit, for example there might be a thousand pipes hooked to a large pool of water and each pipe can add water like liquid money into this storage like a bank. As long as each pipe does not take out more than it put in this tank bank in effect provides V-Bi liquidity for these conduits acting as roots and branches.

More was discussed on this in my first Aperiomics book, the metered valve in effect stops people taking out more money or water than they put in or they might negotiate a loan they then have to repay. A similar situation might occur with farms sharing a water supply, each might be allowed to draw a certain amount and if they draw over this they might have to draw less over time to in effect pay back this loaned water. In this way chaotic events such as droughts can be insured against by having this storage much as a dam would do to balance rainfall and water demand.

This water reserve can be like a balance of payments in an economy, if they are running a deficit the water is constantly going out more than in and so they might need to borrow back some of this water to keep enough available for day to day needs. With a variable exchange rate there might be two kinds of water, say of different salinity where one is worth more to farmers than another. If this economy has water that is more saline then this is like their currency being worth less by comparison to the other water. In this case an overseas economy might have a variable rate of how many liters of the local brackish water is a worth a liter of the overseas water.

This overseas economy would also have a storage tank of its water available to its citizens, this would be like its money supply and the tank like a central bank. Businesses then tend to take this water like liquid money and diffuse it in the local economy, then collect some of it to put in the storage bank. This however is only the V-Bi part of the economy because it is mainly stagnant, there is little chance for growth and these pools of water like in a dam don’t move around. Like a swimmer in a dam then they are constantly using up energy from friction with this water just as with liquid money because each person is pushing in a random different direction from the others and their energies are thus cancelling each other out.

However the conduits mentioned earlier are like B roots and Iv branches where water can flow with some energy and momentum just like money in an Iv-B economy. Because this water is isolated in pipes the energy going in one direction can be saved rather than lost by being mixed with water from another direction. For example a pipe might go from the tank to a business and a second pipe go back to the tank, the water can move with some momentum is both pipes without each causing friction to the other. Doing this in the tank without the pipes would dissipate the energy with little water moved.

A fractional reserve bank also acts like a kind of battery, for example there might be an electric car with four motors on the wheels taking out energy to move the car in four wheel drive and putting energy in when the car brakes. The motors don’t need to have all of the battery available to them, as long as there is enough energy for them to do their job the battery can be as small as possible otherwise. In both these cases as long as there is enough storage capacity, water or money in one case and electricity in the other, the chaotic problems are staved off. However there is still a minimum uncertainty because no one knows what the future needs of water, money, or electricity will be.

When money is pumped in an economy it is channeled by valves to maintain the energy going in one direction so valves tend to be Iv-B, for example the Fed would add money into the banking system by buying bonds and this money goes into the seller’s account, not the reverse. A bubble tends to be inflated by the valve nature of money or goods and services like with a pump, like someone blowing up a balloon with a hand pump. For example a transaction in real estate acts like a valve where someone gets a house and the other person gets money, usually this sale is final and the seller cannot get his house back. In the real estate bubble prior to the GFC there were millions of these housing transactions like pulses through valves as money was pumped into it.

When the bubble burst it became in effect more like a vacuum or an area of lower pressure where it became more difficult to sell these houses, there was a pressure from the sellers to get money and so the price of the houses had to drop to make the houses more appealing. Again after the sale usually the buyer could not get his money back. In some cases a commodity might become completely negative like toxic waste where people have to be paid to take it away rather than having to buy it. In this case there is a strong tendency for this commodity to become G public property because it has no value other than minimizing losses in a Negative Sum Game.

A bubble then also becomes partially a Negative Sum Game as it bursts where there might be pressure on the government for a Roy solution such as bailing out hone owners, tax breaks for buying hard to sell houses, buying houses to be owned by the government for welfare or to rent out, and so on. Even when the economy is still Biv there is still a Roy aspect when a bubble bursts because the G-Gb Zero Sum Game points back to G public property.

For example speculators in a Biv bubble might end up owing more money on their houses than they are worth, there is a Negative Sum Game where they might have to go bankrupt to minimize their losses or perhaps be paying off this house for the rest of their lives.

The bank might also have to minimize their losses and write off some of the loan, both then need to find a Roy strategy usually though the O criminal courts where people might be compelled to do some things under pain of prison rather than just fines. For example in the nineteenth century there were often debtor’s prisons to compel people to pay their debts, also someone might have to pay an I fine in exchange for a reduced or suspended O prison sentence.

So in Iv-B this energy of liquid and gaseous money is directed by a pumping motion to go in a particular direction, the car components mentioned earlier for example go in one direction to eventually assemble a car and the headlight maker would not be sending them to the company making steel for the car. An order or expression of interest in making a transaction exerts pressure on goods and services to satisfy it, when the money offered is enough to make a profit this is an energy profit that is made by delivering the goods.

For example in a series of roots and branches as pipes separated in some areas with valves there might be energy required to move the fluid in the direction of the valves. In an animal there arteries and veins are like this, they have valves and the heart transmits energy around the body by moving the blood past the valves in this so the blood can go back the opposite way. In the same way in an Iv-B economy there is a pumping pressure where people demand goods and services with this liquid money, when there is enough energy in this money or enough of it then the valve opens and the person gets the goods and services for his money.

In some cases this is like a hydraulic system where the same amount of money is worth a certain amount of goods and services but the energy component varies this relationship, for example the heart might have to deliver more energy to get blood up the legs than down them and in the same way some goods and services cost more in some circumstances than others. For example the same kind of house might cost

Many different prices according to where it is, how scarce money is in the area, how strongly the money is pumping into the economy such as with a bubble, how quickly someone needs a house where low time corresponds to high energy, and so one.

Not only does the energy in this fluid like liquid money change the prices of goods and services but it also can deform them in a more permanent way positionally, for example a blood vessel in the body that often exerts more pressure might end up expanding in size and not contract when the pressure is weaker. In the same way when there is a high energy or demand for some goods and services then the price might tend to stay high even when the pressure to buy is much weaker because the market has adapted to be able to handle a larger demand.

For example the US securities industry might be able to charge more for some services because they can handle much higher volumes of liquidity even when demand for this is low. Another market might be able to handle this lower pressure but burst under higher amounts as the amount of liquidity created bubbles of prices all around it. In the GFC US treasuries became a safe harbor not just because of the stability of the US but because so much money could be invested there without affecting the prices much, if the same amount of money had gone into Britain for example it would have distorted prices of many securities which then would have crashed when the money tried to move on.

In the same way the US real estate market seemed to command a premium because of its size, many believed the Japanese carry trade money could be absorbed into the US economy without creating many price distortions for when it eventually had to leave. This was often believed in Iv-B because of deceptions and the secretive nature of how this money was invested, previous influxes of money had been handles with little problems such as with Petrodollars. However this influx of money was in a highly deceptive deregulated Iv-B market based on a false premise, that B US workers just because they were numerous could absorb all this finance without it creating price distortions.

So these B workers were represented as being like US Treasuries in effect, that large amounts of money could go into it like an already stretched conduit that could take this money and generate returns on it while being able to shrink without cracking if this money suddenly left. With US Treasuries large amounts of money can enter and leave them without problem because it acts like a V-Bi pool however in the subprime Iv-B economy there was no real pool of liquidity or assets that could absorb the momentum of these money flows without distorting and cracking.

This is caused by weak I-O policing, usually this carry trade money would have been associated with large V-Bi institutions that could manage the risk of large movement of this money. For example in the past large V-Bi banks would take on this carry trade money and loan it out to Bi community people for loans in a highly transparent, liquid, insured environment. People then expected the same thing to happen in the Iv-B economy and there was a lot of excitement when it seemed this market could grow so quickly and still remain highly liquid and able to handle shocks like these other V-Bi banks.

However these V-Bi banks no longer did most of the loans, securitization meant that they were replaced by Iv-B conduits and high leverage which had few reserves to handle external shocks. So instead of a system that might be able to handle movements in and out of the US of hundreds of billions in a day with a panic or boom there was instead perhaps millions of smaller deals each of which could not handle an outflow of money much smaller than this. Like a house of cards no matter how many cards there were or how large the building it could not have the same strength as one made of V-Bi stronger and more resilient materials.

For example one subprime bond might fail dramatically and this causes the investors to not buy another bond which then remains unsold. This worries a different investor as they see the bonds are not selling so they don’t buy either. Each time a bond remains unsold loans for B workers cannot be made and so a house remains unsold in the cooling real estate market, other investors see these houses not selling and decide to sell their own or forego a house purchase.

This then proceeds with chaotic collapses like falling dominoes even when there is no overall collapse, by contrast if the V-Bi bank like Fannie Mae earlier was selling the bonds then there would be ample liquidity behind them and no real connection between whether a bond sold and whether a loan was made, and so no connection to whether a house sold. In this case then the buying of bonds, the making of loans, and the selling of houses remain independent variables compared to each other and so this is a V-Bi system that can tolerate larger chaotic shocks. In the previous example the bond was directly connected to the loan which was directly connected to the house sale and so while growth can create a boom in real estate sales and a bubble declines can create a chain of collapses because of the high leverage used.

A shop can also act like a pump or engine in the economy, buying stock is like opening the pump’s inlet valve to receive goods and usually at different times opening an exit valve to give money to pay their accounts. Then there are usually two more sets of valves, then the goods are sold to people who receive the goods through one valve and pay for them through another. A shop can run passively by setting prices at the market, there will be then some random buyers arriving in a Poisson Distribution.

There can also be some chaotic buyers where one customer might tell another about a sale and so by word of mouth their sales can grow exponentially until they reach a ceiling where the service becomes so slow the word of mouth starts to turn people away. A shops can also generate more energy in its sales and shorter time by pricing its goods lower so people have to come quickly to grab the bargains, they then have to expend more energy quickly in this situation. Another store might prefer to use random customers more and price goods and services cooperatively instead of competitively, there might be better and friendlier service and word of mouth chaotic business happens much less because the shop’s wares are so open and transparent. This might be like a café where people know each other and act like a V-Bi team.

Another way of looking at the money pump then is that it moves with the current of money with valves to prevent it flowing back again cyclically. So for example the shop in effect opens valves indicating it will buy certain goods at a certain price and other valves indicating it will sell those same goods at retail for a higher price but the Iv salesmen push them into buying some goods and services while their customers push them into stocking these. A shop like this might be neutral in some cases, it tends to generate savings and profits for both the Iv agents it buys from and the Bi customers it sells to.

Some shops like the I-O police can be biased to the left or right and so their business becomes more random or chaotic, for example when the business is more Bi it might be less sympathetic to Iv agents trying to sell their goods and services. The café mentioned earlier then might not stock new and fashionable foods because some of them might have deceptive packaging or ingredients, they might instead specialize in more open and transparent menus where food is cooked more slowly and is more conventional like the middle of the normal curve.

Another shop might lean more to Iv, when agents or travelling salesmen come to them they might cause them to compete with each other for the lowest price and then pass these savings onto their own customers. Such a shops might have large numbers of mutated goods often cheaply made with planned obsolescence and deceptive packaging, sometimes these are full of imports and electronic goods because these are growing the most exponentially.

Once a shop veers away from I-O neutrality there is likely to be more troubling with policing it, for example the Bi leaning café might have people acting like a gang and chasing away people who don’t fit into their idea of being conventional. Some bars can also be like this, a type of Bi community such as unionists or bikers goes there and tends to make anyone secretive feel unwelcome. The police then might have problems with this vigilante like attitude and fights there might be like a Ro neighborhood watch beating up Oy thieves coming into their area.

The Iv leaning shop would have more trouble with fraud, cheap goods would be deceptive about their features and warranties might not be honored. Some goods might sell virally generating large profits while others collapse in sales and make losses for the shop. Each shop also tends to have their Roy and G-Gb aspect, for example a rightward leaning Iv shop tends to have a deceptive Oy thieving side and so O criminal police are sometimes needed for particularly serious fraud perpetrated by them.

## Often this Iv-Oy fraud is a Negative Sum Game where the shop is trying to get out of some bad purchases by ripping off its customers in a predatory manner.

The Bi shop such as the café or bar mentioned earlier also tends to have a Roy aspect as mentioned earlier where patrons might act like a Ro neighborhood watch or gang. When an economy has a crisis large areas might turn from Biv into Roy and so these kinds of shops might have more Roy aspects, for example there might be more serious Oy fraud in the Iv shop and more Ro violence in the Bi café or bar. This Ro violence might come for example as a formerly Biv area becomes a Roy ghetto and wealthier Biv patrons move out. Then a bar might become dominated by Y bikers or mafia, alternatively a Ro gang protecting their neighborhood might take it over and chase more honest patrons away like with Gresham’s Law because of weak I-O policing. The police are made to feel more unwelcome in this neighborhood and so disputes are settled more by vigilante behavior than neutral justice creating more inefficiency.

Often then this is from an inefficiency produced by the Roy situation still being policed by I civil law, for example the I-O police might not be used to Oy thieves running an Iv agent business as with subprime fraudsters in what was previously a relatively honest Iv finance business. The same occurred with the Savings and Loans Crisis in the US where the regulators were not prepared for so much criminal fraud, this occurred because money was still relatively scarce from a period of stagflation in this Biv economy but crooks were held tightly in check by the strong I-O regulators.

## The time under Reagan was where V-Iv business people were trying to find a way to make money and pushing for I-O deregulation allowed them to plunder rather than to build new and sustainable business.

As a society becomes more Roy some government run businesses might take over from Biv businesses that cannot make money because of excessive crime or scarcity of Gb resources. For example state run schools might proliferate because people cannot afford private schools, they might also provide meals to students under a kind of government run G café system. In a high crime area this schools might become dominated by Ro gang violence where other students are intimidated by their team nature and disputes would be settled by vigilante reprisals rather than neutral justice.

Students might lose their lunch or lunch money to these gangs, this is like in the Bi café where people outside the Bi teams were made to feel unwelcome there. Just as the Bi café had Roy aspects this Ro café can also have some Biv aspects, for example people might still use money to buy some extras rather than get G rations of government provided food. Also the food might be catered by a private business, which system is more efficient will depend on whether the area is more Roy or Biv.

The government run business might also be Oy predatory, for example Fannie Mae in the US was partly G government run and partially Gb private. Generally they acted as a Bi community service like a team loaning money, sometimes they acted more like a Ro gang attacking Y Wall Street predatory businesses using Oy subprime predators. Before the GFC however they became corrupted to some degree by acting as Iv agents for loans where they quickly securitized them and sold them to investors. Because of weak I-O regulations some of these bonds were also toxic to some degree, this became then a G government run business ripping off the poorer Ro communities because the O police were so weak in imposing criminal sanctions on financial fraud.

Valves can also be used to amplify or attenuate a signal, this is seen in electronics where a transistor might act like a diode but it also can leverage a small signal by borrowing current. For example a radio signal might be very weak but transistors can boost this by adding electricity from a battery or mains power. In the same way a Biv economy can amplify the power of money or goods and services by a transistor like effect. Some of this was discussed in my first Aperiomics book, for example a speculator might amplify his chances for profit and loss by borrowing a larger amount of money to buy shares.

If he looked at a graph of the shares he could buy without this transistor like leverage then his profits and losses might be small, if he was able to borrow 90% of their cost like prior to the Great Depression his profits and losses might be ten times larger. This also increases the potential for chaos, for example a radio signal boosted by a transistor might sometimes go too loud and blow up a speaker or drain too much power from a battery damaging it. In the same way this leverage can create wilder swings in a market which can cause a meltdown or drain so much capital from other parts of the economy that stagnation can result there.

However transistors are generally useful and not dangerous in electronic goods, the problem is where the signal hits a ceiling where it cannot grow and stronger causing damage or it drains too much power.

Usually a radio would be designed to avoid this, for example its volume knob would not allow the speaker to blow up or to drain power too quickly from the battery. In the same way I-O regulators in a Biv economy should insure that this Iv-B leverage does not become systemically dangerous, some banks for example were using leverage of over 30 to 1 prior to the GFC. This leverage can also be safe as long as the input signal itself does not vary too wildly, for example a radio is generally safe as long as the radio station does not suddenly send too strong a signal which gets amplified destroying the radio. In the same way this high leverage might be safe as long as the economy is more V-Bi normalized and so wild fluctuations are dampened or unlikely deviations from the normal economic situation.

## Prior to the GFC though these signals became too strong because of external shocks, such as the collapse of the Japanese carry trade, and amplifying these shocks was like amplifying the too loud radio signal.

When these signals in the market such as fluctuations in share prices become too chaotic they tend to move to a ceiling and then crash down again, this can be like a microphone feeding back through speakers where the sound might rise until the speakers stop working and then it quickly drops. Then the relief of pressure on the speakers allows them to emit sound again so it rises to the ceiling with a boom and bust over and over. This is the Iv-B problem where Iv agents and B workers feed back chaos on each other with deception like bids in a poker game with bluffing. In the same way then the poker bids feed back according to how each player is bluffing or thinks they have the better hand until the ceiling is reached where the bidding becomes unsustainable such as because someone is running out of money.

This happens in the Biv economy with weak I-O policing then, the subprime crisis was mainly caused by this feedback of lies where the B workers used liar loans to pretend they had enough money to buy houses when they often only wanted to speculate. The Iv agents were a party to this fraud, often they altered even these liar loan documents to make them even more deceptive to get their commissions. The V-Bi loan money from V Wall Street investors and Bi pension funds then tended to be loaned into this fraudulent Iv-B signal like electricity being fed into a radio.

The result then was an amplification of the fraud and bluff between Iv and B people, usually they would not have enough money to damage the economy no matter how dishonest they were. However the influx of money from the carry trade and trade surpluses from other economies trying to hold down their exchange rates caused loan money to flood into the US were in the absence of I-O regulators it found a pair of lying colors. A similar situation might occur if a poker game was concealed so outside parties did not know what it was, they might see the value of the pot going up and down and assume it was a stock or bond changing price.

They might then loan money to these players by buying a stake in them, they might however be thinking they are buying into hedge funds or even manufacturing companies. The players respond to this by bluffing with more money and as the money continues to come in the pots grow larger. Some still boom and bust, this is like a hedge fund winning in some investments and losing in others, overall though the poker game might mimic a hedge fund that is more popular and seems to be making money. Investors might also be able to sell out their stake in the game, for example if someone bought a one percent share in a player for a million dollars then with speculation in them he might sell out for ten million, the game might also issues new share regularly.

All this time just as Madoff’s Ponzi Scheme was hidden from investors they might not realize this was a poker game, eventually the money would rise to a ceiling where investors were running out of money just as a typical game would rise to where the players could not afford to keep bluffing. At this time then the pots would start to fluctuate chaotically where they might crash for a player, his investors just see the returns from him instead of growing are now either large or next to zero and so they start selling out their shares and not subscribing for new shares in him.

Eventually then the game is likely to crash as investors panic, also with weak I-O policing of this game there is a stronger temptation to use fraud where the players collude to get more investors money and even fake some returns like Madoff did. This illustrates then the transistor like effect, the player’s bluffing and bidding strategy is a weak signal like a hedge fund’s decisions on which securities to buy and sell. Often in poker as well as finance this can be highly deceptive or fraudulent but if the investors cannot see in this opaque situation they confuse a boom in bluffing with sustainable growth.

In hydraulics a fluid like money in the Biv economy can also reduce leverage, for example a small movement of liquid in one hydraulic chamber might move a larger amount more slowly in another. This then is using leverage to decrease energy and increase the time taken to move something, a company might add extra money into a project which reduces the potential profits and losses but increase the chance of slow and strong growth. For example a bank might instead of speculating with leverage on shares or securitizing loans might take high energy low time money like check account deposits and put them into long term thirty year mortgages. As it builds a portfolio of these mortgages then a large deposit or withdrawal doesn’t affect the bank because it has so many reserves to absorb this chaos.

This can also be like a depressed economy after an Iv-B boom has collapsed and the deleveraging is pushing the economy down instead of building it up. For example instead of small movements of capital pushing a share price up or down much larger amounts might hardly move it, the government might try to stimulate the economy and get a very small multiplier that seems even lower than not taxing and spending it in the stimulus.

## After the Iv-B boom hits the ceiling then the system instead of leveraging to grow is deleveraging to shrink, this is like Biv trees where instead of growing new branches they are shedding them because of a scarcity of Gb resources.

Money then becomes tight and deflation is hard to turn to inflation, when money is released into the economy with quantitative easing or borrowing it is often used to pay off debt or to increase savings. In effect then where before in the boom a family might feel secure with saving 1% of their income now they are deleveraging to where they need perhaps 20% of their income in savings. This is like the microphone feeding back into the speakers, the electricity power this becomes used up as the sound increases until it crashes after hitting the ceiling. This then means the electricity available as reserves increases and decreases chaotically as this leveraging and deleveraging of it alternates.

This is also like in Roy animal kingdom where Oy predators and R prey might leverage their successes by having more offspring until they reach a ceiling where they begin to run out of food. As their numbers crash they use a deleveraging strategy where those who have fewer offspring or waste the lowest amount of energy are more likely to survive, this race to the bottom will cause a second chaotic crash where suddenly releveraging their numbers with more offspring will again be a successful strategy.

## This then is like the decline in animal spirits that Keynes referred to, those who save more and deleverage have a competitive advantage against other Iv-B people because while this will damage the economy overall it can help the family that deleverages to beat their competitors.

This is also the consequence of weak I-O policing because people need the competitive advantage of delivering because of the high levels of deception in the economy. In the same way a poker game might delever after high bids have hurt some players, they then return to much lower pots where by husbanding their reserves of cash they hope to see their competitors overreach and leave the game. In the same way the deleveraging Iv-B economy is where competitors are trying to outlast each other in a new kind of feedback where only some will survive this bust. After the boom then the decline in the market is also a chaotic competition, traders might be trying to make the same profits from selling short and Credit Default Swaps as from going long in a boom.

Stopping this delevering is done in the same way as preventing excess leverage, random audits by the I-O regulators need to establish what the economy is really doing and they need to reassure investors that dishonest strategies will not win out in a Gresham’s Law scenario over honest ones. However usually this does not happen because regulators get accused of having caused the crash by prosecuting too much fraud at its height, it is believed that banks and businesses are too fragile to withstand honest scrutiny and so this opaque situation favors competitive delevering until it hits the floor.

This was seen in the Great Depression where the economy became stuck for a long time, people had a competitive advantage in saving their money in a Negative Sum Game instead of trying to make profits in a Positive Sum Game. Each time the economy started to revive people took the profits and saved them because they believed the bad times would return and so they would outlast their competitors this way.

This is also like in the Biv plant kingdom where after an Iv-B boom where trees grew too big and fragile they were knocked down in an external shock like a storm. Then these plants might evolve to survive better by growing smaller than usual, they become more like grass because it is so hard to knock it down. When a plant starts to grow larger again it encounters the tall poppy syndrome where others find it more profitable to topple it than to join it in growing larger again. This V-Bi grass then is not only strong in time and low in energy but it can be kept this way because of a deleveraging effect, instead of plants evolving to become larger they might be devolving to become smaller as a way to survive better.

In the same way Oy-R animals might compete successfully by devolving after a crash, the smaller animals might find they survive better because they need less food or they might evolve more layers of fat. As the R prey devolve in like a revolution downwards the Oy predators might have to devolve as well to match them or else they will starve more as they are feeding on smaller animals. Eventually then this devolution will match the environment better so they might be able to start growing in size and numbers again. However this situation can also become moderated by the regrowth of the O middle of the food chain preventing the wild swings in Oy-R numbers that caused their starvation rather than the animals being too big.

In the same way a Biv society might collapse into deleveraging where companies are devolving into smaller and less efficient businesses and people are saving more and cutting back their purchases, as this continues the economy might collapse into Roy not because of a lack of Gb resources but because of this exponentially increasing deleveraging. As this happens then crime might increase and so not only do R people save and buy fewer goods to have a competitive advantage but also to avoid having them stolen by Oy predatory thieves.

The Roy economy then finds it difficult to recover because people are scared to buy goods, they either save their money or they cannot make money because they cannot get work in shops that sell enough goods because of this fear. This would also have happened in the Great Depression where people would have been afraid to show much wealth when surrounded by high unemployment. Without strong O police then people cannot feel safe to shop, for example a high crime area might not be able to support restaurants because people are afraid to park their cars nearby for fear of them being stolen. Because of this the high unemployment and crime persists in this deleveraging where people win by saving and hiding steadily less and less money.

As of 2012 this deleveraging has been accompanied by austerity in economic policies, this is the same Iv-B strategy where an economy that saves more might survive better than others that spend too much. For example one economy might use austerity on the basis that more profligate economies might import more from them and help their trade balance, the austerity suppresses their own imports because people are afraid of disaster if they spend too much. The economies then compete in this austerity race to the bottom, one might get more investors because they can minimize losses there more in a Negative Sum Game because of this austerity.

Much of this is still caused by the fraud from the GFC that is still being hidden, because investors still find the economies so opaque they prefer to compete in deleveraging until the bottom is reached. In the US for example the real estate market has been delevering since the boom because people think it is more profitable to wait for prices to bottom out in a crash before buying in even though this strategy overall causes more damage to the economy. It is then the exponential Iv-B process in reverse, money flows out of the inverse of a bubble so it becomes more like a vacuum where air is pumped out of a balloon so the air pressure is lower inside it than outside.

Iv-B boom and busts tend to overshoot in levering and delevering because of their momentum and speed, there is still then a downwards momentum after the GFC that has not hit a strong enough bottom to disrupt this momentum enough to reverse the competitive strategy causing it. Often then this overshooting can be severe, for example the economic damage from the subprime bubble was because it was far too large compared to the historic prices of housing compared to rent returns. This delevering has still not reached this historic return in the US as of 2012 but even when it does it is likely to overshoot again as people still try to profit more from delevering. For example even when the market is 20% under this historic level investors might still think they will make another 10% by holding off buying in for another year.

Home owners and banks foreclosing on houses can also sell into any Iv-B bear rally of growing prices because they might think prices are going to go lower This then are the two opposing Iv-B strategies, one set of speculators might be bidding up a price like a hand of poker while another set are bidding it down by selling their stock into it to break the momentum and buy cheaper later. For example some poker players might be trying to bid up some hands to make more money while others might be trying to keep the pots low until they have a much better hand to deny those behind a chance to get back in the game.

In the same way a bank might be foreclosing on houses and can choose to either not foreclose in the hope the shortage will create another boom or to keep going so they have a stock of cheap houses which might catch the next rally to sell into. They might then prepare to foreclose but not actually do it, if they think there will be a bear rally then they might try and swamp it with stock before their competitor banks do the same thing. There is then a rush to dampen the upward motion of a rally with housing stock, those who are fastest in doing this make the most money.

When transistors feed back between themselves then the high pitch squeal many have might be picked up from many different microphones attached to other speakers so the overall volume of sound might change chaotically as some speakers overload and go quiet while others are still increasing in volume. This can then be like one boom following another, as one busts the money moves as quickly as possible to the next one created often just by this movement of money rather than actual value in the bubble assets. At times most of the speakers will be louder representing a bull market but then most will crash at the same time giving a model of a depression.

There would be no situation where the sound got to a normal volume with deviations around it because the microphones and speakers are not independent variables compared to each other. If each was in a separate room then there might be a weak feedback between them but the overall volume would be largely random, this is like a more healthy economy but is still not as good as a well-functioning microphone and speakers like that used in karaoke where the feedback is moderated from getting out of control.

In the same way hydraulics can be set up so that a piston in one chamber makes another move more, which makes another move more and so on until it connects back to the original chamber. In that case then moving one piston in a chamber can make the others move chaotically and also feedback some pressure in the original chamber, this can be even more complex if there are valves preventing the motion of fluids in some directions so it can resemble an engine where any movement is difficult to reverse but can go forward more quickly. An Iv-B economy has these valves where sales tend to go one way more easily than going in reverse, or giving refunds.

Because the motion of the other pistons might be hidden then someone moving on piston might think there is a logical and sustainable engine behind the movement he senses when it might be just people like him moving it. Each might then think there is more energy in the system than themselves, if they could suddenly see each other then they might realize they can profitably all take energy out of this system though they can keep putting it in like an investment. In the same way an investment bubble can have no sustainable business behind it that connects to Gb resources or V refinement of those resources, it can just be a cycle of bluff and secrecy or even where all the participants are deceived by the opacity of the system.

If someone working the piston in the first chamber did not know about all the other pistons and chambers then he might move his piston in ways that caused chaotic damage elsewhere. Because of hydraulics this can also create a gearing change with any chamber much like different gears meshing together in a watch. So moving one chamber can have vastly magnified effects in others as leverage but also like the butterfly effect in chaos theory. So for example the B workers taking out liar loans could not have realized they were pushing a piston and sparking a real estate boom because investors assumed they all could repay their loans, they just thought they were buying into a rising real estate market caused by someone else adding value to it.

The Iv agents selling subprime loans like pushing a piston also usually did not realize they were fuelling a system that would collapse, they assumed that people could sell their houses in the rising market and still make money. It would have seemed unlikely to them that subprime agents would be fuelling a global real estate boom. Real estate agents also pushing one of the pistons would not have understood that their selling homes was fuelling these liar loans and causing subprime agents to promise higher real estate prices to the B workers, they assumed they were reaping a reward from value being added by others.

So each was in effect moving pistons thinking that the movement they felt in return was real economic activity, imagine then each had a tap where they could extract water like liquid money or they could choose to add in water and receive more back as a profit. Then each might add in their savings to make more profits, other investors might also add in their liquid money even though they didn’t move any of the pistons assuming that they could get out all the liquid money when they wanted to or at least get out early and leave the others with the losses.

Such a situation is dangerous for the economy and the I-O police could easily solve this by randomly auditing some of the people involved along with the amount of liquid money going in and out to get a snapshot of the whole system. By exposing situations like this the I-O police can avoid these Ponzi like investments from going too far, instead people might be using the system in a more sustainable way where money or water is pumped for a valid use.

When these pistons are in a line they can be like roots and branches and they can be an efficient way to move a force from one end to the other chaotically. The motion of a liquid can be imagined first as an equal and opposite reaction for goods and services so as the money moves in one direction the goods and services move in another. It can also be viewed as a direct current where money is being accumulated somewhere by making profits, for example a shop might be selling goods and accumulating ever larger amounts of savings as profits.

This can also be set up to illustrate randomness in the system, for example a large storage tank has many chambers sticking out of it with pistons in them. When these pistons are moved the storage tank might go up and down slightly with the water in it, and this would also slightly exert a different force on the other pistons. However even if the chaotic effect of one piston, imagine for example it is connected to the chain or circle of chambers and pistons mentioned previously, is exerted on this tank it absorbs this chaos into the randomness of the large pool. Even if this pool is relatively small it might still be enough to prevent anyone going short of water if they move their pistons independently of each other.

This then might be set up like the spokes of a wheel where the pipes join to a storage tank in the center to make each piston move more randomly, this is how B roots might connect to the Bi area which is like the center of the spokes. In the previous example however the pistons were set up in rings and so there was very little randomness but mainly chaotic pushing on each other, even with a storage tank in this ring the chaotic pressure might still be transmitted disastrously from an external shock.

This then is why the Bi-B system of some workers being competitive with each other and other being cooperative is so stable, it combines some chaos and some randomness. The Iv-B system is like the ring of pistons where the fluid, whether liquid money or liquid water, goes in a circle and can then feed back like with the microphone and speaker example.

The V-Iv system is similar to this, instead however it is like the wheel rim where the spokes are connected to, imagine it is like a ring shaped storage tank with the spokes like conduits going out of it. In effect then it is the same shape as with Bi-B except the Iv branches are radiating inwards towards each other and the I market instead of outward like B roots seeking nutrients in the Gb soil. This then also tries to combine chaos and randomness into a stable system. Consider then the two of these system being connected to each other, the Iv spokes of the wheel go from the V circular storage tank and need to connect to the Bi storage tank, it has the B root like spokes radiating out from it. This is just the shape of a tree where the leaves are considered to be joined together.

There is then a balance of chaos and randomness in V-Iv, in Bi-B, and then in the I connection between the two there is a balance of chaos from the Iv spokes and the Bi storage tank. The system then is well designed to balance these two principles and avoid the problems when the two are separated as explained earlier, the role of the I-O police is not only to balance the chaos of the Iv spokes with the randomness of the Bi storage tank but also to try to keep the V-Iv and Bi-B areas balanced as well.

A large number of conduits connected to a big storage tank is then like a bank or insurance company which might react to chaotic effects, such as a house burning down, a business or consumer defaulting on a loan, by balancing some conduits taking out money while others put money in. For example the liquid money coming in might by premiums for insurance to balance the occasional chaotic outflow of money to pay for damage from a fire or earthquake. A bank might balance these inflows and outflows by paying interest on some money as outflows while getting inflows by interest charged on loans.

Hydraulically such a system is very stable because the conduits going in and out are isolated from each other, the more they are connected in rings as well however the more likely this random model might be overcome by amplified chaos. For example if the conduits are connected together they might all withdraw money at the same time like people all being laid off work at once bankrupting the bank. If an insurance company is too small then an earthquake might overwhelm its premiums coming in as so many people demand payment for their damages at once.

In this system them the problem with Credit Default Swaps becomes apparent AIG was like the storage tank of an insurance company also having conduits of premiums coming from Credit Default Swaps. As long as bonds insured with swaps defaulted randomly or a reasonable mix of chaos and randomness then this was a safe business, however when they defaulted all at once in a market meltdown this was like an earthquake bankrupting an insurance company. The problem was the swaps were supposed to be minimizing risk by spreading it around, however when conduits like these are connected in lines or rings it doesn’t matter how spread out they are because the momentum will still travel along them in a damaging way.

## To make swaps safer then it is necessary not only to try and price them with a mixture of chaos and randomness but also to ensure that the securities being insured are not too connected with each other.

This is like what happened in the GFC, all these conduits of money with valves and pumps in hydraulics can represent how the money moved around. A pump can freewheel and move simply from the pressure of a liquid going through it so this is like the money moving around with deals but the pump handle’s motion can tell us the force and velocity of the money liquid’s flow. When this is relatively random then the forces don’t build up anywhere in the system and this works best in roots and branches where the liquid pressure cannot build up anywhere.

However when there are circular connections between counterparties like extensive daisy chains of derivatives no one can actually track how the pressure in some flows will change. Working some pumps can create a vacuum of decreased pressure in some areas like a shortage of money or increased pressure like a glut of money seeking a safe harbor, either of which can rupture parts of the system. Even this amount of chaos might still avoid disaster if there is enough cooperation and openness where people can honestly compare information to understand the tensions and pressures built up in the system.

However in Iv-B people are competitive trying to deceive and bankrupt each other for profit, for each person then it is a competitive advantage for the system to fail in other areas as long as his own area is better off by comparison. Of course some people actually do this which is why there is always some V-Bi pooling of knowledge and resources in the system, however they can remain disconnected from the Iv-B people who think there is more profit to be made by remaining deceptive while the others try to patch up the system. Only I-O police can then bridge this disconnect between the competitive and cooperative strategies to fix the system.

This system can work passively or actively. For example if none of the pump handles are touched or pistons moved then they can all freewheel and the money flows can be regarded as normal random deals for profit people would do because any momentum in the system tends to diffuse with entropy into stagnation. The more different people are pushing the system might turning handles, pushing or pulling pistons, adding or taking out fluids, etc the more strain there is on the overall system and the more chance of ruptures somewhere breaking it or letting the liquidity spill out as happened in the GFC.

When a deal is harder to do then it might need to be pumped like when V hedge funds were desperately trying to sell securities in the GFC meltdown, when subprime salesmen were pushing buyers to take expensive loans with high commissions built in, when the Fed pumps money in or out of the economy to adjust interest rates like a giant heartbeat, when a bond is not selling well and Iv salesmen have to push reluctant Bi pension funds into them, etc.

So whether the money flows are considered to be automatic or being pumped competitively and deceptively the money can still move chaotically if there are not enough pools of liquidity mentioned earlier where many pistons and chambers connect to. This can be for example like the overnight money market where there conduits of money with pumps go in and out but the total level of money stays about the same. When the GFC hit everyone tries to take money out of this market and so the pistons were working chaotically making the level of money in the tank drop so much the valves had to be closed.

In the same way hedge funds and also Bear Sterns and Lehman had money flows going in and out like this but because they were so highly leveraged they actually had little money liquidity in their tank and so were quickly drained. So this expansion of more conduits as Iv-B roots and branches makes for huge numbers of pipes in effect but fewer storage tanks and so when there is a liquidity crisis money is hard to find and the system runs dry. There is much debt as solid V-Bi money but this cannot be easily liquidated.

This then illustrates the innate instability of an Iv-B economy, it needs an I-O section which can monitor the balance between these deep pools of V-Bi random liquid money and the highly chaotic connections of Iv-B chambers and pistons mentioned earlier. As long as there is a balance the system is stable but this must also include a reliable knowledge of how many Iv conduits there are to ensure chaos will not suddenly overwhelm the Bi storage. A tree does this quite well unless it tries to grows too fast to compete with others, but sometimes it has little alternative but to grow to the canopy or wither when overshadowed by the winners.

When Iv is secretive and deceptive or even worse self-policed then these branches connecting to the pools of liquid money increase exponentially and no one, not even Iv themselves, knows how many there are. Because Iv-B grows without any moderation the chances are good that eventually it will get so large that a liquidity crisis is inevitable, eventually different companies start pumping in different directions with enough momentum to rupture the system or send it dry of liquidity in some areas causing collapses which then spread like a contagion.

Much of the GFC was arguably caused by complacency from the Great Moderation which led to a disbanding of the I-O policing of the economy, this is a natural consequence because I-O police are the ones that moderate an economy. Generally then a Great Moderation is a period when I-O regulators do their job, however when there is low crime in a city for a long time people wonder whether the police are needed and the same happens with economic regulators.

V and B are always looking for an excuse to reduce the power of the I-O police, in this case it was partially the idea that the Great Moderation in economic affairs meant that crises had disappeared for some reason and so the I-O police were no longer needed as much. It’s unlikely we will ever not need police, in Aperiomics in fact they are necessary because they evolve spontaneously as do criminals and victims in any system. One problem is when there is a long period of relative calm the I-O police like the human immune system in the absence of germs when growing up might not recognize trouble for a while when it actually comes.

For example it is said that children growing up in a germ free environment from too much cleaning might actually become more sickly than ones raised in a dirty house. In the same way the I-O police continually learn through confrontations with people and organizations that break the criminal and civil laws, without these experiences then the laws become outdated and the police become incompetent. In many ways this happened in the lead up to the GFC but also it arguably occurred because of the rapid innovation in computerization and Artificial Intelligence.

Most of the financial system collapsed relatively soon after it became automated with computers, in many cases the no document or liar loans may have been used because they were easier to process electronically and assess in a computer on a normal curve. The old system of a bank manager replied on getting to know the borrowers, using his instincts, going around the neighborhood where the house is, getting to know the appraiser of the value of the home, etc. This can be hard to digitize on a computer model and the cost and slowness of this as well as human error made many want to get this part of the process to be as fast as the computers themselves. This is a futile process however, some people will act in ways hard for a computer to model if I-O policing is weak and there is a profit to be made in deception.

The alternatives to resolve this problem need to be more than either use people as assessors or not use computers at all, this is not viable since everything else is becoming computerized. It might also be possible to work out a better model of how people act with loans, or to accept the losses which occur because of the improved efficiency and speed of processing applications. The third option was probably taken in many cases and when people didn’t act according to the models then it was assumed they could be tweaked into working well enough like with opinion surveys. However without any O criminal or I civil penalties for Iv-B fraud people could always lie in information given to the computers.

What happened though is much like disbanding the I-O police in a city, when there is little incentive to be deceptive in a survey then people behave randomly and so it is relatively easy to model this on a normal curve. This is much like playing poker when all the cards are dealt face up, the winner is easily seen from the cards and so the winner is random. When there is some secrecy in the process however that introduces chaos and to the extent where this secrecy lies the potential for deception will grow chaotically without regular I-O police inspections like the food inspector checking for mice, etc.

## It is necessary then for I-O policing to keep people honest enough for random models to work to a large degree, but they must also take into account the chaotic effects that are also necessary for a healthy economy.

A similar situation occurs with an ecosystem cut off from others for millions of years and then other species are accidentally introduced to it. The O middle of the food chain might become destabilized by the introduction of new Y-Oy predators such as with the extinction of the Dodo from domestic animals. An economy with too many fast Iv-B innovations is like an ecosystem one constantly being bombarded with new species from other parts of the planet, it upsets the color ratios in the animal and plant kingdoms causing some to grow excessively in number and others to become nearly extinct.

Globalization and free trade in effect opened up each economy to the Y-Oy predators and Ro-R prey from other countries and this caused havoc in each of them. This chaos tends to affect smaller economies first as it grows because they are smaller by comparison to the size and number of these innovations, for example the smaller the economy the more likely its industries will be uncompetitive to the rest of the world when free trade suddenly opens up. This is like the ecosystem with the Dodo, because it came from a small ecosystem there were no other predators but animals in Africa might have so many other predators there that a new one might make little difference.

So this free trade, as it weakened the I-O policing of international trade in favor of laissez faire, led to the crises that affected Mexico along with much of South America and then Asia in the 90s. The cracks widened in these economies often exacerbated by free market Iv-B policies and advocating a weaker I-O policing in deregulation. This was supposed to allow Y-V investors to profit from their weakened state but often the R-B local economies caused Y-V to lose money, for example in Mexico the amount of bailouts required to save their economy meant that large lenders lost some money though they had got their way with deregulating the I-O police there.

A more recent example is the Y-V US military industrial complex supposedly becoming embroiled in wars in Iraq for oil and Afghanistan for other minerals recently found to be in abundance. However in each case not only did they not get control of these resources from the local R-B people but they got harried so much with R-B terrorism that they lost trillions of dollars. The recent history of the US since World War Two then has been of becoming embroiled as a Y-V Empire in battles against R-B communists, insurgents, Islamists, Al Qaeda, etc as they tried to use their economic and military dominance to cow smaller nations such as with the Marshall Doctrine in South America.

With the Y-V elite not understanding how they manage to lose they often persist whenever a weak I-O police in those countries or internationally allows them, often these police only wax in strength when Y-V is exhausted and financially weakened enough. One of the problems that Y and R fall into is the use of rational thinking and Aristotelian logic with an excluded middle. This was explained more in my first Aperiomics book but the three colors Ro, O, and Oy are irrational in some way.

In a kind of color dialectic R stands for yes or positive in the sense of optimism and so R animals have a positive outlook, they just need to find plants to eat and water to drink. Y animals however are negative or no in the sense they are pessimistic and cynical, just like optimists and pessimists disagree or a negative critic lives off criticizing a positive artist the Y animals criticize the behavior of R animals as prey to better understanding how to attack and eat them. So there are no shades of grey in this conflict, rather like as is often painted in Y-V versus R-B wars the patriotic issue is black and white or here R and Y.

This becomes a deeper problem when the protagonists in economics, the military or business try to define their ideas about the conflict. It seems easy to dismiss the ideas of the middle three colors but as we know in policing the O criminal law system in effect sits between the predators or criminals of society as Y and the prey of victims as R. It is neutral and irrational just as for example those trying to be neutral in a war such as the Y Nazis and R Communists appeared to be in this grand war of ideas. This is the problem with excluded middle logic, after a while the excluded middle seems unnecessary but then the problems can become intractable.

The middle colors as Ro as not no, O as not yes and not no and Oy is not yes. So there are different arguments when these three other colors are added, for example R and Oy are yes or positive and not yes or not positive. This means that Oy is like a direct critic of R and in the predator prey relationship it means they act in similar ways using high energy, speed, camouflage and deception to stay alive.

Oy’s philosophy is not rational because it is not positive, just like we call something irrational by calling it not rational this adding of the word not in front of another doesn’t really define what it is. For example if we say something is not an umbrella we don’t really know much more about it. To say something is not rational just means it doesn’t fit into this Aristotelian model of logic but doesn’t really tell us what the rules are of thinking irrationally, we tend to assume there is no such system.

## However Aperiomics overcomes this by defining that as a new logical system called color logic where irrational ideas are defined well enough to be modeled and not to cause trouble in economies and other fields.

So for example the object mentioned earlier was not an umbrella, this gives us some information that is still useful and is the Oy equivalent of the old saying “be anti-communist”. It was meaningless except in knowing what communism was to some degree and then trying to make an economic system that didn’t do those things, if someone failed in that then they were called a Pinko in some cases. All people knew as Oy was that R communism was bad somehow and it was important to not be like that, with such a confusing definition it was no surprise that many became curious about communism just like someone cannot only define heterosexuality by being not gay.

So in these conflicts between the right in Y-V and the left in R-B the central colors of Ro, O, and Oy add a little more understanding in the shades of grey between them. Rather than just an argument of positive and negative or yes and no like a dialectic, Oy is another answer against R as not positive or not yes. One could imagine Oy as a lawyer in an O courtroom whose job is to present a case against an R criminal or a debater against an R person making a positive point and where Oy wins if he simply discredits R without offering any alternative ideas of his own.

The next color is Ro which is not negative or not no, so this is like Ro in that its main idea is just opposition to whatever Y thinks like a kind of anti cynic. So if Y is like a dictator or military occupation then Ro demonstrators might gather to be against this but not really be able to say what they are for to replace them with. This is like the Occupy Wall Street movement currently growing in the US as of 2012, they are against the Y-V predatory Wall Street system but don’t really know what they want to replace it or what their demands are. This is not unusual, if someone is attacked by a Y gang of criminals then they can easily think as Ro to be against them but not know or care what the criminals should do other than leave them alone.

The central color is O which stands for not positive and not negative or not yes and not no, so it is somewhat paradoxical and neutral. This is like the police and law courts who are not for either side in an issue before them but try to establish a middle ground and maintain stability without becoming attached to either side in the issue. Just like many wars get bogged down in these shades of grey when they at first seemed like black and white issues these three central colors define the intermediate opinions, when they are ignored as irrational or having little influence then the conflict becomes black and white like us against the terrorists, the Allies versus the Axis powers, the Fascists versus the Communists, etc and this logic itself condemns the participants into a war seemingly without end because each side can continually regenerate.

So these conflicts between Y-V and R-B became stronger in the 90s as I-O deregulation gathered steam in advanced economies and the I-O police through being underfunded and ignored lost much of their edge in fighting economic crime. Consequently the I-O police in most countries were unable to keep up with these changes and so there were collapses through most of the economies linked in the GFC. In some ways this is less likely to happen again because there will arise some stability in the global economy after this mixing of different peoples, talents, companies, etc in free trade and much of the collapses and excessive growth have already occurred.

I-O police are starting to understand the problems that caused the GFC and have prosecuted or exposed many of the perpetrators. However in this period of Iv-B growth there is still a weakness of I-O policing throughout the global system that is constantly tested by the exponential growth of Iv-B computerization. Economics then itself became complacent from the benefits of the I-O Great Moderation and now like the police is faced by changes that it does not understand well, but this is because they do not have the influence to get enough insight into the secretive and deceptive parts of the economy.

If the Y-V sections of the world economy can survive well enough until the eventual recovery then they can be in the position of a Middle Ages aristocracy where their money and influence can buy them protection for their money from taxes, they can give politicians donations to give them weak I-O policing to use their Iv-Oy swindlers to shear the economy like a sheep once it grows back enough, they can set up and maintain Y-Oy think tanks that have experts to justify this system, use the spending power of advertising to coerce the media into not exposing them, and so on.

Just because the I-O police are waxing in strength again doesn’t mean that Y-V will be weakened until they lose enough money and power by having overextended, for example the wealthy in the US in the Great Depression lost so much money because their Roy predations used up the financial prey available and so they collapsed in power. This allowed Roosevelt as Bi to set up strong I-O policing in the New Deal and further expose some of the predatory business to justify this in the Pecora investigation.

By contrast the wealth inequality in the US and other advanced economies is still increasing which indicates the Y-V wealthy and powerful are finding enough prey to make profits and are still strong compared to a resurgent I-O police. This is seen by the difficulty in the US of passing even modest protections for Bi-B consumers let alone restoring the protections enacted in the Great Depression. While there is a great deal of anger in the Bi Occupy Wall Street demonstrations they are only now reacting to a similar movement of the V Tea Party in the US.

This large amount of wealth concentration has an international arena to find Roy prey in and so if there are few opportunities in the US then money can be made by shorting European bonds or investing in growth economies with the equivalent of the Japanese carry trade with cheap Fed money. Their strategy then is a form of global Y-V elite forming a canopy to overshadow their rivals and not attack each other too much, but partnering in this domination and preventing a strong international I-O police from forming.

With localized I-O policing rather than more internal regulations they can hide as Iv-B between nations using Iv-B tax havens, it becomes then like an international contagion that is hard to control because it always has places to act as a safe harbor. This is similar to the problem with diseases such as AIDS, when there are places in the body the contagion can hide and then regrow. It is also like the R Viet Cong hiding in Cambodia in the Vietnam War and the Taliban hiding in Pakistan currently.

A weak I-O policing as explained later in this book leads to a fight between the strong and slow Y-V team and the fast and secretive R-B loners, this occurs with a strong Y military chasing R terrorists but also with R financiers like a contagion trying to be controlled by this Y-V new economic elite. Y-V then after the GFC have a dominant financial situation, they used their insurance and team nature to bail each other out and to get governments to bail them out as well.

Now they want to maintain this wealth but when they try to invest they run into this same R-B deceptive class of consumers that took so much from them in liar loans in the GFC.

They also try to keep the B wages low but this hurts V as well because B workers need to make enough money to buy the V goods and services. Ideally then R-B should be like serfs, strong enough to be preyed upon and to provide good workers but poor and weak enough to not challenge the Y-V authority and clamor for strong I-O police and justice. The history of serfdom and slavery however showed that R-B people are difficult to control and predict and so eventually they won much of that struggle for political equality.

In the same way the Y-V financiers and wealthy elite after the GFC will try and maintain their money by periodically running to safe harbors like gold and US treasuries after each tremor in the world economy but inevitably this inequality will be lost and the system will become healthy again for a time. Sometimes also Y-V need not even be dominant as often R-B will win and dominate Y-V, this happened in communist countries where R-B arguably controlled and threatened Y-V in Western economies as much as Y-V did with the communists.

So this Y-V and R-B imbalance currently will resolve into stronger I-O policing or it will continue to waste world resources in fruitless wars and economic crises until it does, this however can take a long time as the history of the Cold War shows. Russia became communist because of this Y-V versus R-B conflict in the absence of a strong neutral I-O policing prior to World War One, this was seen in the Y-V Austrian Hapsburg Empire trying to take over R-B Serbia and the Arch Duke Ferdinand falling victim to an R secretive and deceptive assassination.

Then the Y-V Empires throughout the world ended up falling into a war with each other which only led like prides of lions fighting with each other to their being weakened. The R-B people such as the communists then used this opportunity to take over Russia and then try to take over Germany leading to the rise of the Y-V Nazis who lost to the R communists ceding a good percentage of Europe in the process.

So while the Y-V power and money can seem like they have a permanent advantage this must fall eventually, when this does the world economy will regain I-O strength and recover or the domination will pass to R-B and a rise of a new secretive and deceptive power like communism. Currently this Y-V versus R-B conflict is being played out in Greece where the Y-V bankers are trying to get their loan money back by threatening the R-B Greeks who respond secretly and deceptively by not paying taxes, rioting, and eventually will probably default and leave the European Union. Many other European nations are protesting as well, this threatens so many Y-V banks and hedge funds as seen by the recent collapse of MF Global that no amount of government team bailouts can save them.

Eventually in the US the Occupy Wall Street and related protests will become R-B and deceptive, use their numbers as the 99% to pass laws that take money from the Y-V wealthy and give more to them. This will not help the economy much though, it will decrease wealth inequality but can create stagnation because it weakens legitimate Biv businesses needed for growth with a strong I-O policing of the economy.

This then will continue until Y-V are weakened enough to negotiate a strong I-O policing, much like the US needing to be weakened in wars to submit to being involved with international UN or NATO peacekeeping forces. This is happening as of 2011 for example in Libya where the US was unwilling or unable to fund the war there by themselves, if they did then likely the deceptive R-B rebels there would have been a bad investment for them. After perhaps three trillion dollars in costs with the Iraq war to get rid of Saddam and getting another government no more compliant, to have R-B Iran harrying them and costing more money while deceptively building nuclear weapons, to have their Y-V ally of sorts in Assad being brought down by R-B crowds communicating with social media, with Y-V Egypt’s Mubarak brought down in the same way, a Y-V punitive Empire only costs money for the US despite having over half the world’s military expenditure.

So while these current events might seem unrelated to the GFC and the subject of this book they also arise from a weak I-O policing in the world and have to be looked at as a whole. The domination of the US as Y-V has brought most of the R-B attacks onto it but as they weaken then smaller Y-V versus R-B conflicts can arise with a strong enough international I-O. If the US then becomes isolationist as Ron Paul suggests then this would allow these kinds of conflicts to arise in smaller ways around the world, perhaps even in Europe.

The Great Depression lead to R-B winning compared to Y-V who lost a lot of money though both ultimately lost in the Negative Sum Game, if this happens again they will try to regain this money and power by war if necessary just as Germany and others did in World War Two after the Great Depression. Much of this depends on how strong R-B gets in the next two decades, if there is a strong resurgence and Y-V countries see this as a contagious threat like they saw communism then they may extend the idea of more war to fight them over there so they don’t have to fight them in their own countries. This was the rallying cry against Al Qaeda and only served to further radicalize R-B people in Islamic countries, for example the Taliban have no trouble getting recruits and the Iraqi insurgents also had their ranks swell because of perceived Y-V heavy handedness there such as in Fallujah.

Russia could be the scene for instability like this, the government is more Y-V with Putin and they have already been confronted with a contagion with the R-B Chechnyan war. It may be then as with the Y-V reign of the Czar falling to R-B Marxism that Russia could go back to this and then spread this R-B doctrine again after Putin if they become disillusioned with Biv capitalism. This could occur if the GFC turns into a lost couple of decades such as Japan experienced, even now many economists around the world have publically wondered if R Marx was right all along. China also was R-B until recently under Mao and might still return, its only reason for moving to a Y-V market economy has been its success in exports.

If it ends up losing much of the money it accumulated in foreign reserves because of defaults by the US and Europe in a prolonged slump and also loses its export markets then it might not be able to control the people if an R-B leader comes along. So the countries most recently dominated by R-B or with an historically strong R-B insurgent problem might easily fall and lead to a new world war with the Y-V imperial economies. Mostly this depends on a speedy end to the GFC instead of decades of stagnation but this also depends on how strongly the I-O police recover.

A major wild card in this however is the continued strength of Iv-B computerization and AI which threatens to exacerbate this problem by in effect providing a cheap robot and AI labor force for this Y-V elite, however this is at the expense of perhaps more unrest by R-B peoples as well as a collapsing Bi and Iv middle class in the US and other advanced economies. Some economies might reject AI and computerization like modern Luddites, become impoverished by leaving them unregulated in I-O if they continue to grow exponentially as predicted, or there could in effect be a rebellion in R-B robotics and AI as has been hypothesized in science fiction such as the Matrix, I Robot, the Butlerian Jihad in Dune, Erehwon by Samuel Butler that started it all, the Battlestar Galactic series, the Terminator movies as an AI that becomes Y-V and humans become the R-B resistance, the Sarah Connor Chronicles where this evolving AI is happening in the present day, and so on.

This is not to be alarmist but no one has any real idea of the potential of robotics and AI for independent thought, Ray Kurzweil predicts that within decades AI will be smarter than humans and since this is taken seriously the prospect might coincide with decades of stagnation after the GFC such as happened with Japan. Isaac Asimov believed this could be resolved by his three Laws of Robotics so in effect AI becomes self-policing but we don’t know whether this would work.

In Aperiomics unless a strong I-O policing could somehow control AI and robots then this Y-V versus R-B war would be played out by them as well, whether by their attacking humans for example with ever evolving computer viruses in computers combined with AI, or our using robotics in ever increasing wars against them much like against Islamists in the last decade as is being planned by the US military already.

## The point of Aperiomics then it is not only a system that shows the interactions between living things but also between any organization of data whether it be a company, a religion, even computer code.

The internet has evolved as a largely unregulated system and so with weak I-O it is mostly Y-V versus R-B. For example internet companies have largely merged and been bought out into a few large V companies forming a canopy over their competitors and acting as a team because they occupy different niches or territories. They do have some skirmishes on their boundaries much like Empires to try to take some market share from each other but generally they cooperate.

These companies include Apple, Microsoft, Ebay, Oracle, Facebook, AOL, Twitter, and Google, where companies occupy a similar niche like with Bing and Google in Search or Apple and Microsoft with an operating system they tend to fight as Y like rival prides of lions staking out territories. All of these companies are faced by an R-B adversary with hackers, virus writers, phishers with banking fraud, people cracking and using pirate software, peer to peer sharing of movies and music, etc. This then is a fight between revolutions in R-B and evolution in Y-V, so far R-B piracy and manipulation of code with cracking and viruses like an R-B contagion in the human body is growing on the internet.

When R-B is confronted by new AI and robots it is likely they will be hacked in the same way as happens with all other software, they could be reprogrammed to do their bidding and to attack the Y-V systems. In this way software and AIs could evolve to fight in Roy in a Negative Sum Game as well as Positive Sum Game business in Biv where they help humanity. For example if robots become more widely used in stores and various jobs then this would be a new phase of Y-V capital against R-B labor often discussed in economics.

Instead of having to pay workers expensive wages and fringe benefits like health insurance, robots and AIs might replace them leading to a permanent mass unemployment much like cheap labor in the third world is causing in advanced economies. More of this will be discussed in an upcoming book about the future in Aperiomics, it is important however to distinguish two main scenarios and how they will affect robotics and AI.

The first is where the economic stagnation after the GFC becomes more Roy as Biv economies break down under debt and Y-V fighting with R-B because of a weak and behind the times I-O police. This could lead to wars and be more difficult to recover from because many Gb resources have either been exhausted or the cheapest used up in mining and farming as well as limits imposed by atmospheric pollution and the Club of Rome forecasts.

A collapse from Biv to Roy is historically hard to recover from, examples include how the fall of the Biv commerce of the Roman Empire led to the Roy Dark Ages, the difficulties Germany had in recovering after World War One which failed in the Roy Great Depression and led to a Y-V government under Hitler, and how Japan has been stuck in a borderline Roy depression for over twenty years and only avoids many problems because of a huge trade surplus and government spending.

In this case robotics and AI would probably be caught up into various wars, the US army for example is already incorporating robots into its forces and the Predator Drones act autonomously in many ways. Crimes might be committed by robots reprogrammed by R-B hackers, or by Iv-Oy criminals, AIs might even become sentient enough to evolve into Y dictators much like the scenario in the Terminator movies.

The second option is that the I-O police recover and get criminality in the world economy under control, this leads to a recovery like after World War Two where strong policing makes markets and the world relatively conflict free. In this case robotics and AI would be more likely to become Biv and create even more wealth reducing Roy areas from spreading and converting them to Biv, this is the scenario usually espoused by big business in the computer industry.

## It should be realized however that this second option is mainly promoted by people and companies who would benefit most from robotics and AI, in almost every case such as in pharmaceuticals, subprime mortgage lenders, gun manufacturers, pesticides, hedge funds speculating with computer algorithms and implicated in causing the GFC, cars such as Ralph Nader fought against with GM and the Convair, etc Y-V companies have minimized the risks in their businesses because it was more profitable to do so.

Until a strong Bi community evolves to protest about robotics and AI it is unlikely any form of I-O regulation will be contemplated with them, unfortunately with their fast evolution we may end up relying on AI itself to do the policing. This theme was explored in the movie When the Earth Stood Still where robotics was allowed to form an I-O police force on alien worlds to guarantee freedom from crime and war.

A third option is that Y-V and R-B will continue to be largely unregulated by I-O and there will be a rough equilibrium between them in a kind of forever war with booms and busts in the economy, rampant financial crime and small wars trying to stamp out R-B terrorism. This might occur for example if the Y-V elite are wealthy enough to buy off attempts to restore I-O policing of their financing and get more tax from them as well as to moderate their financial frauds and speculations.

This can last for a long time, look for example at failed states like Somalia and Afghanistan where Y-V warlords fought R-B peasants and prevented an I-O government from forming. In this case the rise of robotics and AI would probably be in a marginal society with wars and crime while other beneficial applications are used in Biv societies. These Roy societies might be the scene of revolutionary adaptations in robotics like mercenaries are used today in Africa. The advanced societies would have these kinds of robots incorporated into their armed forces and use more benign robotics in their own economies.

Generally the reason economies have booms and busts are similar to why they happen in nature, a mutation can make an animal or plant reproduce more rapidly or survive better against competitors. It might become a better Oy predator and eat so much of its prey that it periodically starves itself by running out of food until it adapts to use its prey in a more sustainable way. An R prey might mutate to be harder to catch, have better camouflage, be poisonous, or have a higher birthrate and expand until Oy predators work out how to catch and kill them.

In the plant kingdom a similar process occurs, a plant might evolve an Iv faster growth in getting to the canopy and then overshadowing other trees by growing a V canopy. It might evolve this V strategy of making a much larger and thicker expanse of leaves to overshadow other trees under it, it might also make it more difficult for other trees to penetrate its foliage with its own leaves. This would continue until other trees evolved a strategy to compete such as growing faster themselves or making thicker leaves or stronger branches to punch through the canopy above them.

Their B mutations would be for example where plants developed much faster growing roots and got to nutrients and water before their competitors, they might also evolve to use these nutrients up before their competitors get them which is seen for example under some trees where grass doesn’t grow well. They can also evolve a stronger Bi upper root system as a storage of nutrients so they survive better in droughts and so their advantage will continue until other plants evolve to conserve water for example better.

In the global economies there are innovations occurring all the time, these are in effect mutations of established ideas, inventions, art such as music and films, ways of making products faster and cheaper, new flavors in foods and drinks, new architectural styles, new clothes fashions, new memes on the internet such as viral videos, improved communication such as social networks and smart phones, new software such as for offices, faster networks such as the increasing Internet speeds, new advertisements as ways to get the consumer’s attention, and so on. Many of these like seeds from a tree fall on fallow ground and fail from a lack of funding or consumer interest, others might become fashionable and quickly grow then collapse when consumers lose interest, and others might evolve slowly with many inventions improving on each other to form large businesses such as car manufacturers.

These then are revolutionary and evolutionary, when they are revolutionary they are Iv-B and represent a new way of doing things rather than an incremental improvement of older ways which is evolution. Like in nature this is an unstable process but generally the booms and busts in our technology are avoided in nature by a slower time in evolving as well as a stronger O middle of the Roy food chain and plants having a strong I trunk.

To understand an economic crises then it is usually a good start to see what has been growing exponentially and under the radar, or secretively and deceptively, for example in the book The Transcendent Man Ray Kurzweil shows how so many computer related technologies have been growing exponentially for decades. With constantly improving technology this prevents the kind of stability that nature imposes on itself and makes economies like ecosystems being constantly invaded by superior life forms, since there is no real opportunity to slow this advancement into levels before this kind of Future Shock took hold of society economists need to act like more proactive gardeners to in effect prune and root out Biv organizations that threaten the stability of the global economy.

This is already done in many ways, for example the drug wars continue because plants from small areas became popular around the world with addictive properties. Because these plants can lead to criminal exploitation they are a Roy problem and so the O police are constantly fighting against them to weed them out of the economy. Some plants are addictive in the sense they make Roy animals including people dependent on them, for example with foods, herbs, medicines from plants, lectins in plants, and so on. When these plants cause damage from this addiction they can become an O police problem and so these plants are constantly being rooted out.

Other by products of plants might still be a problem but they may be not addictive to some people or they can afford to use them and so they can be partially decriminalized. For example tobacco and alcohol are criminalized for use by children as Roy but permitted with much discouragement and taxation in Biv as in effect I civil penalties, an exception was with alcohol with Prohibition in the US where it went from Biv to Roy and then back to Biv when Prohibition was repealed. The efforts to decriminalize marijuana as well as the use of medical marijuana show that many issues overlap Roy and Biv which is why there needs to be O criminal and I civil laws to handle them.

Much of this was discussed in my first Aperiomics book but in the same way the global economy has difficulty in policing financial and business innovations, in some ways they hurt people in a Negative Sum Game and the environment and so are Roy and require O policing. In other ways they generate wealth in a Positive Sum Game and so can be managed with I regulations, for example alcohol extends the life of some people. Getting the balance of I and O policing right is difficult and with so many innovations is bound to be heavy handed and misguided much of the time, this was seen in the lead up to the GFC where clearly criminal fraud was ignored or incurred fines much smaller than the profits made and so this did not stop or even slow it down.

These financial innovations that nearly bankrupted the world economy were often not even regarded as O criminal in nature so that hardly anyone involved went to jail as a result, sometimes even I civil fines were difficult to enforce. So this is a good example of where innovations are wrongly categorized as Biv when they have a lot of Roy criminality in their applications.

However the opposite can also occur, innovations can be criminalized as Roy even though they can be beneficial as was seen in Roy communist countries where most forms of Biv business were illegal leading to technologically backward economies. Banking in the 1970s was probably overregulated with too many O laws and became very backward as a result, this wave of innovation however sometimes went to the opposite extreme in this deregulation starting with the Savings and Loans Crisis in the US where criminality and fraud were allowed to secretly infect the system.

Sometimes the economy can vary in booms and busts and so a sector of the economy that is usually Biv, like the share market is controllable with I civil laws and fines, can turn Roy as it did in the GFC where many companies only then committed fraud criminally to get liquidity and save their businesses. For example as the US economy started to falter after the Japanese carry trade slowed with much less money to borrow many investment banks and hedge funds started to speculate in dangerous ways with higher leverage and an increasing use of off balance sheet vehicles such as Repo 105s in the case of Lehman to mask their indebtedness.

One of the best examples was the controversy with John Paulsen wanting to short the subprime mortgage business and Goldman Sachs to some degree misrepresenting the nature of these Credit Default Swaps to their clients. As they realized the subprime sector was likely to collapse to some degree they became more reckless in reducing their exposure like so many others did. This is like road rules on the freeway, it is difficult to draw the line as to what driving behavior can be controlled with I fines and loss of demerit points on a license and what needs to be deterred by criminalization and jail time.

For example a first offence in drink driving might be treated civilly as I and the second as criminally by O. The difficulty of this should not be overstated though, in many areas of the economy the I-O police have been successful in finding this I-O line between criminal and civil laws and creating a reasonably stable system. For example in driving, shoplifting, bank robbery, rape, pornography, etc they have a reasonable success but these laws do not cover everyone equally and so some will find the laws work better for them than others. Contrast this however with the GFC which was the equivalent of a crime wave.

Much of the difficulty is from the corrupting influence of I-O police trying to enforce laws on lucrative businesses, police are more likely to become corrupt when handling drug related crimes for example because of the large profits and often people are not being hurt by the drugs in a Roy way so it is tempting to see it as a Biv business. In the same way the money made on Wall Street and similar centers in the global economy has a corrupting influence that makes some companies try to reduce the strength of the I-O police much as drug dealers would try to pay off police.

## Innovations then may ultimately be as destructive as addictions or desires for Biv parts of the plants can work against the I-O police, for example computerization grows exponentially as Iv-B giving benefits to most people but it can addict people to this and ultimately crash the economy.

These addictive innovations can be Oy-R or Iv-B in a Roy or Biv economy because they try to mutate secretly to maintain a competitive edge, for example the drug war is usually secretive with the Oy drug police fighting against R addicts by trying to stop them from spreading into more wealthy Biv neighborhoods. In Biv some addictions are dissuaded with civil laws such as extra taxes on alcohol and tobacco, a doctor’s prescription needed for medical marijuana and methadone for heroin withdrawal, warnings in the media about an excessive intake of high fructose corn syrup causing obesity, school lunches trending towards more healthy foods, the removal of trans fats from many fast foods, etc.

Money however is highly addictive as well so people are always trying to get around the I-O police to make more, this can cause booms and busts as Iv-B bubbles are created with secretive and deceptive new innovations like multi-level marketing variations, new kinds of derivatives like Collaterized Debt Obligations and Credit Default Swaps, dark pools where shares are traded with less oversight, using computer algorithms to trade ever more quickly and pick up smaller arbitrage opportunities, trying to find ever more dubious clients for subprime mortgages, and so on. In the same way computerization and AI will become ever more addictive particularly as it gives a competitive edge, this is because it can keep mutating quickly until some variations go viral.

Faster mutations have become a path to profits and this idea has taken hold as a popular myth more since the 1990s where investing started to replace saving as the path to wealth creation, probably because some were making large profits in new industries like the developing tech bubble. Investors in these sometimes made huge profits and so the baby boomers started to see many of these as like a Hail Mary pass for retirement, however Iv-B usually collapses when a Gb resource falters or runs out which is why so many internet companies failed when the bubble burst.

So as I-O policing weakens these Iv-B opportunities become more common and appear deceptively to be more successful than they really are, as more money goes into them they push even more against I-O policing to allow even more deregulation and this increases energy making a bubble that collapses when the Gb resources are exhausted or falter enough. So liquid money turns to gaseous money and distorts prices around it because of higher energy in Iv-B transactions, when these are allowed to continue by I-O police the economy heats up with more bubbles everywhere growing and collapsing.

A market meltdown can be where the energy runs out or is dissipated in damaged Iv branches and B roots in the system, much like holes or aneurysms in the veins or arteries of a person from too high blood pressure or the heart pumping too fast. The gaseous money that distorts the prices loses pressure and so the excitement and energy forcing up prices to unrealistic levels, like the art bubble prior to the GFC starts to return to a liquid. People start to find that there is not enough money and enthusiasm to keep prices at their high level and since they are highly leveraged with frozen money as debt there is no longer enough energy to maintain liquidity around this solid debt. The system freezes up or becomes insolvent with this frozen debt in effect precipitating out of solution and clogging up the Iv branches and B roots of the system.

## Gaseous money or high energy parts of the economy not only use leverage but they act in a leveraged way by themselves, for example when money moves fast enough to make sales and pay bills it can mimic having credit to juggle accounts.

For example a person might buy a house on 100% financing with a liar loan in an overheated real estate market knowing he cannot make any more than a few payments or even none at all. He then has little more than an option to buy the house because he can walk away from the loan if he cannot sell it, however he might put it back on the market and make a small profit. He might even do the same on a ninety day contract and resell the house without even trying to get finance, to do this however he might have to expend much more energy such as listing the house with many agents, advertising it himself, pressuring customers into buying it, and so on.

However when this gaseous money cools it is like the same house buyer becoming lazy or despondent and not trying to sell it with as much energy, when more people do this the market cools because of a lack of enthusiasm or animal spirits among some people. When the gaseous money or goods and services cool down and stop distorting the prices while still carrying V-Bi debt it is much like cholesterol depositing in the arteries of a person after too rich a diet and so too much exercise as energy and excitement can lead to a stroke or heart attack in the same way. This change of phase in money from a gas to a liquid like with water reduces its volume drastically and leads to a sharp drop in the prices of assets as they try to reconnect to the frozen high time low energy V-Bi part of the economy in the I-O market. These collapses lead to others as parts of the system die or barely function because of blockages with debt much like a heart attack or stroke sufferer.

Economic crises are then similar to each other because they follow color imbalances as they grow and try to resolve in I-O towards the end but they can also be unpredictable because the future must always contain some uncertainty, probability sidesteps this issue by simply calling anything unexpected a standard deviation and chaos calls it a tipping point. It doesn’t mean then that Aperiomics like any other system can predict the future exactly, rather instead of trying to minimize standard deviations in probability or trying to predict tipping points in chaos, it looks at both with a limit to uncertainty that can be reduced as much as possible in I-O.

Otherwise some times in V-Bi when probability rules and all problems are treated as standard deviations to a normal, this false certainty suddenly disappears when chaos intrudes or followers of chaos suddenly find that their certainty of growth or collapse dissolves into randomness. By looking at both of these principles we know that one can only resolve into the other so for example when probability starts to give strange answers we know it is chaos and when tipping points and growth in investments fail to materialize we know it is because the situation has turned random.

It is also important to realize as explained in detail later that this relationship between randomness and chaos does not necessarily lead to a permanently stable economy because the I-O policing mechanism is unstable and no amount of buttressing this will prevent some weakening and color oscillations into unstable configurations. For example if you could explain to all animals the predator prey relationship and how they interact in Roy with colors they would all act just as they do now because each has the same strategy for survival whether they understand it or not.

In the plant kingdom some will still grow as Iv-B even though they must collapse in time because they have evolved to use more fleeting resources. Trying to alter an ecosystem has usually failed, for example new predators and prey have been introduced into many countries and caused ecological disasters, foreign plants have become weeds or been plagued by R pests they have no natural defense to and only survive with Oy toxic pesticides. To try and avoid economic crises with Aperiomics may ultimately be futile because even if the problem is understood there may not be the motivation in enough people to do something about it because of the short term gains.

For example many of the subprime mortgage lenders would have done the same strategy if they had known about the GFC, they would have just planned to get out with their profits in a fruiting phase in advance of it. Many B people would still have used their houses as an ATM because the goods and services they bought were too addictive, like plasma TVs and holidays, also without the loans there would have been no boom that gave them these temporary profits so they would just have missed out on all these goods and services anyway.

In many ways this is why economic theory often fails to avoid crises in the same way that doctors warning about fatty foods and sugary drunks fail to stop people eating them. Mere warnings do not work when people are in effect self-policing their consumption of these and so the government ends up footing the bill in health care costs, much like it does when people and companies create a bubble that bursts. I-O policing will rebuild for a while and then be worn down later until another crises happens. For example unhealthy foods might kill many people but few aspects of them are policed, this leads to an Iv-B and V-Bi disconnect in them.

Iv Agents might sell drinks with deceptive advertising and hide their unhealthy levels of sugar and sometimes toxic additives, B farmer might also grow and sell unhealthy foods laden with pesticides so both of this tend to boom as a drink goes viral and then busts as its health dangers are exposed. In V-Bi such drinks might become a normal behavior, people might eat too much sugar because of peer pressure and the fear of being seen as a deviate by going on a diet.

The situation with predictions in Aperiomics may be similar to the famous science fiction story Nightfall by Isaac Asimov where a coming eclipse and darkness is predicted to come on a planet that had never known it, all warnings about this were ignored because people could not conceive of the chaos and panic that would ensue. So those that understood it could only prepare to rebuild afterwards. Excessive interference in the economy can often create more problems than it solves like the introduced species into an ecosystem, for example there was a push to finance more homes for poor people that induced Bi Fannie and Freddie to make more risky loans that they otherwise would have.

In the same way the urge to finance more subprime loans cannot be viewed as separate from the other color imbalances around it, indeed this boom arose in large measure because of them. When events occur in a virtuous or vicious circle one can point to any part as a cause but in a sense they all cause and effect each other. For example the weakened I-O or centrist parts of the political parties was caused by the voting patterns of the public, they in effect voted for those who were willing to waste some of the economy’s resources on housing just like others pressure the government to invest more in their pet projects like diseases, freeways, wars, etc.

The political parties tend to be more stable in their policies when there is a strong I-O centrist number of politicians elected. Sometimes this center can be ignored, a good example being Karl Rove calculating that George W. Bush could be elected by appealing more to the V fringe and getting them to vote in higher numbers rather than appealing to the I-O center and alienating the V voters.

This I-O center then was less influential and so politics became more polarized as Iv-B versus V-Bi, the I-O independents then moved more to voting left with Bi-B until their moderating influence on police was partially restored after the GFC. So this polarization was as much an effect of the voters as a cause of their response to issues as being caused by politicians or their agents, in a sense the voters were deceptively stirred up by the candidates and the media and then they elected politicians who stirred up the voters in a chaotic circle of Iv-B.

The politicians then enacted policies which secretly and deceptively benefitted Iv lobbyists and Wall Street to keep the subprime Iv-B bubble going, however they had to direct this as a benefit to B people to get enough support from them as well. Both sides then were getting as much as they could in a secretive and deceptive political environment in which no one could see the disasters it was causing. Chaos then in a situation like this infects everything it can and so is the ultimate cause, to point to anything else is just to allow this chaos a safe harbor to secretly regrow from.

The best hope to avoid these problems is in modeling the global economy but not just using probability. It is necessary to map out enough of the roots and branches to see how they are growing, to follow them from end to end to find where chaos is feeding back on itself in Iv-B and potentially creating a bubble and collapse. This is much like how a tree uses DNA to determine its own shape, one elm tree for example looks much like all other elm trees. This template then avoids the problems of booms and busts in its growth because it can sense problems in all its colors, for example if leaves are eaten too much or fruit consumed too early it might grow more or eventually evolve poisons and thorns to protect them more. Plants also evolve protections against contagion like fungus and termites, this is different from the GFC where in effect the economy disarmed itself with I-O deregulation like a person voluntarily disabling their immune system.

The problem then is not trying to determine what is a bubble or what is too much risk, but in mapping out what the actual situation really is while maintaining enough privacy in Iv and B so business is not chilled by this. In retrospect the problems that caused the GFC were obvious if anyone had systematically looked for them, or if they found them as many did alerting I-O authorities who were willing to do something about them.

If the public realized early on the structure of the subprime mortgage business had to end in disaster they would have demanded their politicians regulate it properly. The problem was that like a person too numb to feel their body parts causing them to fall and hurt themselves there were not enough of a connection to the roots and branch system of nerves to sense pain and a malaise that animals use to protect themselves. For example those people trading in Iv-B experienced elation and often panic and despair while the V-Bi people were disconnected from all this and assumed in the opaque part of the economy that things were going well.

In the same way plants can detect in some way when they are attacked and respond to it. While the global economy is very complex it would not be difficult to create this nerve system of pain sensors like a network of Roy snitches and Biv whistleblowers, we get this for example when voters can complain to politicians or government agencies. So in a sense the global economy is evolving into a more complex ecosystem but is still many Roy animals and Biv plants that cannot fell each other’s pain. If we want to act as doctors to keep the economy healthy we need to be able to ask where it hurts and diagnose a contagion.

## We then have to create and maintain our own overall system of nerves as sensors through the economy, otherwise this is like a doctor noticing with an X Ray a problem that a person’s own nervous system has not yet registered as painful or wrong.

So this economic nervous system is roots and branches in Biv and needs to be mapped out with randomly varying points to audit just like pain receptors are randomly arrayed so that chaos and deception does not mask these sensors for its own growth like a contagion trying to hide by avoiding triggering any of the body’s defenses and awareness of illness. People can also be polled randomly to look for the effects of hidden crime waves starting that are not being reported like date rape because of a reluctance to use the I-O police.

It also needs to be followed from cause to effect, for example criminals can have their life history mapped out so that influences that caused them to either become criminals or gave them opportunities can be pinpointed and worked on to be minimized or domesticated. For example if some types of criminals are abused as children then this is a kind of sickness in Roy society that can be policed more and which might reduce other forms of criminality later.

Other kinds of crime might have a genetic component like child psychopaths with abnormal brains could be identified before they cause more economic damage later. If some students learn they can get away with Y gangs intimidating for profit in schools then these can be policed more and less policing may be needed in areas that do not cause crime to evolve. In the same way economic crime in Roy might come from allowing the Y mafia to get into Wall Street as it has many times, catching this at an earlier stage for example by investigating and perhaps revoking licenses of brokers who have felons as partners might stop this contagion. This might then be policed by randomly auditing the clients and associated of brokers looking for secretive criminal connections.

Problems with Iv salesmen may also contribute to this Iv-B contagion and require more stringent training and penalties for misrepresentation as occurred with many subprime loans sold with higher interest rates and upfront fees. They might be audited randomly and their deals investigated along with interviewing their customers for any misrepresentation, at the same time their B customers would also be audited to see if there was any mutual deception as was often the case with liar loans.

Real estate appraisers might have been randomly audited but also traced with their connections to various Iv salesmen to map out how this part of the economy is operating. Such a system should save more in preventing criminality and fraud instead of blindly stumbling into crises with more chaotic costs to society.

Another way to monitor problems in the global economy is to map out color imbalances and how they tend to try to restore balance by oscillations that travel up and down them. For example Y animals such as lions might be culled by humans because of their endangering villages. As the Y predators decrease then there might be an increase of smaller predators such as hyenas and these destabilize the ones in the center or O of the food chain such as wild dogs or small cats by eating more of them.

By identifying where these problems in the Roy food chain are occurring extinctions of some animals might be avoided and man can maximize his economic use of the environment while minimizing the hazards to the ecosystem.

This weakening of the O center of the food chain might then for example cause Bi animals like Wildebeest to increase in numbers eating more grass and causing ecological damage because of the lack of Y lions but then they weaken from a lack of food and start to be decimated by Oy predators. Then the R prey run out of food and also suffer from the Oy increased numbers of predators and so the V tops of plants are overeaten.

In a long term way this might cause the plants to evolve more thorns or poisons to protect themselves from annihilation like Acacia trees in Africa developed thorns to reduce the amount of leaves eaten by giraffes. In the short term this might create a dust bowl where some plants die and the ecosystem is damaged.

More likely the V leaves of these overeaten plants are mostly lost, then the Iv branches trying to regrow them may collapse under the strain of this leading to the I trunk dying. This might appear like dead Acacia trees in Africa overeaten by elephants or giraffes or some trees slowly reviving. As the trunk dies or weakens the Bi parts of the plant like the parts of grass just under the ground try to regenerate and this places strain on the B roots.

So the culling of Y lions has gone right through the colors to B, next the B roots might evolve and try to get more nutrients. Then the extra growth of the B roots can exhaust the nutrients and water in the Gb soil faster so this can then make the forest starve as the R and Ro animals are feeding on it more, this can make the forest collapse into G grasslands.

These color oscillations might then go into reverse or they might feed back directly into Y predator numbers as they are to the left of G meaning Y predators live in G public land. For example as the forests shrink and grasslands grow then this can affect the numbers of Y predators too, it might make them increase in numbers with a larger territory or more likely the increased pressure on the G grasslands can cause Y animals to starve since they also have reduced prey because the B and Bi prey overbred when the Y lions were culled and many have starved and died.

As the system goes into reverse this is like the colors fighting to regain balance, the G resources for the grasslands might now be in excess of those needed for grass and Ro-R prey so the Gb forest has the potential to regrow again. Often these prey might not grow in numbers fast enough to stop the forest forming because the Y-Oy predators keep their numbers down.

The B roots then succeed more in finding nutrients because plants have died and created humus as fertilizer, also the soil has recovered from being nearly fallow for a while as grassland. So as the B roots become more successful the Bi storage parts of the plant fill up until they can regrow or revitalize the trunk of the tree. This causes Iv branches to grow and then V leaves and fruit with seeds to promote faster spreading of the forest. This regeneration allows R animals to recover in numbers and then Bi herds do as well.

This allows the O part of the food chain to increase, then Oy numbers of predators and finally the Y alpha predators which may need to be culled again restarting the process until perhaps a Y animal evolves that is less of a threat to people. For example aggressive lions might be culled until they evolve to be more timid around people and so need to be culled less and the ecosystem including humans becomes more stable, this is probably what happened in Africa with lions as they often attacked people because of a lack of prey.

As the colors fight to rebalance then the B roots find more Gb nutrients and this replenishes the Bi upper root system of the plants and grows a new trunk or revives the old one. This allows for more Iv branch growth and V leaves so the Biv forest starts to regrow as does then the G grasslands.

This causes the R prey to increase in numbers taking the pressure off the Bi animals because R breeds faster. This allows the O predator and prey animals to revive in numbers and then the Oy animals who had begun to starve also increase, this allows the Y lions to regain their niche as more food becomes available.

Like in the plant and animal kingdoms then these apparent shock waves going through the global economy after a crisis usually follow these patterns though they can often also reverberate and be reflected in only some of the colors rather than all twelve. The same kinds of reverberations go through the economy in any crisis, this may start at any color and spread in both directions though the example of it spreading from Y to G and back always represents the color oscillations.

For example the crisis might start at Gb though this can have deeper causes such as resources being overused and becoming more expensive or of lower quality. Assuming though Gb causes the crisis these are the resources like with farming and mining the Biv needs like a rich soil and groundwater can maintain a forest instead of poor soil and drought creating a G grassland. For example an economy with fertile soil and plenty of minerals might prosper as a Biv economy because tree like businesses grow from them, another economy with poor soil and few minerals might remain Roy because of this.

Then these Gb resources might start to become scarce, this might happen with excessive speculation making some too expensive, globalization increasing competition for oil for example and raising the price, some resources running out like food production not keeping pace with population growth or corn used for making fuel making it more expensive for food, restrictive laws like environmentalism making some coal for example too dirty to be used, innovation using up unusual resources like rare earth metals for stronger magnets, and so on.

As these Gb resources become harder to find then this makes B workers try harder and compete more with each other often secretively and even deceptively. For example they might pretend they are doing better than they really are to get more Bi loans to keep in business like a B farmer trying to convince the bank to keep lending to them over a drought. This is also like the B workers wanting to buy homes and finding reduced chances to make money because of manufacturing jobs lost to globalization as well as the baby boomers retiring have tied up much of the country’s wealth in their savings.

So they deceptively take on subprime loans for housing and start to collapse chaotically as happened at the start of the GFC. This then created some problems in the Bi community around them that was depending on them bringing in profits, much like the workers around B farms. Because B has been deceptive though the full problem is not realized by Bi and so they might keep lending such as with Bi Fannie and Freddie to keep B workers going and the housing industry from having a slump.

This then spreads to the I trunk of the economic tree where the market there is catching the contagion from the housing defaults and the lack of consumer demand in Bi and B, so more imports from other countries might be left unsold which starts to spread a slowdown to their markets. It also more specifically causes a slowdown in subprime mortgage lenders who try to counteract this like a tree would by trying to get nutrients out of less fertile soil. This is like the subprime lenders mining in effect B workers that are less and less able to repay loans though they are still being deceptive about their ability to repay.

This then spreads to Iv loan salesmen who start to lose their jobs because of loan defaults and lack of sales, this then spreads to the V Wall Street lenders who financed much of the subprime loans. This is like a plant dying from the roots up because of poor soil, now these V leaves would have fed R animals like in nature so the weakening of V will affect R people next.

Next then the R welfare state and charities as well as workers in Roy areas start to feel the pinch because V is not making as much in profits and paying taxes, this hit New York badly in the GFC because they made so much in taxes from Wall Street. As these R people lose money they might become homeless or sleep in cars, some suburbs might start to break down and become Roy ghettoes much like the loss of parts of the car industry in Detroit turned much of it into a Roy economy.

As R is weakened like this they become more of a target for Oy thieves, for example they might be mugged when sleeping in a park or their car gets robbed. As this problem spreads the community around this welfare state gets more fragmented and angry, this is the Ro community like with Occupy Wall Street. This places more pressure on the O police who usually don’t have the funding to handle these demonstrations and riots such as in Greece and more looting can damage the Biv shops and further depress the suburbs into Roy poverty like with the LA riots or those in Greece.

This then puts more pressure on Oy predatory petty thieves as well as opportunistic shops that might charge high prices by gouging near ghettoes and so they start to lose money from Ro looting and a lack of customers with money and go broke. Then the Y mafia and gangs on top of the food chain might lend as loan sharks through Oy or own some stores that are looted and lose money as well, if they are a right wing dictator then like with Assad in Syria or Mubarak in Egypt they can lose power as the Ro demonstrators see the Y-V wealthy as enemies like Ro buffalo see Y lions.

Y then might fight back and try to reverse the color imbalance which then might flow all the way back to how the Gb resources are used, this is like a Biv economy that turned to Roy like an expanding ghetto and then starts to recover its policing and then becomes more Biv like as resources are not as wasted with looting and crimes instead reform into sustainable businesses.

This collapse of Roy areas can be like the collapse in animal spirits that Keynes referred to in a recession, to recover from this the Roy sector needs to restabilize itself and this allows the Biv economy to regrow with less waste. Often however these animals spirits had just risen in an unsustainable way, for example as R and Ro animals weaken from a lack of food the Y and Oy predators find it easier to feed and can have more offspring, this is like a rise in animal spirits for them and is like a boom in their part of the economy such as with Oy subprime salesmen gouging R borrowers.

It is similar to what happened with the low Gb resources mentioned earlier, this weakened the B workers into taking on desperate loans which poured more money into B and Bi communities and gave Iv and V businessmen a false sense of a boom because they expected to get the money back and did not realize their profits were often just parts of their own capital.

So just as V and Iv collapse like overtones of the Y and Oy situation the B and Bi workers get into trouble much like R and Ro animals do. As will be discussed later some of the GFC may also have been caused by Biv countries becoming more Roy in areas from too much immigration from Roy economies without the training and resources to convert them to Biv workers, from the strain of Gb resources having to try to lift countries such as Russia, Eastern Europe, and much of Asia and India into Biv economies too quickly, from a wave of retirements of baby boomers after World War Two itself caused by color imbalances and a sharply lower birth rate of skilled workers to pay their pensions and replenish their living off savings, from too rapid an Iv-B revolution in computerization and AI making so much equipment and training constantly obsolete, and so on.

Again however color imbalances are often linked together, for example globalization might have been advocated because of the need to let communist countries into the Biv trading economy and so wean them off Roy economics and thus end the Cold War. When many countries saw these lowering tariff walls around the Biv economies they gave up communism and temporarily prospered with trade surpluses because of their lower wages, often highly educated work forces such as in Russia, and laxer environmental laws.

Now as the Biv countries have become nearly exhausted under these chronic trade deficits they are suffering in many areas with a disintegration of their Biv societies and recessions have turned into a near depression. In this scenario Japan, South Korea and Taiwan initially prospered because they were favored by the US in trade to give a model for other countries to give up communism and so Japan in particular built up an unsustainable economy from trade surpluses that crashed into two lost decades as other countries gained access to the markets that Japan initially captured for itself.

So China and India as well as many others now take much of the Iv-B growth that Japan formerly enjoyed. The problem now is if these countries were lured from R communism with these trade surpluses and other Y dictatorships in South America were also moved into the Biv economy with trade surpluses what happens to them if these surpluses are unsustainable and have to end, they might not be efficient enough as Biv economies without the subsidy of a trade surplus to keep Roy poverty and crime at bay. The Biv advanced economies may have to resort to tariffs or austerity to protect their remaining wealth and so unless these formerly Roy economies can now keep going largely on their own they might well collapse back into Roy economies and much of the wealth lavished on them with trade surpluses may have been wasted.

This is like a Roy grassland where someone decides a Biv forest should exist and so plants trees and fertilizes them, afterwards when they run out of money to sustain the forest it dies out and reverts to Roy grasslands and so all the fertilizer was wasted. This is even more likely because while these economies such as Russia are now more Biv their people have evolved in a scarce environment and so crime and so people are more used to power as a path to wealth rather than a meeker and Positive Sum Game approach in countries that have been Biv for hundreds of years such as parts of Europe.

Even so France and Germany for example may seem to have evolved out of dictatorships but they had their Hitler and Napoleon not so long ago. It may then be with these trade surpluses being unsustainable dictatorships which are more usual in Roy societies than democracies may regain control in many countries returning to Roy scarcity. Like the Y and Oy predators that fattened up on abundant R and Ro prey then later starved these newly Biv economies have become used to a more abundant amount of resources than can be sustained, it is an open question whether the current population of the Earth could all have a Biv lifestyle of private modern houses and cars, eating beef, having computers, etc without damaging the world ecosystem.

If so then a return to a mixture of Roy and Biv economies and its resulting mix of dictatorships and wars along with democracies and peace may be inevitable.

Another aspect of the GFC which will be described in detail later is the fractal nature of Iv-B business, roots and branches form a pattern that is self-similar, look at parts of them in a tree and they are similar to other roots and branches. In the same way the world economy produced with Iv-B this similar fractal shape of mass production where coal, wood, aluminum, and iron might be combined together into products like Bi roots converging on the I trunk of a tree, then Iv specialists in medicine or business set themselves up in branches in all Biv economies and trade with each other.

Because roots and branches are similar everywhere they have common faults and advantages, for example they can be fragile and when they start to collapse in one part of the economy the shocks might make similar organizations collapse elsewhere. As the world economy became highly competitive, secretive, deceptive, and highly innovative it grew and collapsed chaotically in much the same kind of system everywhere. Because of this competition a new innovation tended to spread across the world quickly which is why contagion in European banks was like that in US banks.

Iv-B systems also tend to consume any reserves in ever increasing numbers of roots and branches like more specialized goods and services, for example the number of competing products for sale in shops globally is far more than decades ago and is still increasing exponentially. As these mutations increase they can waste more resources as well, for example people throw away mobile phones and computers to get the latest ones and many products have planned obsolescence to break down after a couple of years to accommodate this so often they cannot even be recycled to use in poorer Roy economies. It may not appear that these resources are wasted because they form useful products but V-Bi reserves are drained, minerals instead of being left in the ground create products that quickly end up as landfill.

Despite the possible threats of global warming the use of fossil fuels continues to grow. In the same way in finance the savings in Biv societies were hollowed out into roots and branches, people saved much less because it seemed as if this new Iv-B economy made it unnecessary because of its dynamism. Instead of banks holding liquid reserves as V-Bi that could withstand chaotic disasters they used Credit Default Swaps which looked like insurance but had no real monetary reserves behind them.

## Because of the secrecy of the Iv-B system the obvious implication was not understood, that there could not be an economy that grew so much and prices in real estate become so high without there being less and less liquid money around to guard against external shocks.

In effect the Biv economy was already on the verge of bankruptcy and only surviving because of its perceived faster growth and innovations, as soon as an external shock was strong enough to create a domino effect of collapses them there could not have been enough resources to save it. If such resources had existed when they were discovered they would have been used up already in more Iv-B roots and branches. For example AIG’s V-Bi resources in the insurance business were used up to the point of its collapsing, if there had been ten more AIGs in the economy they would have been used up by postponing the collapse for a few more years by causing more weakening of the I-O police as the economy seemed to not need them, Iv-B growth doesn’t stop for any reason and save money to protect against chaotic collapse because it is always competing and trying to collapse others to succeed.

Iv-B’s ultimate endgame is a few people getting all the profits like oligarchs while all other businesses collapse which is not useful for a sustainable Biv economy.

Another issue with the GFC is whether it was caused by a lack of liquidity or insolvency. In terms of Aperiomics the two are highly related, companies often became insolvent because of V-Bi debt or frozen money and when money is frozen in debt it cannot also be available as liquidity. This is explained in more detail later but liquidity can vary with shock waves in the system causes waves of liquid money to move like tsunamis and this can leave some areas of the economy high and dry, usually with just frozen debt. In the sense of whether there was enough liquidity in the economy to allow it to recover the answer would definitely be no because with deleveraging as Iv-B collapses or goes into reverse the lack of liquidity is a competitive edge for some to exploit.

When the roots and branches break just like with a human having a heart attack or stroke money spills out like blood and is lost, this can be from people hoarding it or others no longer participating in that root or branch so the money moves on somewhere else leaving a liquidity shortage like a lack of blood in that area. The result is that the roots and branches lose money pressure and thus have a loss of momentum and energy in business. When it grinds to a halt the system then has an inertia problem where it tends to stay halted and to get the economy going again the different parts all have to start moving with some momentum and also to coordinate with each other.

This is like surgery after a heart attack where some areas have lost a money flow for a while and have partially gone bankrupt after they use up their savings, other areas might have their roots and branches blocked or narrowed with frozen money like clots or cholesterol, some parts might need to receive transfusions long term in the hope they might revive and these become zombie institutions, some parts were just mutations and were never viable when the boom ended or even slowed and so money might be spent on them to prop up everything after the GFC but eventually it will all be wasted, some parts of the economy are in effect fibrillating like a heart instead of moving and pumping in a coordinated manner and so on.

For example the subprime conveyor belt previously moved money with some momentum from V investors to Iv lenders and salesmen then to B workers who repaid it back up this tree. When the system had a crisis this system started fibrillating where the money got trapped and isolated with B workers trying to sell homes, some money was trapped with Iv lenders trying to sell some bonds, and also with V investors trying to get rid of their own bonds. Instead of all this energy being expended restarting the money circulation it in effect just caused smaller vibrations in some areas as money moved in smaller areas without really being pumped.

As mentioned earlier valves are needed in an Iv-B economy to stop money moving in reverse from the energy used on it, as with people getting refunds as a way to make profits for example, these valves largely went into reverse as there was more money to be made or losses to be minimized in prosecuting for refunds or renegotiating loans than making new business.

Some valves in effect started working against each other, certain loans and deals could not be renegotiated and so they needed momentum to move forward but others such as subprime bonds with defaulting mortgages were able to give back some nonperforming loans for replacement. Court cases based on fraud also tried to get refunds which were like valves pushing against this previous forward momentum, instead of investors selling off these securities they tried to get damages instead.

The B workers often could not sell their homes and valves worked against each other here, instead of getting out of a loan by paying it off or selling the house many people walked away from them and allowed the house to go back to the bank with an opposing momentum to that of making new loans. These banks then as they tried to push new business received back some houses and so their momentum ended up as fibrillation or like a vibration where little actual pumping O money occurred.

The Fed also experienced these valves working at cross purposes, they loaned money to the banks by taking bonds as security with the idea that this would restart the pumping of money through the Biv system. Instead it often led to more bonds being given to the Fed as a momentum in that direction where they remained to be slowly sold off. The money pumped into these banks was supposed to then be pumped into the economy from them however these banks often could not find Iv-B roots and branches strong enough to protect their money and so there was a counter momentum where this money went back into Fed accounts to earn interest. Pushing more money in just made it come back and create more pressure to stay in these accounts like a fibrillation.

This fibrillating also caused even more stress on the damaged roots and branches and often more money was spirited away out of the system with fraud or hoarding. Some money then lost its momentum completely in fibrillation by moving back and forth until it became stagnant, this might wastes money with the increased friction and turbulence coming from the damaged roots and branches. In this process there can also be more collapses and this will waste more money.

The problem is whether to revive or stimulate the economy as Iv-B again in the hope that there are some Gb resources it can use and then try to convert it to a stable Biv plant as it gets going, this is fraught with danger though because it may create businesses that have no prospect at all of being sustainable beyond a quick profit as someone is scammed or creating another prospect to be made into a zombie with subsidies. With all this monetary loss of energy then the system can be extremely insolvent because the amount of leverage that was being used is now not possible as higher leverage would just crack and collapse from chaos like rebuilding the house of cards with damaged cards, the difference between the loss of monetary energy and leverage amounts to a monetary contraction that would equate roughly to a contraction in GDP.

So this excess liquidity from the Fed with quantitative easing or borrowing money is just restoring the amount of money in pools of storage in V-Bi, this requires much more money because it is not a fractal part of the economy and so there is little leverage or energy to replace that lost from Iv-B. For example Iv-B investments banks might have moved money around so quickly with high leverage that this acted as perhaps a hundred to one higher amount of money than was actually in the system even though the leverage itself was perhaps thirty to one. So a bank might juggle its accounts by faster trading so this leveraged money in effect might do three times as much as without this fast trading.

This was explained earlier where a business might just use delaying paying its accounts even without loans to quickly trade without needing leverage, when it added loans to these payment delays it gets a much higher leverage. So not only is the economy delevering but it is also in effect deenergizing where it becomes a competitive edge to conserve energy like Oy predators resting as much as possible in between hunting for prey.

Usually Oy predators in the Roy animal kingdom might move around even when not hunting to scout for food, when prey are scarce though it might have to rest or sleep longer to conserve this energy because other predators who don’t do this might starve and leave more food for the sleeping ones. This might be why cats sleep so much and also perhaps why people and most animals sleep, they retain more energy for looking for food and procreating giving them a competitive edge against animals wasting energy when idle.

## In the same way an Iv-B boom is a like mania in a manic depressive where energy is wasted to keep this boom going every higher. When it crashes there is much less to do and so a kind of economic like an emotional depression conserves more resources.

So while deleveraging faster becomes a competitive edge the economy might become ever more comatose to conserve resources as parts of it are cut off with damaged Iv-B roots and branches causing this fibrillation. Because then this fibrillation just wastes energy the economy in effect goes into a coma to extend the time it can survive in some areas as these conduits are rebuilt. Trying to stimulate a patient in a coma usually doesn’t work, they are better off being left alone in this state as the healing is done. However this is more difficult to do in an economy because like a comatose patient who might die before the healing occurs the economy might collapse before the chaotic wreckage is made into a financial humus new Biv businesses like plants can grow in.

Iv-B ever faster competition and ever lower profit margins meant that Iv-B parts of the economy always had to do more with less money in the boom and this acted like a large expansion of the money supply as well as appearing to be a productivity increase, in effect while some businesses grew faster by delaying accounts and moving money faster other businesses soon learned this trick until everyone was doing it more and more. Much of this high pressure movement of money was not ultimately productive like someone driving too fast to get to appointments making mistakes, for example a sales contest might have been set up in which an Iv salesman is trying to sell a subprime loan loaded up with excess interest charges and up front fees to a deceptive B worker.

He is using a liar loan to buy a house he might have no intention of keeping unless he can sell it for more, so he is also trying to use higher velocity to replace a lack of money, he needs to sell the house before he defaults for example. So both sides of the Iv-B transaction are deceptively trying to substitute speed for leverage or to augment leverage with this speed as a competitive edge, the result is like drivers on the freeway racing ever faster to more appointments that turn out to have been a waste of money.

When the Iv-B collapses then these Iv agents instead of racing around to see more clients might prefer to conserve their fuel by only seeing those most likely to buy, this loses some sales and represents a financial contraction in the money supply because it is a kind of deleveraging. Whenever energy, momentum, speed, deception, etc are used competitively they are a kind of leveraging just as much as borrowing money is and so when these reduce or it become a competitive edge to reduce them faster than others this represents a kind of deleveraging that is difficult to explain in economic statistics. Again however the answer to this is stronger I-O policing to restore roots and branches as being safe to use so it against becomes a competitive edge to grow using this safe conduits.

This manic economic activity where speed causes more mistakes might register as profits in GDP because of the economic activity in fixing the mistakes, for example Iv agents racing between appointments might have more car accidents that add to the GDP in repairs. This then is a kind of economic activity that is really and economic collapse in its early stages where fixing the earlier cracks is seen as good for the economy. Manic poker games might also seem like this if you included all the bets where people bluffed out of fear, anger, desperation, etc but it is more likely the properties built and loans made will be a net loss to some degree just as some of the poker bets made will be poor judgment and ultimately disastrous for some players financially. For example poker player might start playing ever faster to have more hands and try to make more money but make more mistakes, they might also try to raise bets faster to appear to be more confident but miscalculate more and more from this.

In the huge economic contraction of the GFC,the I-O market tried to realistically price some of the mutated housing from Iv-B and it turned out people didn’t particularly want to buy them, there was often no real employment infrastructure around them so buyers could make them a sustainable community. In effect then this manic phase of the boom where Iv-B people tried to augment leverage with every more speedy decisions created even more misallocations of resources and a greater contraction after people realized this and slowed down their decision making to glacial speeds.

Many of these real estate subdivisions were the equivalent of desert plants that served their purpose of using up fleeting Gb resources making profits in a fruiting phase for V in Wall Street and then collapsed with little residual value leaving a toxic humus for other businesses to try to salvage. Even in 2011 much of the recovery in these areas is just speculators in Iv-B hoping there will be another mini boom because prices fell too far, many areas could not revive with higher real estate prices unless there was a renewed manufacturing base to create jobs.

This point is usually left out of statistics, the collapse of manufacturing jobs created more B worker deception getting liar loans and inflating in part the real estate boom. As a result of this deception and manic desperation much of this real estate overhang is no longer viable for people without higher paying wages. Just as a manufacturing or Gb resources boom might lead to the construction of new suburbs when these jobs are gone the suburbs usually fall apart or vanish. Real estate sales then might not rebound unless an economy that can use them regrows.

## With the collapse in the US and Europe those countries with trade surpluses are in a position to overshadow new manufacturing like a tree overshadows its rivals with its leaves, any recovery based on manufacturing would probably be dumped on with loss making goods to bankrupt it.

The situation then beyond insolvency in many areas and verges on being too high and dry for liquidity to ever reach them again, insolvency implies that enough liquid money will unfreeze the solid money debt and get the Iv-B circulation going again like a patient reviving after a heart attack. It is more like someone with a contagion and perhaps tumors that cannot be part of a healthy body and so they need to be cut out and killed off. Then the economy unlike the human body might regrow more sustainable industries than the ones that were cut off, in the meantime though these mutated areas are taking in stimulus money and trying to grow than collapse because they have no use other than to use up Gb fleeting resources and then collapse in toxic waste.

Many of these Iv-B businesses are in the way of the healthy economy regrowing and in some ways the banks are better off holding onto their money and letting these areas expire and then sustainable growth will manage to start without much capital and can then be encouraged. For example the creation of subprime loans was an Iv-B mutation usually based on liar loans rather than real Gb resources, it is better than to let most of this expire and let securitization grow in areas where there are verifiable resources as it is now doing in car loans for example.

The Iv-B system is then insolvent in some areas but with a precipitate that is also toxic in many areas so mixing this toxic waste with enough liquidity will just produce a circulation that kills off more areas. For example liquidity might allow some companies to auction off their equipment, sell off their buildings, sell to a viable company that tries to absorb them, etc. However if these are unsustainable Iv-B mutations then people will just be buying things of no real use because that kind of economy failed and that infrastructure is of little use to build a sustainable business.

For example with high amounts of innovation much of this toxic humus will be obsolete as new sustainable Biv businesses are growing by finding the things consumers really want and can afford. There might be expensive office furniture in areas where no expensive businesses can operate so second hand dealers might buy it up and then go bankrupt trying to sell it. Patents of mutated businesses might be bought and then companies waste money trying to set up businesses with them, this happened for example with many internet ideas in the 1990s tech bubble that were shown to be useless when it crashed.

Imagine for example that in response to the tech bubble bursting the Fed propped up those companies with borrowed money, they would have been mostly useless businesses no one really wanting to buy things from and were often just deceptive ventures that were only meant to look good enough for speculation. Many of these businesses then were beyond insolvent because at that time no one really knew what the internet would become, much of that investment like patents on useless ideas had to just expire as a dead loss. Some subdivisions of real estate for example might be better off being bulldozed back to farmland as has happened in some areas of Detroit rather than trying to prop them up as communities without jobs nearby.

The only way to tell the difference with viable parts of the economy is to examine these roots and branches to see if they connect to sustainable Gb resources or to V refinement of resources that adds value, subdivisions for example can be evaluated according to where the people who live near their work and whether those jobs are sustainable or propped up zombie parts of the bubble from a stimulus.

In a sustainable economy the I-O market usually works out these things with a minimum level of uncertainty, there is enough transparency and policing as these projects are built that few are tricked into wasting money. If there is fraud the perpetrators are caught and usually don’t get a chance to be trusted again. This acts as a powerful deterrent because unless they can make enough out of the initial fraud and escape they will have no profits later, Iv agents then usually avoid Oy predatory behavior as long term Bi cooperative strategies find a balance with short term competitive strategies in the I-O market.

As the I-O market revives it has become apparent that much of this oversupply of homes is just not considered viable because of a lack of work and this overhang of unsold real estate is also a part of vicious chaotic circles perpetuating unemployment, if this lack of employment had been priced into the market earlier than many homes would not have been built. Transparency now shows the mistakes made but often these industries are just dead wood now like a forest that died and the infrastructure is in the way of new businesses growing.

## In many ways like a deceptive battle in war the GFC represents a sudden collapse after a euphoric belief that the advanced economies were winning the trade wars.

This is like in Germany in World War One where the people remained confident because of the secrecy around how the war was going, it suited the politicians and generals to convince people they were winning to keep getting more resources from them. Often though no one in charge really knew what was going on in this Oy-R opaque situation though the Y-Ro war of attrition seemed to be going against Germany. In the same way the advanced economies thought they were winning the trade war with deceptive and innovative financial strategies but were losing the V-Bi war of attrition with their trade deficits.

The situation then was ripe for a collapse much as happened with Germany when resources started to run out and could no longer support the bubble of the front lines in France. In a Y-Ro war of attrition each side might have relatively few of its soldiers exposed to battle on the front lines and most are recovering and running logistics behind it, when these resources start to run out a hole in these front lines can occur like the bursting of an economic bubble causing a quick rout and collapse.

In the same way then as the V-Bi war of attrition was going against the advanced economies some of the economic benefits of cheap imports were promoted by politicians and economists who either did not understand the opaque trade war or used the deceptions to keep people motivated and spending. The bubble or front line of this economic war was the equity in real estate and financial instruments that were used to keep manufacturing going and to take in cheap imports and loans like spoils of war and tribute from defeated economies.

As the advanced economies were ground down in this V-Bi war of attrition though people had to sell more and more goods and services to plug the gaps and keep making their loan payments, this is like people’s savings plummeting before the GFC as they used them up to keep this bubble strong for a hoped for economic victory where their manufacturing would beat the competition once again. People were also deceived into working harder for lower wages as in the war, also to act as economic cannon fodder by spending more money and taking on deceptive investments such as housing and subprime bonds like Germans invested their money in war bonds.

As the situation became more critical Germany decided to try and win by a fast Oy-R attack at Verdun which used up their resources faster and led to their collapse. In the same way as B workers became more desperate with the loss of manufacturing jobs they invested in housing to try to make enough money to salvage their finances, also the advanced economies tried to invest more in competing manufacturing technologies they hoped would turn the trade war and balance of payments deficit by making the trade surplus economies buy more imports.

However they were also trying to win an economic war and so they could not afford to drop their Mercantilist restrictions on imports even if they were superior, they had to continue to dump goods even at a loss on advanced economy manufacturing like bombs on industrial areas even if this was hurting the global economy overall and leading to mutual devastation when the trade war had been won. Businesses then were urged to hurl themselves at these Mercantilist trade barriers like infantry at the opposing trenches leading to these businesses often using up their money and going broke and then the trade surplus economies bought out their technology and resold the goods at a profit.

This is like Germany using new weapons which are captured and copied by the Allies, improved, and then used back on them with more devastation. Just as the Iv-B economy believed itself to be superior to the older V-Bi system because it was faster and more innovative the Oy-R infantry battles in the Somme were from a belief that these strategies were superior to the fixed positions of the Y-Ro trench warfare. Soldiers on both sides grew exponentially in numbers ready for an attack and then collapse when they could not break through the positions with their momentum, in the same way the Iv-B innovation in the advanced economies could not break through the V-Bi trade deficits they had built and so their businesses continually wilted and crashed when they tried.

War of course occurs from weak I-O policing, after World War One Woodrow Wilson attempted to rectify this with the League of Nations this was not strong enough to prevent World War Two.

In the same way economic war happens from weak I-O international economic policing and also caused by free trade where both sides believe they can gain more by evading this policing than using fair trade policies.

For example in the 1990s the growing pressures for free trade were because all the economies believed they would do better with it than their competitors would, also they believed there would be some economic advantages for all in a Positive Sum Game. For example Bill Clinton promoted the NAFTA trade agreement with Mexico because they thought they would benefit more from cheap labor and were not really interested in whether in would help Mexico. The Mexicans thought this would increase their exports but did not really care if this helped the US or not.

In the same way China thought it would benefit from free trade enough to move further away from Ro-R communism and while there might be benefits for the advanced economies they would not change their plans if the advanced economies lost their manufacturing industries and developed trade deficits. For all economies then free trade was trade war where all thought they had a chance to do better, many also tried to hang onto Mercantilist trade barriers that would benefit them like Germany keeping its front line trench warfare strategy while invading as Oy predators at Verdun to gain a quick end to the war.

So free trade was in effect a loosening of internal trade protections like World War Two was a loosening of League of Nations restrictions as well as protections of the Allies from World War One for economic saving of money as well as hopes of getting more territories in their respective Empires. For example after World War One Britain and France were more interested in expanding their Empires to take over areas of the collapsed Austrian Hapsburg and Ottoman Empires than in keeping to Woodrow Wilson’s Fourteen points to give self determination to all peoples.

In the same way free trade not only seemed to over benefits with a Positive Sum Game but more markets for exports where the advanced economies though they would win and end up with trade surpluses themselves. The emerging economies thought the same and turned out to be more correct because they are winning the V-Bi war of attrition with their continuing surpluses. This is then why free trade does not work anymore than I-O deregulation in the financial sector or disbanding the police in a city, it allows more injustices to grow chaotically and deceptively until they collapse parts of the global economy. Other parts also collapse under this war of attrition of economic trench warfare as in World War One.

Just as Biv colors are overtones of Roy, each war as economic overtones. For example much of World War One was fought with the prospect of economic gains from expanding an Empire at the expense of their rivals, in the same way free trade is an overtone of weak I-O policing and the smaller wars and conflicts around the world. The end of the cold war is linked to this economic war, the reason so many economies spend so much on weaponry is also linked to their economic aspirations as fears.

After World War Two Germany probably recovered faster with its economy in ruins than if it had a mutated Iv-B economic structure that was a collapsed boom and which was in the way of new regrowth. After World War One Europe and the British Empire were in ruins and had largely returned to a Roy society where criminal penalties had to keep people from looting and stealing from each other because of the scarcity of resources, these economies nonetheless had a lot of trouble rebuilding back to a Biv society because like trying to help a third world economy or revive after a depression people are still thinking in a Negative Sum Game of minimizing losses rather than making profits.

Biv business runs more efficiently on I civil penalties rather than O criminal laws, however it is rare for criminal laws to be strong in business dealings. The result is if the economy is still largely Roy then businesses can make more money scamming people and being predatory and then paying the I fines out of the profits made. It is also like a Biv forest trying to rebuild and being knocked over or uprooted by Roy animals, the Biv economy has to get through this stage to become so strong that Roy people make more money being submissive to it like birds and insects do from flowers.

The US ended up loaning a lot of money to the recovering economies as well as having a trade surplus that eventually could not be repaid. This set the stage for a Roy European society trying to get to Biv with loans similar to many Roy societies from communism trying to become Biv democracies with export earnings and borrowing money from the advanced economies. It also highlights the problems of free trade where all economies are really trying to grow at the expense of each other and to hurt their competitors if possible.

The benefits of the Positive Sum Game can help in some areas but in others the Negative Sum Game is where economies are trying to minimize losses at the expense of each other. For example after the GFC many economies are trying to get out of a slump by exporting to others, however this strategy of everyone minimizing losses is Roy and predatory where exports are meant to prey on other economies. With I-O deregulation this becomes an O criminal problem which can degenerate into trade or actual wars as economies grow poorer from weak I-O policing.

Soon after the end of World War One the US had its roaring twenties where the economy became Iv-B and grew wildly, this may have also been because of few resources causing the economy to act more like a desert plant. One reason for this may have been the strain of helping to rebuild the war torn countries, the US also had been a war Roy economy for a time when it entered the war. So the world then may have been in effect trying to get back to Biv but only with limited success because of so much Roy criminal fraud in the stock market, when the Iv-B boom broke it fell back into a Roy society in the 1930s spreading this worldwide as each economy tried to minimize its losses in a Negative Sum Game with trade barriers and pulling investments out of other countries.

Usually chaos takes some decades to build and so the problems that caused the Great Depression were probably related to the causes of World War One. For example the world’s Empires in the start of the twentieth century were running out of Gb resources they could efficiently use and so were turning to more speculative Iv-B ideas. This led to the Panic of 1905 in the US and also to deceptive and high energy fast paced ideas about war between the Empires in Europe who were running out of colonies and land to assimilate from each other.

The Austrian Habsburg and Ottoman Empires were on the verge of falling apart and disappeared after the war, the Russian Empire quickly collapsed in the war in a communist insurrection and the Germans had in part launched their attack on France because of a need for resources as Hitler did later for Lebensraum or room for Germany to grow in the East into the former Austrian Hapsburg countries.

They would have been suffering from a high degree of chaos in their economies from rapid innovations such as in industrialization and railroads, the treaties between them would also have been like roots and branches that ended up pulling each other into war and in effect toppling them into conflict like dominoes. While the US was not as chaotically connected by treaties it was by trade and so both suffered and profited as the war continued, the US at first made money by trading as a neutral economy and ended both World Wars as winner of the Negative Sum Game by losing less than the other countries.

This combination of a lack of new Gb resources and highly chaotic Iv-B economies would cause them to try deception and bluff like the Austro-Hungarian Empire’s attempts to annex Serbia while its Empire continued to crumble as different countries in it became more competitive with each other. In such an unstable situation this Serbian annexation represented a shift in power, each Empire was acting secretively and deceptively in how to react in this opaque situation after the assassination of Archduke Ferdinand when Serbia was invaded.

Enough V-Bi transparency as V-Bi in the situation could have prevented the war but also it would have made some countries believe they could have won a Y-Ro war of attrition so only I-O policing between the Empires could have helped. After the conflict had ended the situation was much like after the Great Depression except that war caused an economic collapse in all these countries instead of business, this is seen in the comparison between Germany’s battles and free trade mentioned earlier.

The various economies grew in spurts and collapsed after World War One as Germany tried to pay onerous war reparations, this caused collapses and hyperinflation later which is where money grows exponentially as Iv-B without a corresponding exponential increase in the sales of goods and services. Loaning money in this environment is likely as with a stimulus in the GFC to be just quickly used up with little effect, create zombie industries, or perhaps give the deceptive appearance of a recovery causing more loan money to be wasted.

## Then when this loan money was not repaid international trade collapsed leading to the collapse of the chaotic Iv-B economy in the US where high wealth inequality was a result of this intense competition in Iv-B, this top heavy US tree then collapsed.

The chaotic Oy-R situation then eventually led to world war again, this time the mutating innovations in Biv were used in rival military systems that quickly killed off the mutated weapons, logistics and plans if they did not work. This then was like reforming the Roy animal kingdom where predator and prey relationships cause mutations to not survive and in effect cleaned out many of the Empire’s economies of unsound businesses. After World War Two ended new more viable I-O policing had replaced the Iv-B speculative atmosphere of the 1930s, indeed war profiteers as an expansion of the deceptive and secretive strategies that led to the Great Depression were largely illegal and so businesses got in the habit of more honest war efforts. These then became a more healthy Biv economy when it converted from a Roy war footing, this was made easier because new innovations allowed more Gb resources to be available for consumers.

For example mass production was much more efficient after it had been perfected in building tanks and planes. The sense of justice from winning a war against a perceived evil made I-O policing in business much easier as the ideas against war profiteering extended then to all kinds of profiteering for some decades. This in effect was a revival of animal spirits where soldiers had become used to working hard, confronting evil, and so when they returned were more likely to be determined to succeed through hard work rather than being despondent and pessimistic as many had become in the 1930s.

Unemployment lingering on from the Great Depression would also have been soaked up in the US armies and so many killed would have created a shortage of labor that raised wages in Bi reducing wealth inequality and creating a consumer led prosperity. A similar situation happened for example after the Black Plague in the Dark Ages in England where an increased demand for skilled labor among the survivors led to political change as Bi workers demanded more money and political freedoms in exchange for working for the V aristocracy.

A change then to a Roy world economy purged some of the mutations from it by people agreeing more on O criminal behavior than they did about I civil causes of the Great Depression, then as the war and technological innovations eventually showed Gb resources were too abundant to be fighting over the advanced economies mostly moved back to Biv and prospered. If the GFC settled into a decades long malaise then much of the world may slip back into Roy wars and dictatorships only to return to Biv if there are enough resources later.

The issue of whether to let businesses and consumer finances fail to regrow or try to prop them up is then a complex subject and is best answered by understanding where the roots and branches go. This also involves the question of whether a lender of last resort as Bagehot advised is a good idea or whether it creates moral hazard and causes people and banks to take more risks next time assuming they will be bailed out yet again. The question involves an implicit assumption that an Iv-B economy is superior to a V-Bi one or to a healthy balance of colors in Biv. For example the colors V and Bi represent team colors where people prosper by cooperation, if someone prefers to compete then they tend to move to Iv and B jobs and vice versa.

In Aperiomics an Iv-B economy does not work in the long term so the idea of avoiding moral hazard by having an Iv-B economy is not true. Anyone using insurance is affected to some degree in their behavior because of it, for example someone with fire insurance might be more likely to leave a heater on overnight than someone without it. However moral hazard is not an argument for not using lender of last resort insurance, it is an argument to police insurance so that dishonest people cannot take advantage of it because they are the ones in whom moral hazard is dangerous.

For example some people might insure their house for more than it is worth and deliberately leave a heater on unsafely to collect the insurance money, a moral hazard then is only a hazard when the immoral are hazardous to the rest of the population. This immoral hazard, or the hazard we face from immoral people is similar to many well known crimes such as drunk driving where car insurance might cause someone to drink more assuming the insurance will pay for any accident they have.

Immorality is generally a crime in Roy society, depending on how immoral an action is there can be fines or imprisonment or even execution. In Biv society though there is not a criminal penalty but a civil one which is intended to dissuade people from certain actions because of the fear of loss of money or other assets. When people are gamblers though this may not be something to avoid, they may even relish risking money and indeed they might not even be in business if it did not have the thrill of taking these kinds of chances.

People like this also might not see being fined or losing a civil case as immoral without a criminal aspect to deter them and so can continue on to do enormous damage in an economy. Moral people of course would avoid this hazard anyway but in the shades of grey of an argument with the three central colors in Biv of Iv, I, and Bi as well as Oy, O, and Ro in Roy, people often tend to have a mixture of guilt and innocence.

For example an Iv agent might often lie to some degree to make a sale to B, he might see this as exaggeration or salesmanship rather than actual dishonesty because in Biv the customer usually gets some benefit from the sale too. Bi people tend to team up together and if they boycott an Iv salesman by publically warning about him or his business then they can cause sometimes unfair economic losses with him. So they also to some degree have a conflict with their conscience which they deal with because it is often the lesser of two evils instead of letting a dishonest Iv agent rip off members of their community.

The same situation happens in Roy where an Oy predatory criminal might justify his crimes to himself for example by thinking that his victims have plenty of money or insurance, he might also say he needed to feed his family or his victims were bad people or came by their money dishonestly. Ro neighborhoods that catch a criminal might act like vigilantes and beat him up, the equivalent of Bi boycotting in Biv and so they also find right and wrong has shades of grey. This also occurs for I and O, the main difference is that they act as a compromise with the adjacent colors to them and find the law defines this lesser of two evils and other complex shades of grey more precisely.

For example sometimes the O police might beat up an Oy petty thief like the Ro community sometimes do, at other times they might work with the Oy thief as an informer and allow them to steal from the Ro community in exchange for money or information about Y criminals. The Ro neighborhood in effect bail each other out in beating up Oy thieves, this insurance like team nature might make some of them leave their houses open as a kind of moral hazard making their behavior more dangerous. A Y mafia might defend each other against criminals and the police then get arrested themselves, this tendency to protect each other can make some of them take more risks in a kind of moral hazard as well.

This moral hazard in Y-Ro teams is reduced by the I-O police, for example if the Y mafia take too many risks because they trust their gang to protect them then the O police can undermine them with Oy snitches. In the same way the Ro neighborhood might get penalized by moral hazard when the police arrest some of them for beating up people instead of locking their homes. In the same way V teams might act more carelessly because they believe their V team members including connections in the government will bail them out, in the same way this is moderated by the I civil regulators using Iv whistleblowers to expose this.

## Bi communities might also become careless with moral hazard because they believe their connections in the left wing of the government will bail them out in a recession with more welfare, however I regulators might deny this to people who have not taken enough care in saving money for a rainy day themselves.

In I the situation is an overtone of O, the civil law might fine an Iv salesman for misrepresenting his product and even revoke his license from a Bi community’s complaints which is like the Bi boycott of the Iv agent directly. The civil I police might also act like Iv and allow some misrepresentation in salesmanship where the buyer should beware instead, for example advertisements in the media all tend to exaggerate their products and services to some degree. In this case then the Bi community has a moral hazard in getting ripped off by the Iv salesman and so they should be more careful instead of expecting to get bailed out. In the same way the V financiers should have been more careful in lending money to deceptive B workers on liar loans and this would be a better reason to deny them bailouts for their careless lending.

So the idea of moral hazard is one that belongs in these three central colors as a matter of law whether civil or criminal and so is not really an aspect of economic policy. If it is then it becomes equivalent to being like Iv leaning police saying that the hazards of being exposed to an immoral salesman is ok and then going on to the secondary question as to how that affects the economy, in this case then the idea of moral hazard is really whether people deserve to get bailed out when they are the victim of a crime.

In Aperiomics then if there is moral hazard with insurance then the immorality is dealt with according to I-O law and then insurance is still used as necessary to reduce chaos. Another issue with this is that I and O are not trying to stamp out all crime or all moral hazard but to domesticate it to the point of not threatening the ecosystem. This can be seen with most O police in countries where there are mafia and other Y gangs, usually they know who the criminals are and could act as Ro vigilantes by executing them without a trial but instead choose to moderate the behavior of the criminals in charge by making them more wary of O snitches or failing that sometimes using Oy deceptive tactics to frame them with a false crime.

This can happen to some degree such as by fabricating evidence but the ideal of neutral O policing is to prove their guilt in a court of law. In the same way the O police could get rid of the R problems of society who are sometimes seen by other colors as a contagion much like germs in the body, however like an O immune system which cannot just kill cells in case they might be germs or it might become an auto immune disease and so guilt needs to be proven again beyond a reasonable or moderated doubt.

## In some cases the police become Oy such as with death squads against R communists in South America or arresting R drug addicts to clean up communities but this is against the ideas of O policing.

So the I and O police are not really there to get rid of all criminals but to keep a balance in the colors, they want to keep R and Y domesticated in the sense that they do not become so chaotic and random that they undermine the I-O police as well as the Ro and Oy parts of the community. To do this they enlist the neighboring colors to help with this policing, for example they use Oy petty thieves as snitches to help catch dangerous Y criminals in exchange for allowing Oy to operate to some degree. They also use the Ro community to help catch their own R criminals and turn them in or at least use some vigilante justice to keep them in line. In the same way they might put pressure on a Y mafia to moderate their Oy thieves or else they might be turned into snitches to threaten them.

So the problem of moral hazard in economics is a fear that this moderating system will get out of control and cause systemic danger in the economy, this leads to the idea that V and Bi strategies of team behavior and insurance are inferior to Iv and B competition and that perhaps companies and communities even if V and Bi should be allowed to wither and die in competition because it is more efficient.

For example when the banks which are usually V and Bi got into trouble they did not have the reserves to self-insure anymore and the FDIC in the US started to run out of money to cover all their bank failures. The fear was then that bailing them out would set a precedent so that V and Bi areas would continue to compete to the newer limit because bankruptcy was no longer a danger if they were too big to fail.

This is indeed a danger in the Iv and B sectors of the economy, they tend to take any advantage available and use it to compete and bankrupt their competitors if possible but it is not a feature of the V and Bi communities who would definitely need to be bailed out in this case. In an Iv-B economy these V and Bi reserves are drained and wasted so to revive the economy as a more stable Biv plant instead of just letting it collapse like an Iv-B desert plant these reserves must be replenished by a lender of last resort if necessary. However often V-Bi banks are using deceptive Iv-B people to do their dirty work and so ultimately the deceptive use of moral hazard can be traced back to them in this way. This why the I-O police are needed to determine issues like this in a neutral way.

However the at the same time the I-O police must be used to determine who is entitled to these replenished reserves that have been decimated from Iv-B speculation otherwise all the money in the economy will just be wasted in competition again, this sometimes needs to be determined quickly in a crisis as the Fed found out when it bailed out AIG which is why random audits like the health inspector uses need to keep Iv-B contagion in check long before it becomes systemically dangerous.

Many of the credit default swaps AIG covered were for Iv-B speculation and while it revived the Iv-B desert plants with some new Gb resources it did little to make them act like healthy Biv plants, for example these swaps were often used to bet against companies rather than to insure them so they were more stable. The money then generally went to speculation and arbitrage and very little to actually rebuilding a Biv economy again. Partially this is because some of this speculation should be illegal as fraudulent or dangerous like dangerous driving is, when laws are not policed then the bad businesses drive out the good because they don’t have the scruples to compete with all the dishonest advantages available.

This is like in the Olympics where if athletes are not tested for steroids then all will eventually use them because any that refuse to use steroids will not be as fast as those who do and will be eliminated. The issue then of moral hazard comes from the idea of Iv or Oy self-policing which does not work, once secretive and deceptive people are expected to be moral rather than compete to the limit with whatever they can get away with then the problem of moral hazard is indeed a danger. So if I-O cannot become strong enough to deal with the situation, and often it cannot because of color imbalances leading to politicians who won’t restore its power as happened in the US after the GFC,, then it may sometimes be better to let V and Iv banks fail because there is little chance they will act morally with the money.

Feeding more money to Iv-B will then either be wasted because having already fruited the V management making the money might have left and are not interested in starting up the business again unless there are clear signs of larger profit opportunities than perhaps a few months of a tentative recovery from a stimulus. For example Countrywide was arguably an honest business except towards the end when they got caught up in the Iv-B business to compete and avoid being overshadowed, they in effect went bad to compete with those who had fewer scruples in the same business because of a lack of I-O policing. To tempt this kind of Iv-B business back to life then it would need to have prospects of another boom and bust as it has no interest in building stable Biv businesses, better to entice the more honest Iv-B businessmen because they will want to mature their businesses into more stable Biv plants after they win against the competition.

In the short run the increased amount of I-O policing will have a chilling effect on Iv-B businesses and because they might dominate some areas of the economy such as finance then it appears as if the situation is too fragile to prosecute anyone for what happened in the GFC. However this is a critical mistake, it is more important than ever to clear out the Iv-B chaos and contagion as well as letting dishonest business fail so they provide humus for honest ones to grow as well as in effect getting rid of the dead wood which is blocking honest businesses from taking their place. Creating zombie dishonest businesses is like the worst of both worlds much like fertilizing diseased crops rather than clearing them and planting fresh seed.

The results of this policing can produce strong Biv business by using the available Gb resources more efficiently, this is known because until relatively recently Biv societies functioned quite well on the resources available to them before they fell to the Iv-B contagion. Desert plants as Iv-B are efficient in that they can grow quickly on fleeting resources such as a short burst of rainfall might make them quickly bloom and seed, then however they collapse and all their humus is lost and blown away because there is no attempt to improve their soil. This is like balanced plants improving Gb resources instead of just quickly using them up, in the same Iv-B companies are like weeds so the infrastructure in the economy is wasted. For example the Iv-B idea of opening up the US and European economies to free trade caused much of their manufacturing base to collapse as a total loss of resources, this is like plants collapsing and the humus blowing away and lost forever. Better would have been at least to use protection to try to allow them to adapt to the competition or to retool in a different industry, in most cases however the factories just went bankrupt, the worker’s skills were totally wasted like the desert plant humus, and then there were fewer resources available to regrow other industries.

In this environment then Iv-B plants as businesses were best suited to it but they progressively mutated and became more toxic using up the wealth of advanced economies rather than preserving it. This is one of the problems with excessive innovation and revolutionary products, they can waste so much in worker skills and infrastructure that people are left with no wealth left to buy them. There is usually some recognition of this after Iv-B collapses in an economy which has wasted sustainable resources because most people realize the economy like the environment must be sustainable to feed its citizens for the long term and not just for short term gains then a collapse.

However the resurgence in I-O policing will be usually temporary and will weaken again eventually allowing more Iv-B bubbles and collapses. It may be that the economy becoming more Roy is seen as a sign of danger and this might then cause the I-O policing to grow stronger for a while. For example in the lead up to the GFC there was rampant fraud in the subprime lending sector as well as on Wall Street but much of this was ignored, Harry Markopoulos found this to be a problem with the SEC when they ignored his pleas to investigate Bernie Madoff.

However when the economy starts to run out of Gb resources, much of this can actually be from the waste associated with Iv-B business in its relentless innovation and dumping of old technology with the wastage of some resources such as rare earth elements, the cracks in the economy start to grow and more people see this in isolated areas and start to talk about it in Bi and V communities. This is like people seeing cracks in a building or bridge long before it actually collapses and is a sign the chaos in the economy is starting to tear it apart with shearing forces. For example if one part of the economy like real estate values tries to go one way as a higher price and a second part tries to get continual profit increases out of refinancing as the house prices go up while a third part is where people are losing high wage jobs to overseas manufacturers then it should be clear these three momentum based trends contradict each other unless there is something providing extra wealth going into these areas.

As it turned out the only money going in was loans from businesses that had not even looked at these shearing forces because of the Iv-B secrecy and deception in the business where information disclosed usually just helps a competitor. It might be like for example people playing poker with a deck missing some cards, unless they cooperate by comparing hands it is hard to discover the problem as everyone is bluffing and lying about their cards and then discarding them.

In Biv then these problems are usually handled by fines or withdrawal of licenses such as for real estate or stock brokers, the problem is though there is an implicit assumption in economics that each transaction benefits both parties because each agreed to the deal. Since both sides are profiting then it is hard to allege there is a problem, at least the issue is that one side is only profiting somewhat less than they should be. However once the economy starts to become impoverished from this reduction in Gb resources then business starts to turn more Roy as profits in a Positive Sum Game where both sides win get rarer. Then it can turn into a Zero Sum Game where one side wins and another loses like with Collaterized Debt Obligations where essentially one side bets against the other like in a casino and finally into a Negative Sum Game where both sides lose and the competition is between who can lose the least amount of money in trading as deals are unwound or deleveraged.

By that time the temptation to commit actual Roy crimes of predator and prey is stronger because they are more and more the only ones ways to make money available. People can sometimes ignore the fraud in Biv because people are generally making money and they can argue however incorrectly that this is a necessary part of how the economy works in free enterprise. For example deregulation usually creates an increase in corporate crime because no matter how strong the policing was before there are still Iv and B people in the economy who are competing and either need to be deceptive to survive financially or are dishonest and have been lacking an opportunity to commit fraud. So this can happen relatively quickly as seen with the Savings and Loans crisis in the US, the same would happen if the police decided to take a week’s holiday in most cities.

As long then as this economic crime is limited to civil laws then the economists can point to the many good deals that were still done and even that the crooks still did many honest deals. This however is like saying that criminals in general are not so bad because they also do some honest things like paying for their groceries. When the situation turns Roy though people tend to recognize predatory crime where the victim clearly loses, this is much harder to justify as part of a laissez faire system and so people become alarmed and demand action.

As the GFC progressed then much of the economy turned to Roy and where people were very short of money and saw clear cases of Roy crime the demands for police action and threats of Ro vigilante attacks such as the Occupy Wall Street protests increased. This prodded the I-O regulators into doing something and where they were corrupt and under too much influence from Iv Wall Street this became more exposed.

So the increase in O policing for criminal law infractions led to the increase in prosecutions for civil law infractions in I. The power of economic ideas to cause devastation in an economy is not so obvious when it is prosperous because some people are usually just not making as much money as they otherwise would or the winners in the Iv-B system are deceptively portrayed as honest and those complaining sore losers and haters. When the economy sours and becomes more Roy however there becomes a clearer difference between those still wealthy and others destitute where before both were prosperous to some degree. In Bi communities then before they might have been gaining from the deceptive B workers getting liar loans because of the extra jobs and sales from the loan money being spent, now they see themselves as a victim of financial predators and demand that police deter this kind of crime or they will protest and perhaps riot. Sometimes though this change to Roy, like the forest being threatened to collapse into grassland from a contagion, is necessary as the I-O police might be so biased towards Iv and Oy that only sustained anger from the Bi and Ro communities can bring them back to neutrality or onto their side.

## This probably happened to a large degree in World War Two where the US and other people in Europe and Britain had a clear enemy they saw as Y predators in Hitler and Mussolini destroying their Biv way of life and so they were prepared to act as a Bi-Ro army to defeat them, this would make them less likely to tolerate V wealthy crooks when they came home from the war.

Economic ideas can dominate the global economy like Iv-B memes spreading virally and often deceptively. For example in the lead up to the GFC there was ample evidence that I-O deregulation was leading to a crime wave but because this crime was largely hidden and contradicted the prevailing theories it was ignored or thought to be outweighed by the extra economic growth. There was little evidence for such a theory as was seen when the GFC hit in full force and no one knew what was happening, where all these sudden collapses had come from, and more importantly people had little real idea of what to do about it. Iv-B economic theories such as with the Austrians then were themselves poorly policed in terms of how dangerous they were to the global economy, like a business trying to compete and cash out before a crash economists themselves fell into the same mindset of having to compete with each other for jobs in the government and for prestigious posts.

To sound warnings then in such a secretive and deceptive environment was dangerous for their own livelihoods, for example to work for the Bush administration at the time it would have been almost essential to be approved by the American Enterprise Institute in terms of Iv-B free market ideology, free trade and a commitment to deregulation. Anyone who did not agree as David Frum found out tended to be ostracized and lose their job so the system of learning itself had become an Iv-B competition to promote market competition, an atmosphere of deception where false confidence was more prized than skepticism, and careers themselves became highly leveraged so that economists became either wealthy as consultants or shut out and overshadowed by those who succeeded in a kind of winner take all situation.

In such an environment it would be difficult to speak out honestly against the system, in particular those with the most influence could only either speak in favor of the system that they were winning in or give up their winnings. This becomes a similar problem to Iv management in companies before the GFC, if they sounded the alarm in an opaque environment they were likely to be contradicted and ousted by competitors looking to get their jobs. In the same way the idea of competition as a cure for all ills became a path to success and anyone questioning this in the opaque bubble would be denounced and ousted by the others.

So the Iv economics culture of secret misgivings along with public optimism was chaotic as it was in R communism for fear of being denounced and highly connected with the kinds of Iv politicians being elected, the economic theory of free markets and the Iv invisible hand was supposed to keep making Iv-B businesses grow exponentially. Just as Iv-B business avoided I-O policing and denied liability for the GFC the Iv-B theorists in economics also defended their theories of an invisible hand that needed to be left alone against a transparent examination of their effects in the I-O marketplace of ideas.

## Usually though above these Iv economists are V economists who overshadow the Iv economist ideas like the V business men who use the Iv salesmen to try to create V monopolies. Their ideas on how to fix the crisis were to bail out the financial system and restore stability while those advocating an Iv strategy of competition and allowing the system to collapse and regrow were sidelined.

The ideas of bailing out the financial sector with government money or allowing them to collapse were mutually inconsistent with each other, usually the balance between this randomness and chaos is resolved in the I-O market. Neither though advocated stronger I-O policing to remove the Iv-B contagion because V economists looked at the V-Bi part of the economy and Iv looked at Iv-B with neither in this disconnect looking at the effects of deregulation on this crisis. Political leaders then would be surrounded by the wrong kind of advice that caused the problem while those with a more balanced color view of economics had been discredited in the highly competitive drive for tenure and positions in think tanks.

But even the politicians were often no better, those who succeeded in being elected were sometimes more Iv-B themselves such as with the viral growth of the Iv Tea Party or to some degree Neo Cons and the V Republicans trying to overshadow them and use their growth. Often this Iv politics like in economics relied on deception and secrecy, in economics this is called the invisible hand and in politics it was more back room dealing. It is important then to realize that Aperiomics is not about favoring any particular kind of economic or political theory but to show how each evolves in different parts of the color codes and then takes aim at others evolving elsewhere to either be at war with them or to form an understanding or compromise. This is not meant to be a criticism of V-Iv economists or politicians but to show how their color codes drive them to evolve various kinds of theories.

Even the public didn’t want a strong I-O police to resolve the situation, after the GFC they wanted the Iv-B boom to resume to get them out of debt or bring back their profits. There was so much deception and competition among all of these sectors of the economy that no one could successfully advocate more Bi transparency until it became obvious enough that the Iv-B collapse was not going to quickly regrow. Even in 2011 the desire to punish people who committed fraud in the system is having difficulty gaining traction rather than maintaining the deception of opaque banks being ok while continuing to use deceptive placebo like speeches to try to restore confidence.

Since no one really understood the secretive and deceptive Iv-B economy no one really knew why it crashed and whether it would regrow or not, years after the GFC the situation was in many ways as opaque as before the crash. With such weak I-O policing them the deception was so pervasive academically as well as economically that the prospect of further collapse was unbearable and so V economists and politicians overruled the Iv ideologies to create a zombie economy with bailouts instead. Using zombie economists and economic theory was used instead to arrest the decline and hope things fixed themselves before more awkward questions would have to be answered.

Against this process of continuing deception and hoping for the best, V-Bi in Biv and Y-Ro in Roy parts of the world economy demanded more transparency and honesty threatening vigilante style action, this was seen for example in Congressional Bi investigations with much anger directed at deceptive Iv and Oy members of Wall Street, reminiscent of the Ro Pecora Investigation under Roosevelt in the great Depression. The economics and political processes as well as the public attention to the economy demanding transparency remain strong creating more stagnation, the Iv-B parts of the economy want to hide their mistakes and former crimes while trying to resume the kind of growth they enjoyed and even blamed the V-Bi politicians and economists for bailing out the economy rather than letting it collapse faster as they argue it would have rebounded more quickly.

The V-Bi parts blamed this Iv-B boom for the crash rather than deregulation and want to do ever more Keynesian stimulus which was mainly creating zombies by propping up Iv-B businesses that were no longer viable or were obsolete by then. This disconnection between V-Bi policies and Iv-B laissez fair continues and is largely failing as first one is tried and then the other or both are tried together. This is like letting some businesses collapse with Iv-B policies while others are propped up as V-Bi zombies giving inefficient surviving businesses while sustainable Biv businesses are left with no resources or driven out of the market by crooks because of deregulation. This disconnect then may continue until enough of the world economy becomes Roy to center attention on actual economic crime to resolve the contagion in the system and allow healthy regrowth.

Often even the principle of honest debate about the economic problems is disputed because of the lack of I-O moderation as would occur in a debate. For the real value of bank assets to be determined they have to be sold in the I-O market with mark to market accounting, this has to overcome the idea of using placebo like speeches by politicians and economists that things are improving. For example it is not possible to inspire confidence to get business to invest again unless the situation is either really good for an economic revival or the urging of businesses will create a self-fulfilling prophecy as their desire to compete makes them fear to miss out on a reviving economy by hanging back too much. Often however these kinds of speeches can deceive businesses into overextending and going bankrupt while others succeed more by hoarding their money.

So to some degree this false confidence is tried as a political and economic strategy to cover up uncertainty about what is really happening, to do this it is necessary to weaken I-O policing as it might expose too much corruption and fraud in the system scaring off investors and making the placebo speeches ineffective. If then there is not the political environment to actually police the economy properly it may even be better to not try to encourage businesses at all. In this case there is only hope Iv-B parts of the economy have learned their lesson enough to moderate their behavior until the economy recovers and more effective policing can be introduced, if they realize the self-destructive nature of excess speculation then they might clean up the financial sector enough while the police gain in strength. More likely though a scarcity of resources will turn the Iv-B economy into Oy-R making it much more predatory.

To simultaneously expose massive fraud on Wall Street and then not police it just sends a message to investors in V-Bi to not do business there, so this transparency can having a chilling effect on a recovery.

The I-O market though can resolve this situation to some degree with police going after smaller examples of fraud to deter the large businesses and give the appearance of cleaning up the financial industry of contagion while masking how widespread it is. At the same time the bad publicity of this fraud in Iv-B makes V-Bi sectors of the economy cautious keeping them disconnected from each other, this is resolved in the I-O market by a commitment by Iv-B to honest business and perhaps accepting more policing voluntarily. For example the V financiers in Wall Street have the problem of either trying to keep derivatives unregulated outside I-O exchanges and not giving investors any reason to trust the system after it crashed, or allowing them to be traded publically and gambling that additional profits will come from the appearance of honesty they give. Better for them though is to give the appearance of honesty while using loopholes to maintain competition and deception as this gives more short term profits though it will probably lead to more crises. This is why the I-O police have to act like health inspectors, to use random audits to look behind the honest façade and deter Iv-B crooks from using this strategy.

It is important to realize the GFC was caused by a mathematical problem which permeated the political and economic ideologies as well as the businesses in the economy. No one is then at fault because the system will be sometimes unstable regardless so everyone in effect faced the same kinds of dilemmas and ensured the crisis would be as widespread as possible. The earlier crises in previous decades were then building up to this, spreading into more and more of the advanced economies not only in businesses but also in the kinds of politicians elected from the businesses donating to them and the kinds of economists and experts in all related fields who faced competition if they did not see the boom as mathematically required. The public also voted for the politicians, often deceptively bought goods and services from the Iv-B businesses, supported academia and their economic theories, and lived their own lives with more competition and deception as the economy mutated with ever more innovation of all kinds. Like a perfect storm then the only ones who could have warned against it were marginalized by the mathematics of the system itself.

This is not to say that Iv-B crises are all the same, but that they grow in different ways because of the path they can take in avoiding I-O policing or market scrutiny. If there is a way to grow in economic theory free from excess transparent debating of their ideas, such as in a think tank or having a separate Economics school like the Austrians then it can start there and then spread through devotees of these ideas. If the theories include an antagonism to I-O policing or direct claims that it causes problems then this causes the devotees to avoid policing even of their own field and when they are in a position to as with Greenspan to weaken deregulation they either do it or lose their place to someone who will in a Gresham’s Law dynamic.

They might also become politicians and spread these ideas in an unregulated way through the media so more people become elected with these beliefs as with Iv Ron Paul and the Tea Party. The tech bubble was different to the subprime bubble because each was under regulated in a unique way. For example the tech bubble was in the context of a general loosening up of I-O regulation under Clinton and this wave of innovation was seen as being useful to get the deficit under control and perhaps allowed to continue more for that reason.

When governments are short of money in a V-Bi stagnant economy then the Iv-B green shoots of a future boom might be seen as a lifeline they are reluctant to prune even though this Iv-B is more like destructive weeds than stable trees. Also the internet has grown free of I-O regulation and grew chaotically and secretively because of this with rampant pornography, stalkers, trolls and anonymous users of forums, etc which have slowly come under more control with a reaction by Bi communities to the crime involved with it. The internet like with mobile phones was seen as increasing productivity rapidly with this secrecy, phones for example enabled people to have far more secret conversations than before and this enabled more Iv-B deals to be made in business getting ahead of others who were not so mobile. It also led to a disconnect between this relatively lawless new Iv-B economy and the slow and ponderous highly regulated V-Bi economy and the perception grew from the exponential Iv-B growth of computer technology that there was something logical about this system because computers worked so well using it.

For example people have an impression computers are highly logical because they can do some jobs better than people can, their growth then and the rise of programmers who thought more like computers seemed to imply a better way forward economically. This new breed of entrepreneurs as coders who supported the Iv-B economy as good for themselves also believed they were transforming the world in a good way as has been seen in such organizations as Ted talks and Fora TV where scientists communicate how rapid innovation is doing much good in the world.

It is not the system however doing the good but that computers and related fields are rapidly evolving Artificial Intelligence simply because they have this potential in the nature of silicon to make computer chips, etc. Just because iron was discovered long ago and then many kinds of steel were made from it in technological innovations, it does not then follow that a political system or method of I-O policing of an economy is responsible for these innovations. The rise of computerization and AI is a unique part of human history along with other revolutionary technological discoveries and does not mean that all revolutionary ideas are good, the world discovered this for example with communism, poison gas, lead paint, DDT, Thalidomide, and so on.

Karl Marx was responsible for many good innovations as well as bad, for example helping to form unions, raising worker wages, improving working conditions, much of the welfare state, etc. However as these revolutionary communist ideas progressed they grew into R communism and this in turn inspired Y Nazism and fascism which led to World War Two and the cold war. We are more likely to be in the early stages of Iv-B growth of computerization creating many revolutionary changes with technology but also creating and widening cracks in the global economy and it is not understood what it will eventually mutate into. If it ends up collapsing Biv economies so much that it creates more Roy societies it may lead to another world war for example.

The financial bubble grew differently because the tech bubble exposed problems that led to increased I-O policing as well as more caution in the V and Bi sections of the community who became leery of investing in internet businesses. However as Ray Kurzweil points in the book Transcendent Man the exponential growth of computerization hardly paused in the bursting of the tech bubble but just grew in other areas, one of these has been in finance. It could even be argued that the GFC is the second tech bubble that burst because so much of the lending process as well as hedge funds was based on computerization and algorithms for speculating in stocks and bonds. To trace the growth of Iv-B then it is necessary to see what parts of the economy are poorly policed, don’t have police working proactively looking for contagion like health inspectors would, what is growing exponentially which is usually easy enough to work out from the media and scientific journals and even from the exponential rise in stories about some subjects, what areas are becoming so profitable that they weaken regulation with lobbyists, what areas are experiencing small chaotic collapses and rapid regrowth, what areas are drawing in more investment money which is arguably quelling chaotic collapses and building for a larger collapse later, which areas are tapping into new Gb resources either discovered or made more profitable with new technology such as with computing, advances in working out arbitrage for profits using computers, etc.

As of 2011 there is little regulation that came out of the GFC so these trends should be continuing on chaotically in secret probably connected directly to the GFC itself. For example the tech bubble bursting did little to slow the growth of exponential Iv-B computerization but did change its course because of the publicity that chaos shuns. So the publicity of the GFC would have altered its course so it would be growing in other areas still not proactively investigated for contagion like a health inspector would. Predictions for the future will be covered in an upcoming book but the media gives enough clues of this growing chaos such as in high frequency trading, money loaned by the Fed being used like a carry trade in global speculation, the rise of robotics in manufacturing starting to displace human workers potentially creating mass unemployment and cracks in V-Bi social safety nets, AI potentially replacing many jobs with a natural understanding of human language coming from the IBM Watson program winning Jeopardy, the ever larger internet businesses with ever more massive profits and valuations using exponentially increasing computing power and AI such as Google and Facebook, and so on.

These increases in new kinds of tech bubbles such as the sky high IPOs of Facebook and LinkedIn are a kind of localized inflation because of the Iv-B roots and branches feeding money into them. Other areas experience deflation from falling prices with technological innovation as well as unemployment causing B workers to compete with each other keeping wages low. Because so many V-Bi reserves of wealth were exhausted prior to the GFC there is little market for expensive goods and services except at the top of various economies where the Iv-B winners like the fruiting part of a plant made most of the profits from the boom.

Because of this it is difficult to see inflation being a problem in Iv-B except when localized bubbles might cause some commodities to rise as happened with speculation in the oil and gold bubbles. The oil bubble led to a general rise in costs across the US but this was so quickly followed by a reduction in people driving because of their lack of savings it relatively quickly collapsed for want of demand. While the current food bubble causing riots in less advanced economies is mainly caused by speculation as well as using corn for ethanol these effects should not be enough to produce a reduction in food demand in more advanced countries. Food then is unlikely to produce major inflation because people can often change to cooking more food at home than fast food outlets, this reduction in demand in restaurants however could produce collapses in the global economy like the oil bubble did with car sales and food sales along driving routes.

As various cracks in the global economy continue to occur it should be possible to trace these and follow to some degree how Iv-B is mutating, for example robotics causing unemployment would lead to a loss in purchasing power and strain V-Bi welfare reducing savings available for investment in countries with trade deficits. More cracks in the system can be traced at a lower level before they join up into much larger cracks by examining bankruptcy, mortgage foreclosures, those running out of unemployment insurance, increases in crime in some areas as B and Bi people are less able to protect themselves, consequences of reduced I-O policing in some states because of budget cuts, increases in forced sales of second hand goods because of financial hardship such as plasma TVs, increase in loan sharking, and so on.

To trace the widening cracks from these however it is necessary to randomly trace the roots and branches from people involved in these to see where they lead. For example tracing down towards B will see where the ultimate cause is a lack of Gb resources to create jobs. Tracing them up into Iv and V will show if wealth is not trickling down or there is a lack of refining capacity in business to improve Gb resources such as manufacturing jobs.

Those economies with surpluses then might be depended upon even more for V-Bi loans so that Iv-B bubbles can continue after quantitative easing is wound down in advanced economies. Currently this money is to a large degree being funneled with roots and branches into new Iv-B bubbles and missing the larger economy but it is also spreading and diffusing to some degree in V-Bi areas with stimulus spending. Protests against the poor returns from this quantitative easing and stimulus will either lead to their being overused to get some effect and creating larger Iv-B bubbles or their being reduced to save money and either collapsing bubbles or making them rely on the trade surplus monies and other funds from fruiting Iv-B businesses that escaped I-O policing after the GFC.

## For example the increased wealth inequality in the US indicates many people made a lot of money out of the Iv-B growth that led to the GFC and they will be looking for fast growing investments to run the same kinds of Iv-B businesses they were successful in before.

The effects of the stimulus and quantitative easing will then depend on how much of this money gets out of Iv-B and into sound businesses regulated with I-O policing. It is necessary to stimulate businesses by getting money into areas where the Iv and B branches have broken or died because of either collapses in the GFC or because too many Iv-B branches have taken away the capital and resources needed. Much of this can be done as in mercantilist countries by working out which industries are most likely to be able to export or withstand import competition and protecting them with subsidies, tariffs, government contracts, etc until they can compete on their own.

It is also necessary to reduce the predatory exchange rate manipulations of trade surplus countries to steal manufacturing jobs, if this cannot be done then equivalent tariffs linked to the exchange rate might be designed to fluctuate so these exchange rate manipulations are made ineffective. As their exchange rates rise then the tariffs might automatically disappear. Some industries that are marginally viable might be propped up like zombies with subsidies because they may add more to the economy with wages and supporting other industries than the cost of the subsidies because they reduce other payments such as for unemployment and food stamps. The government then can work out its taxes and expenditures like a business, if it can make a profit subsidizing some businesses with increased tax receipts or reduce welfare later than it should do it.

If it can lose a controlled amount in this way in depressed areas then this becomes a kind of Negative Sum Game stimulus where some industries might become partially Roy by the government or a consortium of private and public investors share in the profits from it. The government might even pay out dividends to Iv agents and investors who find deals like this that only lose say 5% a year on invested capital like a product might lose money for a long time to establish a market. It should also look at supporting local government services that produce a profit from avoiding chaotic collapses such as police preventing theft, fireman preventing property damage, free clinics preventing the spread of disease, and so on.

By looking at this like a business it encourages some areas to regrow in a sustainable way into Biv so private businesses can join in later. This is an established part of many governments, for example it is common for local governments to pump some money into a poor economy with a bus service which helps people to get to work and so delivers money back as extra tax receipts. A similar process of stimulating the economy can occur through the earmark process in the US if it is I-O policed.

Such interventions in the global economy are becoming more common over time, Mercantilism for example spread from the Germans after World War Two to Japan and then became a model for China. The US has its states compete with each other in subsidies for business so this acts as a kind of Mercantilist strategy against each other. In some ways the US has the equivalent of different exchange rates between some states because the federal government redistributes tax money to subsidize some states over others. Because of this the ones getting more money are able to be more competitive, for example they might be able subsidize some industries more or keep local taxes lower.

Exchange rates then can float freely or if they are fixed then money might flow from an overvalued currency to an undervalued one until this forces a revaluation. However in the Eurozone a revaluation is not possible since each country is using the same currency, they then face the problem of having a trade imbalance they cannot resolve by floating their currency. One way then is like the US model where some states subsidize each other, for example it might be worked out the relative trade imbalances of each country in the Eurozone and then that money is paid directly to the ones with deficits by the ones with a surplus. This acts the same way as a devaluation, the ones receiving the money might be able to drop taxes on business and become more competitive that way.

If this trade imbalance widens then the subsidies continue to increase, the countries with trade surpluses then also have to raise their taxes to pay for the subsidies and also it negates the strategy of increasing productivity to gain an advantage. For example Germany might have to pay subsidies to Greece and others allowing the Greeks to repay some of their debt without reducing and renegotiating these loans since it was the trade imbalance that caused the problem in the first place. This then would be the same as leaving the Eurozone for the Greeks without the economic dislocation.

The European Union is also highly interventionist overall though it has free trade between its members. The mixed economy of Biv business and the Roy welfare state has extended over time to an Iv-B laissez faire part of business disconnecting from the more traditional and insurance based V-Bi sector. Overall this mixed economy has been more successful than the Roy systems of communism and the pure Biv systems of capitalism tried in Argentina for example as well as Biv shock therapy in Russia which led to collapses. The problem now is these different sectors of the economy are being torn apart from each other by the shearing forces of chaos as I-O policing weakens with some winning the Iv-B competition and gaining trade surpluses.

Some parts of the global economy then work well but other parts are mired in a near depression, this is not much different from some parts of third world economies such as Egypt and Pakistan where unemployment and a disconnect from the innovating world economy has been the case for decades. The difference now is parts of the US and Europe are in the same situation, this is because economies are more disconnected from each other with this Iv-B innovation creating more winners and losers. There is also a lack of I-O policing of international trade which allows more deceptive ways to win this trade war.

With I-O deregulation this same process is also occurring more inside countries where some areas are like a first world economy trading with overseas economies while other areas which are more like the third world missing out on this trade and having a trade deficit with the rest of the local economy. With welfare drawing threats of being cut this situation becomes analogous to international aid to the third world where the stimulus efforts in poor US areas is compared to the failures and wastes in internal aid in Africa for example. The desire to reduce welfare to these areas such as with pensions, unemployment insurance, and food stamps in the US arises from the highly competitive nature of Iv-B. If a country can reduce its taxes by lowering welfare for example it can compete better with other countries who then might have to lower their V-Bi safety net as well leading to a new competition where businesses are no better off but the increasing chaos in the systems from people falling into the cracks in the safety net make each country more unstable.

Such competition then is just like reducing insurance premiums to save money in housing which is successful until there are fires or storm damage. The reduction in V-Bi reserves then is reflected in lower assets people have, this just means that interruptions in the economy from a recession or external shocks just create far more waste of Gb resources than if they had more savings to tide them over.

Much of this is driven by Roy chaotic predatory greed, in a Biv system many people are content to a large degree with the level of wealth they can accumulate without Roy crime such as a car, home, steady job, etc. Others however get caught up in the Iv-B innovation making them greedy for the newest things, the internet for example created some billionaires and then many businessmen dream of being billionaires even though this is unsustainable for most in the world economy. Hedge funds made so much money in the 1990s that this became the new benchmark of success causing more college graduates to be in financial engineering.

So this Roy kind of predatory greed cannot be satisfied by any kind of Biv economy, no matter how much money is accumulated in this Iv-B mutating chaos people either cannot stop because of relentless competition or because they feel left out if they do retire. This is like Oy predators in the Roy animal kingdom where they go after any R prey they can get, sometimes burying it for later such as with foxes and chickens, the equivalent of wealthy people saving ever larger amounts of money.

Like a treadmill going steadily faster the rewards of Iv-B chaos seem to be more addictive and it loses connection to V-Bi where the definition of success is stability and insurance against disaster. This can also drive bubbles as seen in the subprime crisis where B workers wanted more and more from speculating in Iv-B rather than saving up to pay off a home and be secure. Businesses wanted more ostentatious emblems of success like a private jet, salesmen sometimes wanted to spend more money on wilder parties. Much of this is the addictive nature of chaos itself, for example businesses compete with each other to make sales by any means when there is no I-O policing and by honest means when there is.

So the more addictive a product can be such as loading up food with salt and sugar when not policed the more they sell regardless of the cost to the health of their customers. Cars and the latest plasma TVs became more addictive with new features because they keep mutating until some variation becomes viral and the must have thing to own, this caused B workers to speculate unsafely in mortgages to get them. Advertisements and even news in the media without I-O policing of their honest and transparency can become highly deceptive trying to motivate consumers to buy regardless of what it does to their financial safety.

Usually this kind of appeal to consumers is in control with I-O laws on misrepresentation, food labeling laws, etc but with the general weakening of I-O regulations caused by the exponentially increasing Iv-B computerization this spreads more deception everywhere. Paradoxically then Iv-B produces more wealth in keeping up with the Joneses but often deceptively so that for example people became more obese in the US from the deceptions of fast food while being short of money from the GFC,. The binge on consumer goods left many people destitute after using their homes like an ATM by refinancing with subprime loans, and so on.

Just as Iv-B chaos reduces the stability and size of various businesses it can do the same with countries and so be systemically destabilizing, this can create trade imbalances and even Empires to fall. For example since I-O deregulation increased under Ronald Reagan in the 1980s the US has become more unstable as a kind of economic Biv and military Roy Empire acting like a global marketplace as I and policeman as O. This led to an increase in Y versus R wars such as fighting R Al Qaeda terrorists using Y large scale and expensive military to occupy more countries such as Iraq and Afghanistan and spend more bolstering others such as Yemen, Egypt, and Israel.

While this was happening the trade wars increased in ways that drained more money out of America than these military wars. The result of this Iv-B competition in so called free trade was a massive transfer of wealth first to Japan, Taiwan and South Korea and then to others such as China and even Mexico. Since there are still other countries with the potential to be a military threat such as Russia and China the destabilization of America’s O policing role internationally is reducing its Y-V Empire.

This was one of Lenin’s major goals after taking over R Russia, he understood that the world was dominated by many Y-V Empires such as the British, Dutch, French, German, Austrian Hapsburg, Japanese, American, etc and so he aimed to use R communist insurgencies to bleed these Empires with the high costs of controlling the R contagion just as Bin Laden aimed to do. Lenin also encouraged separatist movements in each of these Empires, this led to most of them breaking up and so this changed the world into being more Iv-B as competitors rather than alliances of countries in Y-V Empires with a relatively stable Bi middle class. In the same way the global war on terror against R Al Qaeda has been expensive for the American Empire just as trade deficits have weakened it economically, this results in ever more pressure to pursue an isolationist Iv-B foreign policy rather than policing the world and stopping conflicts such as Israel versus Iran and Pakistan versus India escalating into wars. In many ways then the US policing acts as a complement to the UN O peacekeeping.

This same pressure should then reduce more V-Bi international alliances, for example Germany keeping wages low has resulted in huge trade imbalances in the European Union which is chaotically exerting shearing forces threatening to tear it apart. It is possible then that the V-Bi tendency for alliances dominating world politics will keep weakening and more countries will start acting as competitors resulting in more collapses. This occurred in the Great Depression for example when protectionism became a competitive tool and economies used them to try to minimize losses at each other’s expense in a Negative Sum Game, the end result was a major collapse of world trade.

This is different from the possible need for I-O protectionism to reduce global trade imbalances based on a just I-O market, for example Japan and later China used protectionism to build industries that then dumped products in the US market in order to bankrupt some of their manufacturing base so they could build these same products to export to the US and recoup the money lost in dumping. When this becomes a competition to hurt competitors rather than a more honest market as the WTO or World Trade Organization is supposed to do then it can become a kind of Roy trade war and a Negative Sum Game.

For example one country might raise tariffs on some goods expecting its consumers to lose because of higher prices and to lose when other countries also raise tariffs. It may calculate though it loses less this way than with free trade continuing to decimate its manufacturing base. This happened in the Great Depression with the Smoot Harley Act in the US, the British Empire resisted this idea and didn’t raise trade barriers against the countries in its Empire but still suffered with the resulting trade imbalance internally. In many cases this I-O weakening will be resisted, it mainly happens in areas that are growing exponentially and creating too much Iv-B which weakens the I-O policing around it. This happens much less in I-O economic policing of the world such as with military hardware though this is also growing exponentially in some areas such as robotics in the military.

However because of the domination by the US military this makes it difficult for there to be substantial competition in military hardware with other countries. This is then restricted to small innovations in such as fighter plane technology and the potential growth of nuclear weapons in some countries such as Iran. World food shortages are exacerbated to some degree by Iv-B quants using computers to speculate in so many markets, this has driven up the prices of oil and food to higher than they should be. However because this is not causing serious unrest in the world such in the Arab Spring the speculators are not being strongly blamed so far. While computerization and other technological innovations are driving Iv-B competition destructively between many economies there are still enough traditional economic connections between them to resist trade wars and the European Union will probably survive with only losing a few countries.

The main chaos in the global economy exists in a more abstract sense and best grows in a virtual environment such as electronic banking, speculation in the money grid, and code in the increasingly interconnected Internet with business and home computers. Both of these have now had a bubble, first in tech and then in the money grid, both had a collapse though they are still mutating with little I-O oversight, people are however generally more wary of investing in both now without more transparency than they wanted in the previous booms.

Social networks on the Internet are less unstable now because they are more V-Bi because people now usually give their real names and details rather than being secretive and deceptive. This may then indicate the Internet is maturing into a more stable network of trees in a global forest but the rapid Iv-B mutation of code and hardware may destabilize it again such as with severe zero day infections shutting down parts of the Internet. The GFC in many ways failed to create more I-O regulation or criminal charges against financial businesses so it is trying to rebuild more Iv-B bubbles in areas still unregulated or hoping to lure investors back in with profits to erase their previous losses.

It remains to be seen then as to how unbalanced I-O policing will be globally from these exponentially growing technologies. It may be that if this Iv-B growth is recognized as being hazardous then future crises may be easier to control, one problem is though that the pressures from the various colors would remain the same. In effect then this I-O policing might still wax and wane even if the results are known in the long run because different colors have different agendas, V for example aims to profit by fruiting and flowering like a tree as its time of profits. It does this like a tree in the sense that even if the economy will go into recession this is like plants dying off after fruiting and so V people are not deterred by recessions from seeking too much wealth at times.

Iv salesmen and agents are the same, even when people here could see the crisis building prior to the GFC they could not stop competing because of the nature of the system. Bi people have a tendency to be complacent and usually only get upset enough to change things when a crisis is already happening and B workers are so competitive with each other they usually have no chance to slow down. So when the I-O police weaken even if just by being caught flat footed by new criminal and civil infractions of the law the other colors cannot replace their influence. In this sense then even if this theory of Aperiomics was generally accepted I-O policing would still weaken at times and cause crises, though perhaps not as bad as those caused by the ignorance of the value of I-O regulations. It should be realized though that at the heart of the movement for deregulation there were many who knew the bad effects it would bring and nonetheless still advocated it for the short term profits they wanted.

This represents a brief introduction of the causes of the GFC according to Aperiomics but to understand this fully it is necessary to go through the actual history of the events leading up to it. The Tulip Bubble was an example of this Iv-B process at a much earlier time, this shows it is independent of technology or even political ideology. Then the book goes through the various crises such as in Mexico, Argentina, Asia, the tech bubble in the US, etc leading up to the events of the GFC and the aftermath. One problem with this kind of historical analysis is that the problems seem relatively clear in retrospect but this is because they eventually resolve themselves in the I-O market and policing. The secretive and deceptive behavior in Iv-B is brought out by Iv and Oy whistleblowers who see more profit in divulging what happened once the system has collapsed because the secret information is of little use then except perhaps for plea bargaining or publishing for profit.

This gives the impression that the next crisis will be easier to predict as a result of this analysis in hindsight but the nature of chaos is that it grows secretively and deceptively, if there then is nowhere for this to happen then it will not grow until the I-O vigilance has been lured into complacency again. The only solution to this is a regular proactive program like the health inspector of examining the economy for cracks, also like checking airplanes and bridges for metal fatigue. It is then the nature of chaos that it is never seen coming, rather it spreads secretly inside parts of the economy where it cannot be seen or where people profit from keeping it hidden.

This is why the Great Moderation happened, the I-O regulators were so vigilant for so long that the Iv-B chaos was under control for decades giving this false impression that it could no longer manifest. At the same time there was enough chaos as growth in the economy to just be seen as innovation getting the world out of the V-Bi stagnation of the 1970s and moderating inflation with constantly improving productivity from early computerization and other technologies. So this indeed appeared to be a new kind of economic environment where because technology seemed to be giving so many advantages it was relatively benign, however as Ray Kurzweil points out the exponential curve appears for a long time to be smooth growth and in a short time starts to change its growth quickly relative to events.

This more rapid growth then caused cracks in the global economy because other parts were not innovating and so were becoming more and more incompatible with this exponential Iv-B technology. Most people have seen this for example with trying to teach elderly people to use computers. So predicting a crisis mixes up cause and effect, the crisis is an effect of a lack of vigilance so deciding to be vigilant in watching for one to develop cannot work unless whistleblowers are sidelined and ignored as part of the process. Of course few people would have acted the same if they knew in 2000 the GFC would occur 8 years later, at any point prior to 2007 for example almost anyone in business or the government would have changed their behavior if they could have seen the chaos, the only ones who did foresee it either shorted the market to make it worse or fruitlessly tried to warn others as Iv whistleblowers.

Another problem with Iv-B is because we usually see it first as smaller amounts of chaos we tend to assume that it is a small problem, but this contagion is like cockroaches where as the saying goes if you see one you can be sure there are more. In the same way chaos grows in secrecy and deception so if people do happen to see signs of it or it is only appearing in weaker or smaller economies then it is very unlikely to be contained there. This is because economic theory has tended to be fairly homogenous in the last 30 years about deregulation because of a growing Iv-B and V-Bi disconnect. Many developing economies for example have had Iv-B deregulation forced on them by the IMF to appeal to investors looking for fast growth and not caring about sustainability because they can get out before the crash. It also comes from conditions laid down by the IMF where privatization reduces V-Bi reserves and forces parts of a poor Roy economy into becoming Biv prematurely which is less efficient. They also increase competition destructively in these economies trying to get an Iv-B rapid growth to get their money back quickly as well as for other investors. So as the stock and bond markets have become more Iv-B because of a lack of I-O regulation in advanced economies they also seek out and reward in the short term economies that develop in this way, this then is how chaos creates ever more connections between the different countries.

These smaller chaotic collapses affect countries differently according to if they have a trade surplus or deficit overall, if the surplus then they have more money to absorb the small collapses created in their economies but they can also tend to prop up the areas affected by these collapses, create a network of zombie businesses and thus enter a V-Bi stagnation as their Iv and B chaotic growth was been broken by these overseas collapses. If they have a trade deficit these collapses can be more dangerous because they have fewer and fewer reserves to quench the chaos with randomness, they might then allow more collapses in their economies and these can either spread more cracks leading to a major collapse or in some cases allowing smaller failures can stop these failures happening when they are much larger.

For example the Japanese and later the Chinese caused many small collapses in US manufacturing with Mercantilism and their protectionism behind trade barriers, but these businesses were rarely propped up by the US as zombies or were protected by the I-O police, they then either learned to survive and adapt or went under. This led to spreading chaos in terms of unemployment initially masked by people speculating in real estate and taking jobs feeding on this speculation such as real estate agents, builders, and loan brokers. Because these weren’t sustainable jobs then they were just more hollowing out of the advanced economies and when this was finished they joined the ranks of the real unemployed.

If however instead of protecting some industries with tariffs or demanding revaluations in some currencies they propped companies up with subsidies then they might create zombie industries that can become inefficient like those behind tariffs can. When an industry is only surviving through protectionism and knows it cannot compete without it then this is the worst of both worlds, it costs more for consumers to buy goods and also has no prospect of surviving on its own. However this can still be better than having no industries to employ people, to allow companies to go bankrupt because of imports it is important that the competition is fair or it is economically wasteful.

These protected industries are like plants in a forest that might only survive a contagion such as weeds of fungus by someone coming in and removing it, or in building a wall to keep it out. The government can often help in these situations by approaching them as a profit center, if businesses can generate more tax revenue by being propped up then they might be worthwhile. Also sometimes the subsidies generate more multipliers or Iv and B in depressed areas and give rise to other industries that might compete without protection. They might also provide enough tax revenue back on wages to be comparable to welfare expenditure. Random audits would be needed to determine how cost effective subsidies and protections are as well as how honest the competition is.

Usually this issue is more clearly seen in Roy than Biv, for example small skirmishes between countries are carefully watched by the advanced economies to stop wars breaking out if possible, this is thinking like an O global policeman. However in many areas there are serious I problems where the market is not being policed civilly such as the tragic history of exploitation in the Congo first of rubber and now of many minerals, similar to the blood diamond issue in other parts of Africa. It is however not the exploitation of diamonds in the I market that is regarded as the problem but the warring between governments and rebels financed by it that O such as the United Nations try to stop.

In effect then criminal law infractions are generally understood and policed but civil law infraction are sometimes dismissed as somehow the free market in action. Often though this Iv-B deregulation and weak I is feeding the O need for policing because Biv colors are overtones of Roy. For example if companies are exploiting and ripping off the Congo financially then this is a weakly policed I civil market but this becomes tied up with the incursions from Uganda and Rwanda for example and they become a concern of O. The two are so intertwined it is almost impossible to view them as separate issues, this is because colors tend to link particularly in areas where there is Roy scarcity and Biv abundance around mineral deposits. If these areas could have as much an International Civil Court in the Hague as an international Criminal Court then many of these problems could be resolved, there would be less of a need to be watching crimes against humanity unfold.

This then is why many areas become trouble spots, they have some Gb abundance such as with oil in the Middle East and then an overreliance on watching for Roy wars and terrorism developing rather than looking at the civil law reasons for the problems. Granted this is often by design, V companies try to make money by weakening the I civil laws in these markets and pay B workers and countries as little as possible. In return they get more and more trouble from R terrorism and insurgencies, these can quickly cost more in military aid than the companies are making and so they are often benefitting from a state Roy subsidy of their Oy predatory business because of Y-V parent company ties to the government.

For example Iraq is said by the economist Joseph Steiglitz to eventually cost over three trillion dollars compared to much smaller profits by the many companies that were trying to get business there. Uncounted more trillions have been spent in the Middle East but very little on trying to set up a workable civil law as I even if dictatorships are still encouraged because of the difficulty of having democracies in Roy countries. It may well be if these economies are strongly I-O policed then many companies and their parent countries would make more from the growing economies than they make corruptly now, this is because of the inefficiencies in the market introduced by the Iv-B and V-Bi disconnect.

The problem though has been getting worse in the last few decades because of the general weakening of I-O regulation in advanced economies, this led to more Iv dominated business trying to make money out of poorer nations with Biv privatizing Roy public utilities like water and electricity with bribes or using the IMF to compel this privatization then putting the prices up, loaning money corruptly to Roy dictators to siphon off Iv commissions as the money is often taken by politicians and cronies going straight out to tax havens, getting concessions on mineral rights by corrupting the governments, etc.

Much of this has been going on for centuries of course, it is in some ways the essential nature of colonialism and imperialism but there is now more of an economic theory of Iv-B deregulation behind it rather than admitting it was exploitation in the past. In some ways this is also a kind of isolationism where the US and others tend to pull back from involvement in some countries as an overt economic Empire like the Roman Empire was and are concentrating more on military Roy aspects instead. This then may be another sign of decline as much of this exploitation is from companies that don’t directly benefit the US Empire as they pay little tax and often have political influence to get the military to support their industries in a different kind of military industrial complex.

## It would be interesting if this was a characteristic of declining Empires in general, to become disconnected from actually profiting economically while still prevailing militarily as such an Empire would eventually become too expensive to maintain.

It is important to realize though that O policing has not historically been obvious to people as a solution to political and economic problems especially in wars. For example in World War One and Two there was very little agreement between the warring parties as to who was right and wrong, both sides were often guilty of taking advantage of weaker countries. For example the British Empire in World War One used the war as an excuse to try to break up the Ottoman Empire, Germany in World War Two had little sense of right and wrong when it acted like a predator against many other races as much as they did with the Jews, the Polish for example were vary savagely treated as were the Ukrainians when they initially often thought of the Nazis as liberators from R communism.

Towards the end of World War Two Russia took advantage of the situation to spread communism like a contagion and set up the Warsaw Pact. So while we currently are in a time where I policing is weakening, perhaps because of rising poverty, this strong and moral attitude to O world policing might well weaken as well if there is enough of a continued economic slump after the GFC. This might lead to countries rationalizing all kinds of grievances as an excuse for war. Most of the advanced economies have not really changed that much since the times decades ago when they had a much less principled opinion about war and exploitation of other races, for example each Empire in World War One had exploited their colonies savagely at times for profits. It is only now because there is a higher percentage of Biv economic activity that many more see international O policing as necessary but the world’s population is far bigger now then it was a few decades ago and so there is more of a chance of Roy economies starting wars without the US as an I-O policemen if the technological innovations falter as they are already doing with food prices for example.

The problems around the world can also be seen like a kind of froth or foam of smaller Iv-B bubbles growing and collapsing, the larger more advanced economies seem more stable co pared to this but because they are becoming more fractal this connects the GFC to happening like the smaller crashes but less often. For example the Iv-B connections between economies are constantly growing because of the current belief in deregulation and also because the internet and other network technology is connecting more with roots and branches. Because of this smaller chaotic cracks appear which we see as worrying news around the global economy, instead of ignoring these until they became a full blown collapse as in Mexico and Argentina in 1990s for example people are now more panicky about the cracks they see developing such as in the Eurozone.

Iv and B people are naturally more timid in their actions because they compete with each other having few reserves and so the fastest into an opportunity and the fastest out of danger will generally be most successful. Instead of ignoring these cracks they are now announced in the media because they drive ratings and this profits, this tends to scare Iv and B businesspeople nearly every week as of the end of 2011 and so is a strong dampener on economic activity. For example it is hard for banks to be confident about investing in small businesses when doomsayers, sometimes perhaps associated with short sellers trying to drive down prices, are predicting economic collapse. This is also the Iv-B system in reverse where scaring others to leave economic opportunities might give someone a competitive advantage. This is like in the Roy animal kingdom where discouraging other Oy predators can leave an animal more food.

The problem however is not the lack of confidence or the panic but the opacity, investors still cannot see what is going on and there is still little real assurance that economic crooks will be deterred or even investigates let alone prosecuted by the I-O police. So just like with subprime lenders that sometimes were fraudulent and left people with near worthless bonds with the belief in Iv-B deregulation still prevailing there is no way for investors to be sure of safely investing. Opacity however is a deliberate tactic in Iv-B just as not seeing the cards is a necessary part of poker, if this opacity still persists then it means someone is using it for a competitive advantage or they would all agree to make the situation more transparent.

Much of this is compounded by economists who give interviews with contrary advice to each other often looking for a competitive advantage where they get profitable publicity, some say there should be a massive stimulus to the advanced economies regardless of debt, others say wages need to rise to stimulate demand regardless of competitiveness with economies like China, some say wages and the welfare state must be reduced, and so on. To make sense of these contrary views requires a way to unify all these observations into a complete theory because each of these are true in some way. For example wages indeed to need to rise to stimulate demand, this is like saying that B tree roots need to get enough of the total nutrients to keep growing or the whole tree becomes top heavy and can collapse.

However with the global economy and free trade in effect there is a larger tree stretching from China with B workers there, the Chinese and others can then take over much of the operations of this global tree and simply leave out workers in advanced economies. There is nothing new in this, many countries in the Middle East and Africa have high unemployment because of their being uncompetitive and being left out of this global tree. When the same occurs to the advanced economies something must be done about it or the income from manufacturing will continue to be drained away with trade deficits.

So this creates a paradox of wages needing to fall to be competitive with such as China, this however creates a lack of demand in the advanced economies that makes their welfare system unaffordable and people stop buying goods and services. To get around this one can assume the problem is temporary and just needs a stimulus, the equivalent of people living off savings while they are looking for work. It is also like forcing blood through the circulatory system with a shot of adrenaline or sap through a tree to keep the system working because if this circulation stops then parts begin to starve as they use up their reserves and can collapse permanently.

It is also like zombie economics because just keeping the circulatory system going does not solve the problem of why the patient is unwell, to fix this the contagion has to be identified and removed if the patient is to recover and not need this stimulus. This is where the I-O immune system comes in, only by these regulators going through the whole economy and finding where the contagion is breaking criminal and civil laws can the situation become safe enough and transparent so people can do business much like cleaning up a city at night can allow people to safely go out to restaurants and bars. For example it may be that the advanced economies have to protect some strategic manufacturing industries that give a high number of jobs compared to a small rise in the costs of goods compared to importing them. For example a manufacturing industry might make a 10% profit in an economy and employ a million people but go bankrupt because imports are 1% lower in costs so consumers move to buy them instead.

Currently because there is no real will to clean up this financial contagion, with the in effect bribing effects from tax income and campaign donations to politicians the global economy remains on life support. One problem is while the system was falling apart with cracks it appeared as though it could prosper with this contagion and like a person used to eating bad food and drinking without consequences there is still a perception that corrupt business as usual will continue to work because enough people work in corrupt industries to lose money if they are cleaned up.

This is like for example a Y mafia community where so many are associated with crime and a city being governed by the mafia that people fear the economy would collapse without it. In the same way Y military companies might be so pervasive in a Y-V military industrial complex along with fighting small wars and overseas bases that it seems the economy would be hurt without it. In the same way the financial sector seems to help GDP growth even when it is often destroying companies, states like New York and the City of London might lose so much revenue from policing the financial sector that they leave this plundering to continue. However without random auditing and using whistleblowers it cannot be determined what parts of the financial sector add value and which parts cause problems, not fixing the problem because of a fear of using the I-O police then is another vicious Iv-Oy circle caused by a rightward tilt of the police. For example the Y mafia city mentioned earlier cannot be cleaned up by the police because too many are corrupt, also the taxes in a city like this would tend to be directed to keeping the police with this rightward tilt like a Y-V Empire that is self-perpetuating.

There is plenty of evidence where this weak I-O policing causes stagnation in many developing economies, for example this corruption might kept some Bi-B areas poor with high unemployment and poverty because of Iv and Oy crony capitalism. Often they can reach an equilibrium where as long as V-Iv are not corrupt enough to cause a revolution or too many riots in the streets then the situations can seem to persist indefinitely if the country has some Gb resources to use up. Usually then the system has many cracks which can cause it to collapse in a revolution if they are widened too much by extra corruption much like third world buildings barely staying up with structural cracks as long as there is no external shock like an earthquake.

One major chaotic crack such as 9/11 should not affect an economy too much because it cannot easily penetrate into healthy areas with reserves of Gb resources to ride out the tsunami like effects of it. For example if 9/11 had occurred in the middle of the GFC then its effects would have been magnified because it would have created even more tsunami like waves and panic, toppling more banks and businesses. When it happened though the tech bubble that had burst recently but the economy had already showed the contagion was not spreading elsewhere. So a previous large chaotic crack or collapse not spreading like this indicates the economy was relatively free of being dangerously hollowed out then, so 9/11 had a more limited effect. It may be though that much of the economic effects of 9/11 were from the cracks that came from the bursting of the tech bubble before they could heal substantially.

This can be like someone getting injured a second time before a first wound heals, when the system senses these cracks in itself it tends to try and heal from it by moving less much like a person might move more gingerly after falling over.

For example the GFC has led to a time of flighty investors, a great deal of soul searching by economists and questioning of market based economic theories, more criticism of politicians than they might deserve in a difficult situation, second guessing of economic policies like the bailouts, complaining of poor I-O regulating after the GFC, a fear of doing too much as it might lead to further collapses like a reluctance to use more stimulus funding, etc. This sensitivity to changes can indicate a weakness from chaos that is still increasing somewhere like a contagion still making the economy weak, or it might be from a reluctance to do much while reconstruction is fixing this hollowing out like someone convalescing after an illness.

Some areas of an economy will have had more contagion than others and so will have collapsed more, this will have created more mutated Iv-B businesses and investments that spread into other areas that are now ailing and might either be supported as zombie businesses while they recover or they could be let collapse. For example the financial industry and other more abstract mathematical parts of the economy had this problem because they were more and more just numbers in bank accounts rather than real cash. Houses may have been less abstract as real assets but usually loans and wages to pay them were numbers in accounts rather than actual money held or checks written. In this sense the money grid was like computer code, or like data in a database and what happened related in many ways to a computer being infected by a virus or a network with Trojans, etc.

Other parts of the economy were more traditional such as shops and manufacturing jobs and while these experienced some mutated Iv-B business models there was more common sense and understanding in them because people could still use their judgment. By contrast though the mathematics of the financial system can become incomprehensible because no humans can follow the movements of money and more than they could follow the individual drops of rain in a hurricane.

Iv-B economic infections though have been mutating for centuries and are at times held in place through I-O policing but this often fails as in the economic collapses around World War One and Two and with the Great Depression. The system is not likely to collapse because of the growth of computerization because of the inability for people to understand the economic system as well as they used to, this is another kind of secrecy and deception where the system becomes so complex that it becomes incomprehensible whether there is deception or not.

The color codes are becoming more abstract as well and so the I-O policing in the system can become more like AI and more abstract as well. For example with high Frequency Trading of stocks currently the Stock Exchange is working on policing transactions in effect in microseconds to pass them through filters and a kind of AI policing to prevent market meltdowns. This might work well and lead to more comprehensive I-O programs that become like virtual regulators of banking, business, speculations, etc but these will still experience the same pressures as I-O human police do and will sometimes be weakened just as with I-O antivirus programs and spam filters for example. When I-O police themselves become computerized and incomprehensible except to other computers it might be impossible in principle to see if they are corrupt or not, even working more for themselves than humans whether overtly or just as color codes evolving a machine life form.

More people are now wondering about with the rise of AI how a kind of Terminator like outcome can be averted and this usually centers around how to police it or how to add a kind of morality into computer programs much like this I-O policing of computerized stock trading. In effect then this adding of a conscience into computer programs will be a kind of I-O circuitry and will lead to robotic policing and soldiers as well as programs already used to automatically look for suspicious financial transactions with money laundering, insider trading, Ponzi schemes, naked short selling, working out who to audit for tax or financial irregularities in public companies, and so on.

In the same way though these computer programs will evolve more complex and deceptive Oy and R predator and prey relationships as they are doing now with quants designing trading algorithms for hedge funds and hackers creating viruses or breaking into computer systems for profit. This is like in economics theory where arbitrage is described as being like piranha catching small prey, small profits are captured where prices for the same stock or bond might be slightly different in exchanges. This will then lead to investing ever more amounts of money into developing predatory programs to catch these ever smaller and fleeting profits like an R prey going extinct, also to create other programs to defend against these predatory trading algorithms.

For example these programs not only look for profits from less savvy investors must they must also avoid losing money to those higher up on the food chain with smarter quants, faster and larger computers, and those being closer to the stock exchange getting orders in faster. Adding O policing to this will essentially cause this to evolve itself into a Roy ecosystem where Y quant created programs prey on those programs which are slower or not operating as a team like Ro. Also some programs will act like R investors by looking to buy into talented companies which are like V with flowers and leaves which these R investors feed on. Then other programs will try to catch them in trading by deception as Oy, with some O policing with other programs to domesticate this.

## The tendency then to create a complete ecosystem even in the money grid and computer programs also extends to all parts of societies so in effect most people end up as part predator and part prey in Roy aspects of their lives and also part branch and part roots in the Biv aspects.

For example a salesman might act as Oy sometimes and rip off R customers but sometimes he will get ripped off by other salesmen or even be violently robbed by Y gangs. He could also get outwitted by R clients such as by their taking his goods and not paying for them. An economy then can have lots of issues that are like shades of grey where each person is sometimes winning in some areas and sometimes losing in others. A B worker might have gotten a subprime loan with no income and been lucky enough to sell out before the GFC and then got ripped off in Roy with the stock market by coming up against these quant created AI programs. He might also then have gone bankrupt and ended up keeping the goods and services he bought on credit and so came out ahead in that way, then with the general GFC might have had his house robbed by Oy petty thieves.

The situation in the economy then is usually very complex and when it is a marginal society, which I refer to as one which has a lot of Roy as well as Biv aspects to it, there can be a lot of collapses and regeneration going on. This can be seen for example in some suburbs might have a renewal where added shops and road works might attract a wealthier clientele or house buyer, other areas might collapse into a ghetto causing the flight of wealthier residents.

The situation is also complex in nature, for example Y predators like lions or hyenas might be infected with R germs and fleas and succumb to them but also kill R animals like gazelles. In Biv forests animals might attack the B roots like an R contagion, there might be fungus attacking trees, strangler vines might be dragging down other trees, and so on. This can make the economic situation seem hopelessly complex and predicting economic downturns like trying to predict next year’s hurricanes but this is not so, the color codes can differentiate all these influences so the system can be understood.

This need not mean anything can be done to avert an economic collapse however, if the I-O police are ineffectual from corruption for example then it is unlikely knowing this will cause the corruption to somehow stop. It may be though that if accurate predictions can be made in Aperiomics that some colors might alter their behavior to prevent an overall crash. Others however profit in a calamity and so only I-O policing is likely to stop them.

Probably one of the best illustrations of this situation is the malaise affecting a declining Empire like the Roman Empire, the Byzantine Empire, the British Empire after World War Two after it lost most of its colonies and had war debts, and perhaps the US to some degree with its current trade deficits. This gives a Roy aspect to the economy where military threats drain wealth from them, this leads to more areas turning Roy such as the various cities in the US declaring bankruptcy. The trade deficit also drains out money even though an Empire is supposed to use its colonies and trading partners to make a trade surplus in exchange for using its military might to intimidate or protect. Usually though the twelve colors will manifest in some way and so if the system becomes dominated by some colors more than others that will rebalance over time, this makes any utopian society impossible in

## One sign of this growing contagion and general malaise was the rise of the shadow banking system that simply evaded I-O policing by doing business in ways reminiscent of before the New Deal and I-O regulations, and even before the creation of the US Federal Reserve.

Much of this kind of chaotic business gave the impression of some believing the economic ship was sinking and so there was a scramble behind the scenes to in effect get in a lifeboat while not alerting others to the problem. For example in the decade prior to the GFC there were increasingly strident warnings from many pundits, some more credible than others, who saw widening Iv-B cracks in the economy such as with increasing debt and trade deficits as well as a bubble economy. Often the advice given was for profit such as advising people to buy gold, build survivalist shelters, prepare for starvation and civil war, predicting disaster while also shorting the market to profit from the downturn caused by this advice, religious figures often taking large donations while proclaiming the Rapture or other signs of the end times were seen, and so on.

For a substantial part of the financial industry then there was an awareness if not a suspicion that the system was unstable and heading for a crash, this is true when it becomes Iv-B, and so instead of trying to fix it people were trying to get a nest egg large enough to rise out the aftermath. This would lead V-Iv businesspeople to do more dishonest transactions then they otherwise would as well as Bi-B workers taking on loans and speculating in ways they would not normally do if they saw a long term future.

However religious leaders, financial advisors, doomsayers in general also act according to their color codes. This is explained more in my first book but it is the nature of chaos and randomness to create patterns in society that people take advantage of, just like animals do in Roy to catch prey or evade predators. For example as casinos well know random V-Bi patterns occur in society that people assume are chaotic. For example someone might try to work out a Roulette system because they assume that some patterns are likely to be predictable but each spin of the wheel is independent of the others.

If one spin somehow made a number more likely to come up in a second spin then they would become chaotic dependent variables so in effect the random parts of society fool people who believe there are predictable patterns in independent events. Religion has also thrived through the ages by saying that natural disasters occurred because of the wickedness of the congregation or by not sacrificing enough to God or giving enough to the priests, this is like saying that random natural disasters have a chaotic connection to the actions of people. In the same way Iv and B people in a Biv society have trouble understanding the randomness of some parts of it, they see the V-Bi random based economics as somehow suspect and random events like stock fluctuations as either presaging a general chaotic collapse or boom . Like God’s anger to the religious Iv-B experts tell them that this can only be avoided by paying them for financial advice, buying gold through them, buying a survivalist shelter, etc.

When the economy is more Iv-B this influence is stronger because more of it is chaotic and less is random and so this advice is more often correct. If it is not correct then something else chaotic might happen and they still gain prestige by predicting some kind of disaster.

This superstitious aspect can infect economics itself where events are argued about in blogs as being a new GFC in the making, because someone has to be right eventually they develop a reputation of knowing what is happening or their brand of economic theory does. The Austrians for example might have argued for a long time that the V-Bi random based system was doomed and then when a chaotic crash came they could say it was similar enough to what they had been saying.

The opposite can also occur when the V-Bi random economy is much stronger and absorbs chaos more easily with its reserves but is also stagnant from a lack of Iv and B growth. Now instead of those who distrust randomness and predict more chaos then there is now trust randomness and think chaos is not a real danger, this is like the economist Eugene Fama who argued the markets are completely random and that no one could construct a deterministic way to make profits in it. This creates the opposite problem, when there is too much chaos then this makes Iv and B pundits seem to know more of what is going on, when there is too much randomness it makes V and Bi pundits seem more like experts when the problem is the color economy is out of balance.

For example this can occur in religion where priests instead of trying to find a cause and effect relationship between random natural disasters and God’s wrath now try to embrace randomness by advocating patience through adversity and a mysterious God’s plan that nothing can be done about, and that clear skies will eventually come as things return to normal. In the economic field this is like where V-Bi pundits say there is nothing wrong with the economy except random deviations from a normal operation, their policies reduce the effects of chaos with insurance such as by insuring deposits to stop bank runs, advocate unemployment insurance to rise out these deviations and then save up for the next random downturn.

This outlook can gain a lot of credibility just by recessions fixing themselves much like how doctors can take credit because people get colds and the flu and then get better after seeing the doctor. Many investment advisors take this approach to making money as V-Bi, the opposite of the Iv-B doomsayers advocating investments to protect against chaos. For example they might promote stocks and real estate that despite downturns as Fama showed can do well over the long run and seem to make it unnecessary to listen to the chaotic warnings of the doomsayers. This is why many got caught in the GFC, because they didn’t see how the economy had been turning Iv-B and more chaotic over the previous twenty years and so their model of investment was working less well while others such as the quants using arbitrage was now working despite what Fama had taught.

The difference was that the colors were shifting in influence because of chaotic revolutionary technologies tipping the system towards Iv-B, this was also weakening I-O policing which made random investments more likely to be deceptively ripped off or no longer profitable. This was seen for example in the Savings and Loans crisis in the US where the random bank model was infected by too much competition draining away their profits and bringing them closer to tipping points while also allowing more Roy crooks to steal these reserves. Pundits of V-Bi and Iv-B use these events to draw different conclusions, V-Bi saw it as a random deviation where crime and a series of improbable but bad business decisions caused some temporary losses.

Some Iv-B pundits saw it more correctly as the harbinger of doom to come, not because of an innate stability in the system or a deficiency of capitalism but because of a periodic weakening of I-O policing and regulating of the banks as well as this exponential innovation in technology changing banking with computerization in ways people could not foresee well enough to avoid some collapses.

The media and the accumulation of knowledge itself becomes part of the problem when the colors get out of balance, often pundits can cherry pick the facts to fit either a chaotic or random interpretation because most situation are an uncertain mixture of chaos and random, or dependent and independent variables. Because of this then when the economic system becomes unstable the same influences exacerbate this instability with pundits pushing it more in the wrong direction, they do this in most cases because what they see seems to make their ideas correct. This can become so extreme that after the GFC the chaotic advocates of Iv-B are constantly either predicting more collapses and panics, even to the point of creating them with their own warnings like saying a bank is failing used to create a bank run, and only their regular loss of credibility when randomness stops this chaos from happening keeps their credibility in check.

In the same way the V-Bi proponents of randomness and that the GFC was just a deviation from a normal economy are held in check by chaotic collapses and bubbles forming, these fortunately made many economies give their financial sectors large bailouts in the GFC to quell this chaos. The random based arguments like Herbert Hoover made as well as many Republicans after the GFC in the US was that it was a period of excesses that needed to be liquidated and that the economy was basically sound and would return to normal, in effect denying the whole idea that allowing chaotic collapse could be more expensive than propping up the economy for a while.

These ideas then caused many problems in recessions, for example by raising interest rates to cool inflation and causing tipping points to be reached and so giving stagflation or a deeper recession than anticipated. The assumption was that raising interest rates or reducing the supply of money would just give a deviation from a normal course of the economy that would right itself, if this had been done in the GFC then it is conceivable the whole world economy would have collapsed worse than the great Depression and which may have by now led to Roy wars or a resurgence of Roy governments like Y Authoritarianism or Ro Communism.

The situation is exacerbated now by their being an Iv-B exponential explosion in the amount of information available, often much of it is deceptive and secretive making it hard to be understood except by the experts in that field. Economic theory then becomes more dependent on a form of econometrics and use of computerization so that the economy becomes all but impossible to comprehend by people, this gave rise to the ironic situation where people such as Treasury Secretary Henry Paulsen were reduced to guessing what to do in the GFC as none of the traditional tools and theories seemed to be working any more. With so many experts giving contrary advice and the economy so opaque because of secrecy as well as complexity it was similar to a consumer listening to so many pundits either with a chaotic doomsayer Iv-B sales pitch for gold and emergency food supplies, or a random investment broker saying a dart board approach to stocks was a good an investment strategy as any.

The natural effect of all this is uncertainty, and so the Fed and other experts were uncertain as to what to do. Uncertainty though is in I-O and so the way to minimize this was with extra policing and market discovery of the pricing of stocks and bonds, not by tacking between the different views of pundits who as V-Bi and Iv-B symbolized the disconnect between the two viewpoints which was caused by the weakened I-O policing part of the economy.

Moral hazard is a difficult principle to enforce when no one including the economists understands the economy, it in effect punishes some investors by not being able to foresee what no one else could. This in some ways is like denying house insurance to those destroyed by a hurricane on the basis they should have known the hurricane was coming and insurance just encourages people to build homes in areas prone to hurricanes. In the GFC it was apparent the I-O regulators didn’t anticipate it or understand the level of corruption and fraud in the economy. To blame people in that situation is like blaming the victim of a crime, in effect it is a kind of crime itself in that investors even if not reckless or engaging in fraud are made the fall guys instead of those who actually broke criminal and civil laws. In effect this is a kind of Gresham’s Law dynamic where not only are honest people driven out or ripped off but they are then supposed to pay compensation for the crash that follows.

For example an insurance company might use this reasoning to deny paying out claims of people who acted differently because they had insurance, for example parked their cars in more dangerous areas than they might without insurance. However risk is how insurance companies make money, if a certain number of people do this then rates would naturally rise with all insurance companies unless there was a way to differentiate this risky behavior from more prudent car owners.

To say then that insurance should not be paid just because people expect it to be paid misses the essential problem which is to avoid insured people from taking on unnecessary risk. Denying coverage for this doesn’t work very well because often it is hard to prove, when the government decides as it did in the GFC that one company such as AIG or Lehman might lose for its recklessness but another such as Goldman Sachs or Morgan Stanley should not it is working on the basis of propping up a crumbling but opaque economy not enforcing moral hazard because there is little attempt to discover who is actually immoral.

The problem is when no one understands when an economy can collapse no one is doing something wrong by taking on more risk, so if they are entitled to keep their equity when the market goes up they should not be punished if it goes down. This is like saying someone can reasonably be expected to assume their car will be stolen because they parked it in a more dangerous area, blaming the victim instead of the criminals or in this case not blaming the lack of market policing. Looking at AIG’s role in the crisis it is also hard to accuse them of acting differently with an expectation of being bailed out, arguably Goldman Sachs with its influence in the government might have acted differently rather than AIG but they did get bailed out without losing shareholder equity.

In effect then this is moral hazard in reverse because of a lack of I-O policing, the only real way to determine what is moral hazard is to define it in terms of known criminal and civil laws. If someone for example is deliberately careless with insured property then that might be actionable, they might be acting deceptively hoping their property is stolen to collect the insurance like some people taking out Credit Default Swaps on companies they are trying to bankrupt. It might then be written into an insurance policy that if it is found the owner acted carelessly as to where he parked the car then his claim might be denied, the same however should also apply to swaps.

The real problem then is that weak I-O policing doesn’t define or police the way investors act in exchange for government insurance, this carelessness or dangerous behavior is not a criminal or civil infraction of the law. Even if it was when there is an actual collapse investors seem to get bailed out according to their systemic risk instead of their legal misuse of government insurance so again this is part cause and part effect of weak policing. It should be the obligation of the I-O police to keep the public and the economy safe, this is really their only reason to exist.

If they fail then perhaps they should be sued by the public, this would then lead to the government paying out according to collapses in the economy according to if investors have a legitimate claim for compensation and if they were not reckless in their investments. This can lead to one way of slowing a bubble by warning some companies that their reckless business activities in a bubble economy will not be insured unless they act less recklessly. If they are then bailed out because of corrupt influence the Bi public might sue the government for wasting taxpayer’s money. This can reduce reckless behavior as a penalty, companies might continue to invest recklessly but would have a competitive disadvantage because of this lack of insurance. This would be similar to car insurance companies denying coverage to people if they had too many fines for speeding or if the monitored car speeds were too high, even if a GPS device found a car was parked in a dangerous area.

Some kind of balance with insurance of companies in a bubble economy is necessary because as was seen in the GFC in the end this insurance was needed to stop a complete collapse of the world economy. Defining a reasonable moral hazard and conditions of being bailed out in exchange for companies paying tax in effect makes the government like a state insurance business like FEMA in the US for economic natural disasters. If so then rather than disavowing it will bail people out then not being believed, it should agree to do this under strict conditions laid out in advance much as it does with FEMA or banks with the FDIC. How much investors would be liable to lose, what kind of criminal laws might be applicable to over leveraged and dangerous investing, how companies might be broken up according to a formula if there is a systemic crisis, etc.

One recurring problem is that this is an interaction between V-Bi open and relatively transparent colors and the Iv-B secretive and deceptive ones. Any transparent objective such as the posting of I-O regulations like this to use in a crisis will then be worked at secretively and deceptively to undermine them, lobbyists might be paid to water them down and over time if there is little visible chaos and then I-O will weaken again to lead to another crisis. The purpose of these regulations then is not to protect against crisis because such a crisis will either be postponed until the regulations are gone or not enforced, but to reduce the problem of I-O regulation of banks and businesses to reflect criminal and civil law.

That is, look for a similar situation now handled successfully by police such as dangerous driving or defrauding car insurance companies and apply similar laws to the financial system. Currently the law is more like a wealthy person phoning up the police and making a secret deal to get out of a speeding ticket. That way at least there is more likely to be a obvious connection to these laws being subverted, when the I-O policing strengthens again these laws will be easier to enforce because of precedent.

The closer laws follow this policing logic the more likely they are to be respected, Glass Steagall for example was harder to justify because it banned the mixing of commercial and investment banking without a clear reason as to why the useful parts of this banking should be banned as well as the harmful aspects. It becomes then like a drug law that penalizes those capable of safely using drugs such as marijuana while ineffectively protecting others, such as children or addicts such as those who become psychotic using it, because then the law is usually flouted or undermined because it is not fair. A law that made marijuana legal for some but with much higher penalties for selling to children for example conforms more closely to the idea of Roy crime having a victim.

Another problem is V and Bi people naturally think like teams and so think of their government representatives as part of their team. They then think naturally of bailouts like corporate welfare which is similar to unemployment or disaster insurance to be paid for with taxes in more prosperous times. It is then difficult to some degree to I-O police this because they have some influence with the V-Bi politicians but unemployment and other insurance is policed by the claimants being checked out usually randomly to avoid fraud. The problem with the GFC was bailouts were given out like after a hurricane where people not even affected by it are given money. This is also like people working in the black market receiving welfare, it tends to make other workers try to get welfare and as with Gresham’s Law this gives the cheating workers a competitive advantage to undercut the honest ones. Bailed out companies then were able to undercut their rivals that were not bailed out, gaining market share because the government in effect picks the winners from the members of its V-Bi teams.

This was justified on the basis that there was no time to examine these claims closely but it was the fault of the system that chaos was allowed to get so large that the collapse led to this hurry, Iv-B naturally has everything happening faster. Much of the bailout money then was making zombies of parts of the economy and was ultimately wasted because other more sustainable business did not get any money, so companies often went broke after receiving bailouts.

This then is a disconnect between V-Bi desires for bailouts as insurance and Iv-B desires to deceptively get some of this money to stave off chaotic collapses that will likely happen anyway. For example Iv-B works on being highly competitive so the tendency will be for few companies to survive the crisis, Bear Sterns and Lehman did not. There is a tendency then to lead to a kind of monopoly in Iv-B, companies are ultimately trying to outgrow the competition and in effect mature into more balanced trees with a large V canopy that overshadows and stunts permanently their competitors. So the opportunity for bailout money can make a critical difference in a crisis where some might survive better deceptively getting this money and then can last longer while their competitors fail and then take over that part of the industry. This is likely to be a much bigger problem with moral hazard, in an opaque economy few companies know enough to be taking on too much risk but if they can get a bailout in a crash then this is money to buy cheap assets.

This arguably happened with Morgan Stanley and Goldman Sachs who became bank holding companies and so received more government funding than Lehman and Bear Sterns would have. There is then a fighting between the V-Bi part of the economy that gets bailouts more easily as they pay more reliably into the government with taxes, and Iv-B who are trying to topple the V-Bi institutions if possible with bad advice and rarely pay their full taxes, they can also cause trouble in a crash by front running or selling short. So Iv-B companies either don’t want V-Bi parts to get any money to keep their competitors weak, or failing that to share in it themselves to grow quickly with this money in the financial humus lying idle after the crash. This is another example of where weak I-O policing leads to V-Bi and Iv-B acting separately from each other and creating more cracks in the economy.

Iv-B companies then would like to take their profits as Iv-B with high leverage but also socialize their losses in V-Bi. This is the way a tree works, the roots and branches in effect borrow nutrients from the V-Bi parts of the tree and return them with minerals the B roots find or energy the V leaves get from the Iv branches while growing fast enough to avoid overshadowing.

## To accuse companies of wanting to privatize the profits and socialize the losses is sometimes wrong as this is how the system is supposed to work as long as enough is paid in taxes on these profits to replenish this insurance of their losses, this then needs strong I-O policing to avoid some shirking these payments to get a competitive Iv-B advantage.

Many Iv agents then work on commissions with their V employers but can also be looking to start their own business and drive them out of business perhaps by stealing contacts or software needed for it. They might even do so many bad deals for V that it falters so Iv forms their own business and then takes over the V company’s place in the canopy. Iv and B then work to create chaos as this is how they succeed, one way for this is to undermine the random V-Bi parts of the economy which is why for example these areas get so hollowed out of funds. There are then many ways areas with reserves in the economy get hollowed out without enough I-O policing, deliberately giving bad advice to reduce their reserves, converting those areas to ever more Iv branches and B roots, profiteering like a contagion or predator by simply overeating those areas like an R giraffe eating too many V leaves on a tree, and so on. When out of balance then Iv-B will hollow out the V-Bi areas any way it can and for any perceived profit. If some Iv agents refrain from doing this others with less scruples will just take their place leading to the modified Gresham’s Law again of bad businesses driving out the good.

The same occurs with B workers hollowing out the Bi worker unions and communities. If they can deceptively get work by undercutting a union or cooperative then they will, they might even picket against unionization in principle which is bad advice for the Bi cooperative unionists but might give a competitive advantage to B workers. If there are bailouts like unemployment insurance then B workers might try to get this even though they might also be making money in a black economy that pays no taxes.

They would also want to convert the Bi community into ever more roots of B workers to give their whole way of doing business more room to grow as opposed to being crowded out of some markets by Bi unions. This is like the B roots of one plant or business trying to starve other businesses of resources, for example one mining company might take up leases around another to stop it growing or patent inventions around its products to restrict its growth. Trees often do this, some trees might have such a large root system that other plants cannot grow under them for lack of water. Prior to the GFC then B workers taking on liar loans were trying to compete against each other and also to try to make money out of a relatively stable random Bi real estate market. With this artificial demand for houses it created chaos in this market so prices went up, essentially hollowing out the market with more debt and less equity until it collapsed.

The role of government in this cannot be separated from color interactions, politicians are elected according to the lobbyist money available and the color strengths of different parts of the electorate. To say then that the government is the cause of the GFC is just like picking any part of what happened and calling that the cause. No doubt the government made mistakes in retrospect but it should always be remembered that without foreknowledge of the future and with substantial parts of the economy being either chaotically secretive and deceptive or randomly impossible to predict there is no one to really blame for a chaotic crash. Any system then that relies on something impossible such as predicting chaos and randomness must fail, there will always be new developments not foreseen which can cause a misallocation of resources.

The real problem is how to make the system as efficient as possible given this uncertainty about the future, generally this must be done through I-O policing. In effect then the government failed to police the economies of the world well enough but this is because of pressures from other colors such as V versus B and so the political will and support from the electorate and the ones making political donations in exchange for favors made effective policing impossible. So even though the lessons of each crisis are learned for a while inevitably a calm period such as the Great Moderation will cause the I-O policing to lapse just like a crime wave can follow when police stop being vigilant.

Another problem is how a crisis starts and spreads, because there are more and more small cracks in the economy there is a tendency to see them as separate issues, because just as the chaos is fragmented so is the policing itself as well as the government. For example if Iv-B spreads through the economy it reaches in to the way politicians are elected, how I-O regulators are hired and promoted, it can cause policing agencies to become paralyzed with infighting between different branches not trusting each other and withholding information. Because there are more pundits competing deceptively against each other they see each crack as like their path to making money from writing about it, or even hiding the information until they can exploit it in some way.

This leads to no overall picture of how the cracks are widening and joining up just like with 9/11 where competing intelligence agencies in the US refused to share information with each other and so the dangers of the R terrorists evaded the Oy policing used. If the police were more O then they would have enforced a sharing of information between its Oy agencies, this is also like Oy snitches who often inform on Y criminals but they can also hold back information on R criminals they are investigating until they can profit from it in some way. The various intelligence agencies needed to use information they gathered on terrorists as bargaining chips for extra funding, winning turf wars with their competitors, to appear more indispensable by letting some smaller failures occur, etc.

If someone had been able to get the information from each regulatory agency in the US and Europe in the 5 years prior to the GFC it is likely they could have put together the whole problem and by effective policing prevented most of the fraud. The only way to stop chaos and deception is transparency used randomly, so by looking at all this information and randomly taking parts to make it more manageable a picture of chaos and fraud out of control would have become obvious. However this could never have been done in an Iv-B economy because the incentives to do this did not exist, people were making too much money from this chaos to want policing to occur.

It becomes like illegal prostitution, gambling, drug dealing, etc where both sides of the transaction want to trade secretly and deceptively and oppose I-O police and so they become like a permanent contagion in most societies. Usually then the police control these by watching them and when they grow too troublesome like the chaos becoming greater exponentially they crack down on it then. The I-O police then should have been watching the fraud with random audits and snitches even though they had no clout to do anything, when the subprime problem did become worrisome to the government and the Bi community they could come in quickly and shut down the fraudulent areas.

Again the idea of financial I-O policing is not to stop all the criminal and civil infractions of the law but to domesticate them so overall they do not threaten to get out of control and cause systemic risks. While chaos seems to rhyme in the way it grows rather than repeating itself it just varies enough deceptively so that the I-O police remaining are either fooled by it or unable to muster enough support on the flimsy evidence available. This rhyming or similarity to similar crises in the past then is of little help to stop them because if it did seem to be alerting the I-O police too much then the chaos would just change and be more deceptive until it was different enough to be ignored. The only way to avoid this is to recognize the mathematical nature of chaos itself and to see it in the actual statistics with random audits and using snitches to see it growing in an overall picture. This of course is exactly how police in most cities do it successfully.

The Iv-B chaos also needs to grow in a way that maximizes its transmission much like with viruses. For example Ebola has little chance of causing an epidemic in the West because the victims are too obvious and die too quickly, this makes quarantine an effective protection. A financial contagion then must not be too obvious early on and ideally make the victims appear even more healthy so more victims rush into be infected, this makes quarantining this chaos much harder as the IMF tries to do with smaller countries. For example when a developing economy has a chaotic crisis this is quickly exposed to the I-O market which then draws money out of the infected country and usually refuses to reinvest until the problems are under control with some transparency.

The IMF would in this process give some loans which help to extinguish the chaos and countries associated with or trading with the infected country examine their links for being overextended with credit, their businesses might examine whether they will get their accounts paid, etc. So the GFC was a process that was building for several decades where chaos was growing and mutating into ways that were harder to detect and appeared less dangerous much as AIDS did. When AIDS first started spreading it quickly killed its victims which made it harder for it to spread, this then caused it to mutate to mask its symptoms for longer as well as keep its victims alive for longer to infect more other people. Just as the contagion from Lehman was worse because of unanticipated links AIDS spread more because it was not realized the blood banks had become infected like the real banks with a financial contagion.

Also just as addicts sharing needles and with promiscuous people both gay and straight lying about whether they were sick spread the virus, the B workers borrowing money and continuing to get liar loans gave a deceptive view of the health of the economy. Iv agents playing the confidence game and trying to appear more prosperous, etc spread the financial contagion as others were fooled into buying subprime bonds that were infected with a time bomb much like a terminal disease.

The effects of a collapse also spread this contagion much like cholera would spread with diarrhea polluting the water supply. When a company overreached and had to sell their subprime bonds at fire sale prices others snapped them up as bargains and so this toxic waste as it devalued moved ever deeper into the financial system. When B workers had to sell homes in the booming market because they could not afford the payments then others snapped up the bargains even though this pattern of speculators buying these homes meant they were being built and the suburbs mutating in ways that were not sustainable places for people to live and work once the boom burst.

## Bargain hunting then became like a bear trap where collapses occurred as chaos was becoming starved for resources, this deceptively lured in more investors and so was able to expand into more solid areas while temporarily propping up the weaker areas.

For example the art market also boomed prior to the GFC and as the market weakened the bargains were bought by those who wanted to support the prices of art they already owned or because they talked new investors into buying them to prop up the prices, this then increased the contagion in these investors as well as forcing it into new uninfected investors like an epidemic. It also prevented the overall Iv-B market from collapsing until it had exhausted all the resources available. In this sense the financial chaos can be more adaptable than a biological virus which has more limited ways to mutate, because a financial contagion is spread by computer code and virtual entries in computers that represent money in the money grid. All it needs to do to survive and grow is find more money, algorithms have much more scope to mutate than DNA does. When they become attractive enough to lure in more investment they keep mutating to use that money up with secrecy and deception, people use their self-interest to prevent any weaker areas from collapsing by talking other V-Bi investors into the market much like they do in multi-level marketing. This avoids too many investors being aware of the coming tipping points until the whole system is evenly weak and ripe for collapse globally.

This is because chaos is fractal based, it forms a pattern that is self-similar everywhere in roots and branches, like in a person where a virus replicates and mutates until the virus amounts in different areas are either the same or specialized to those organs. Ideally for transmission a virus has the maximum number of ways to leave the body such as diarrhea, sexual fluids, blood, coughing, sneezing, etc. In the same way the chaotic financial contagion maximizes its ways of transmission into all the linkages available to other economies so it spreads while giving a false impression of prosperity. If it did not appear to be prosperous then it would simply mutate until it did just like products of a company mutate until they find something consumers want to own, or hopefully the product goes viral and people feel they must have it.

For example the subprime contagion needed to create an atmosphere of prosperity so V-Bi investors would put in more money as well as B workers take on more liar loans. It did this by allowing people to take out money from their homes like an ATM exposing them to wanting to own all the mutating addictive products the Iv-B technological explosion was creating. Then it caused the liar loans to perform relatively well initially with Adjustable Rate Mortgages so there were few defaults, this caused people who could not really afford the loans to deceptively appear like more prosperous borrowers perhaps with extra money from the black market which explained why some of them could afford the loans.

The carry trade of Japanese savings initially created rising prices around the world by investing in areas starved with credit because of the trade deficits in the US and elsewhere, this made repaying the Japanese loans easier and caused them to allow more money to go overseas. The real estate market in the US was low historically because people had been losing manufacturing jobs to places like Japan which made it hard to sustain a boom with local investor funds, the carry trade money then made prices rise which made it nearly impossible in the short term for B workers to lose with liar loans as they could sell the house if they couldn’t make the payments.

This created a deceptive appearance of a rising market which made more investors want to loan money into it and more want to buy homes. This then infected the government because it was politically desirable for more poor people to buy homes, encouraging these loans made it then look like these poor areas were experiencing urban renewal as money flowed into other parts of the economy with construction jobs and consumer goods sold to those using their homes like ATMs.

It was then in the government’s interest to deceptively paint this picture as being more rosy than it was to help politicians get elected. Like the art investors supporting prices it was in the government’s interest to keep prices rising and to have lenders such as Fannie and Freddie take more risks which would be covered with other profits they were making. Financial brokers and real estate agents had every inventive to make the boom sound good because they made money that way as did pundits who predicted this would continue to look like financial gurus and get paid for their investment advice. This made the pundits and salesmen look more prosperous and flush with cash, their spending was ostentatious and made it look like the process was healthy.

This led to home improvements and new larger and more elaborate house designs, this was a kind of mutation where different variations were tested to become viral like having certain kinds of windows or using special timbers. Some became viral fads like putting in a swimming pool and made the process more addictive for people to spend their home equity as well as to make the economy appear more healthy. The contagion then made each aspect of the boom look more healthy in a deceptive way even as it became sicker, this maximized the amount of money and numbers of people becoming infected by it until they became evenly weak and so the collapse would be postponed until all the resources were consumed.

Iv-B chaos spreads according to the characteristics of Iv and B people in Biv and Oy and R people in Roy societies, areas, parts of an economy, etc. So where there are characteristics like speed, energy, camouflage, misinformation, disinformation, lying, panic, terror, etc chaos can grow more quickly. For example one problem with the financial industry is it can have trends not just when markets go up with greed or a desire to grab small and fleeting profits but also down where it can exploit panic. This also happens with other markets, for example with the depressed housing market in the US in 2011 there are Iv and B speculators picking up houses cheaper than perhaps they should be.

Since the market is clearing better with lower prices real estate agents now have an incentive to talk down the market to get cheap houses to sell, at other times they might deceptively talk up the market so buyers are more enticed into investing. People might sell consumer goods more cheaply if they are short of money, a death in the family, they make a mistake with pricing something, etc and then those fastest into getting these make the most money. This can be seen on Ebay for example. Usually then to make money out of a downturn people have to buy cheaper and then wait for a time to sell the goods for more, in the financial sector however speculators can short the market.

This means that they can in effect sell the product before they have to buy it in a falling market and then they can deliver the stock, bond, derivative, etc to that buyer and pay less. This then gives panic selling an added chaotic edge because Iv and B pundits can try to scare the market into selling off a stock or bond which allows short sellers to deceptively make money. A panic then in these markets can be more directly chaotic and profitable than just looking for bargains in an auction. This is like panic spreading chaos with a virus, for example someone panicking and breaking out of a quarantined area and then infecting other people.

Because the global economy is no so interconnected it became impossible to quarantine the chaos, this was seen where the effects of Lehman collapsing sent shock waves around the world despite the Fed’s best efforts to insulate other parts of the market. It can also be like rabies making people or animals act more aggressively and spread more even though their appearance would normally make others keep away from them.

So creating a panic either through false stories about a stock or bond or a pump and dump scheme where prices are manipulated upward and then the truth becomes known, this makes other people act more chaotically and this becomes profitable for the financial contagion so it in effect mutates at some point to cause more different kinds of panic. In an earlier phase it may mutate in ways that make the market appear to be much better than it is to get in more investors and money, in the latter stages it makes the market look much worse in all the ways possible to depress prices faster as the bubble bursts for more profit.

A disease then might spread even more rapidly in a later stage by the infected people looking much sicker, for example people start trying to run away from the infected people not realizing they are infected themselves and so they spread it over a wider area. In the GFC then the market contagion became suddenly much more obvious and even looked worse than it really was, the Fed for example was able to quell most of the chaos. However this appearance caused more panic and so when money tried to get away to a safe harbor its movement created more shock waves and collapses than if everyone had remained calm, this is like people trying to get out of a quarantine area. This panic had mutated so much from the initial euphoria to bring investors in to be infected that it was able to collapse nearly all of the global economy.

Financial contagion feeds on money wherever it can be made without encountering transparency and I-O policing, making a bubble bursting look bad can also add to ways for it to grow as investor rush in to get bargains. For example as the various crises around the world in Asia and South America led up to the GFC they had an initial appearance of being a better situation than they really were to get more money and then to look worse than they really were to get even more money. This is why a recession tends to bottom out more sharply than the economic indicators show a few years later was rational, it is also why the GFC was so strong as a bubble and now profits are still being made from its collapse.

For example in 2011 it appears many are making profits from shorting European bonds, this is pushing the Eurozone to either chase away the Oy-R predators by insuring the market enough or to break up chaotically as their V-Bi reserves become hollowed out. Some speculators may have been pushing up the oil and food prices while shorting companies such as car manufacturers or bakers that suffer from it. This is because profits are still available to be made in these few areas and so the limited opportunities instead of scaring investors away makes them jump into a steadily shrinking bubble.

Too much energy and momentum was lost as the roots and branches broke apart in the GFC. For example the roots and branches holding together the world economy broke apart or ran dry of liquidity which is why trading between countries took such a large fall, it reached many tipping points and in effect hit the floor like a toppling vase creating more wreckage.

Situations like this need more policing and random audits, also stories from snitches about this need to be publicized and they should be rewarded and protected as part of the I-O police growing in strength. When these chaotic opportunities to encourage more collapses are restricted enough the pressure of this speculative money will go towards creating another Iv-B bubble and if this is not available it can be forced more in sustainable balanced color growth.

Another aspect of this making money from the collapse is some areas of the global economy are still weak and make easy targets for takeovers, shorting, crime, etc and so some colors such as Y and Oy are still doing well. This is like in the Roy animal kingdom where R and Ro prey are weakened by contagion or a lack of food so the Oy and Y predators eat more easily and have more offspring. This creates more wealth inequality and can reduce the finances of the poor and middle classes so much that there is little demand for products and services made in V and Iv. This can make them speculate more and turn into Y and Oy criminals to make more money. Reducing this with I-O policing is important because this is like the middle of the food chain collapsing, if this is not reversed then eventually the wealth inequality could become so high the economy of the US for example could collapse again.

An Iv-B crisis usually collapses in Bi-B first and works it way up the economy, this leaves for a long time V teams that become in effect like large groups of robber barons that have the capital to rebuild sustainable industries, V for example usually recognizes the value of the Bi middle class to employ and so like Henry Ford are not intent on reducing their wages. Y and V then recognize that chaos may give some profits in a recession or depression but they also realize that chaos is not their business model and that it needs to be controlled, they can then support to some degree the strengthening of I-O policing.

For example in a right wing Y dictatorship such as the Nazis, Fascists, with Somoza, Pinochet, Marcos, etc they used police corruptly but also allowed them to operate to keep the peace. This is because Y and V recognize that short term profits in a crisis might be good for them but it is not good for their model of longer time and lower energy, they also feel less threatened by the police, for example the Y mafia usually survives despite the best efforts of the police to catch them all. The balanced Biv system then usually generates the lion’s share of profits for Y and V people, they have little interest in seeing a collapse like the GFC as they might be threatened by a revolution.

For example Y lions might enjoy easier prey when R and Ro animals are starving but they probably have an instinctive fear of the situation from memories and prefer a steadier supply of food, they do not then tend to behave like Oy predators that prefer chaos. Iv-B then is disconnected from the V-Bi business model which V people will try to regenerate even if this means helping Bi communities. On Wall Street for example there will be Iv quants who want to keep chaos growing by shorting markets or creating another bubble and there will also be V more stable banks and brokers who want to quell this chaos with more transparency and get back to a more stable and regular way of making money.

The weak I-O policing will mean there is a kind of war going on in Wall Street in 2011 like with the Republicans having the more chaotic Iv Tea Party which rose up so exponentially and the more stolid and stable old guard V Republican conservatives. On the left there is a similar disconnect with chaotic B voters forming an Occupy Wall Street set of protests and a more solid Bi community who see themselves as the opposite of the old guard of the conservatives. In 2011 then Obama has been trying to reconcile Bi-B and while John Boehner has had the same problem with the two groups of Iv and V in the Congress, much of this is also persisting because of gerrymandering of electoral boundaries on both sides as this polarization of V-Bi and Iv-B increased making it harder for centrist I-O politicians to get elected and hold the balance of power.

This makes it harder for independents in the center to get the compromises they want and so they have become more disaffected, it may better in the US for them to form a third party to get seats in the senate at least though such a party like the I-O police tends to be unstable. This could have for example a permanent policy based on polls that follow what the center of the electorate wants, this could then reconnect the V-Bi and Iv-B groups of politicians to get the centrist votes or miss out on them and give the centrist party the balance of power.

Currently this disconnect is seen with Ron Paul on the right espousing a more chaotic and individual based Iv vision of government reducing insurance based policies such as social security and Medicare, a more isolationist foreign policy rather than forming and maintaining alliances with other countries, the Austrian Iv model of economics where businesses should be allowed to collapse to promote faster regrowth rather than using insurance as bailouts, etc. This is being opposed by the more old guard candidates such as Mitt Romney and Newt Gingrich who support maintaining alliances such as with Israel, oppose getting rid of social security and supported bailing out much of the financial industry.

The Iv ideas from Ron Paul resonate with B workers and unemployed who like the idea of isolationism in foreign policy and the general idea of looking after the individual’s rights rather than looking at society as a team as the Bi community does. So this chaos is still persisting as a contagion in the US because it is still profitable to make more collapses, the disconnect between the chaotic and random models of economics and even political strategies for the upcoming elections keeps the chaos separated rather than being quelled by randomness. For example Iv and B candidates will tend to try for secretive strategies and suddenly springing new accusations they hope will go viral in the media and on the internet such as in blogs and Youtube videos.

They also have their secrets which threaten to be exposed, currently for example this is funding from the V Koch Brothers in the Iv Tea Party movement. By contrast the V-Bi politicians of Obama on the left and Romney or Gingrich on the right try to talk about a more normal and evolutionary way forward rather than the revolutionary Iv ideas of the Tea Party or the revolutionary ideas of the B extreme left. Because the V-Bi politicians see world events as more randomly unrelated and coincidental the ideas of conspiracies rife in the Tea Party and B on the left are mostly ignored, this however can be dangerous as it is similar to how chaotic cracks in the financial system were ignored by V-Bi. These kinds of disconnects between Iv-B and V-Bi in politics hinge how quickly the I-O center and policing will regrow and hence how soon the global economy will become healthy again.

The political philosophies on the left and right then are under threat to be fragmented with Iv and B revolutionary ideas, to be deceptive with secret funds and agendas, apocalyptic with fears of collapses such as hyperinflation and a run on the dollar, etc. In some ways this is similar to what happened in the 1930s with the Great Depression, the Oy Nazis for example fomented chaos to undermine the more stable government and also battled chaos fomented by R communist insurgents. Conspiracy theories against international Jewish bankers and Germany being stabbed in the back by dissidents leading to the loss of WW1 were rife, these are like in the US today where similar theories about bankers causing the crisis circulate in blogs and the right see the left as having undermined the country in the recent Iraq war.

Just as this occurred in Germany because of the government being unable to police the country effectively it is also happening in Europe and the US because of weak I-O policing failing to prevent the GFC and also not preventing 9/11 in the US. In Germany in the 1930s this led to the higher colors becoming stronger by preying on the weak so they ended up with richer V and Iv industrialists such as Thyssen and Krupp who developed the Y strongman of Hitler to protect their interests, this is like in the US where the rising wealth inequality is occurring as the remaining wealthy feed off the weakened parts of the economy by shorting them and buying up assets more cheaply. The potential then exists for more Y strong men perhaps like Vladimir Putin to restore order from the chaos and as a byproduct to restore more I-O policing.

In some ways the recent president George W. Bush capitalized on this feeling as the chaos was growing at that time though he was demonized to an enormous degree by the B left. For example while the Republicans were initially blamed for having wrecked the economy it has become clear that Europe pursued even worse policies with higher leverage and more deception. For example the financial state of Greece in 2011 is not much different from California in the US, both overspent in good times on pensions and both were caught unawares by the spreading chaos.

As Iv-B grew it used competition and incentives for profits to pry allies apart, Glass Steagall in the US was a good protection against letting chaos into the commercial banking sector but it was repealed to be competitive with the City of London who were taking away business from the Americans with less regulated markets. Companies could incorporate in different countries to reduce tax and I-O policing, they could also use tax havens to secretly funnel up to half of the world’s trade through them and deceptively change the country where the profits were made. Like a crime wave makes more money and uses this to corrupt I-O police as with Prohibition in the US this increasing chaos generated more political donations and helped elect people to keep it growing such as with Blair in Britain, Sarkoczy in France, Merkel in Germany and Berlusconi in Italy.

Much of the trade imbalance in the Eurozone that created a bubble in some areas and debt in others was caused by differences in productivity of workers and the amount passed onto them in wage increases leading to a trade advantage for Germany. This Iv-B growing chaos then would tend to break up the Eurozone with speculators shorting its sovereign debts, competition in the Eurozone with prices of goods along wages causing a fragmentation of the V-Bi middle and upper classes into Iv-B, the lowering of I-O regulations to attract more Iv-B speculators to ward of V-Bi stagnation, reducing reserves of banks with higher leverage and Special Investment Vehicles, buying more subprime debt to reduce reserve requirements, etc in a chaotic perfect storm brewing worldwide.

It could also be viewed as like a large string of earthquakes connected to each other with faults, tectonic plates being like trade imbalances and the forces of Iv-B speculation while weak I-O policing meant that the building up tensions in the plates were not monitored nor the widening cracks associated with sudden movements in earthquakes. Because of this a lot of tension in the system is still unresolved and the shearing effects of this Iv-B momentum going in different directions is creating more collapses and aftershocks. Much of this will continue until the global economy is fully examined through its roots and branches for pent up and still growing chaos.

Other analogies often used are firestorms and viral contagion because these also can grow chaotically, they might start secretly and grow exponentially, then lead to collapse when the resources they feed on are exhausted. For example a bushfire might be started by weak I-O policing of campfires in a national park and grow explosively as Iv-B until all the wood is consumed, this is like an Iv-B desert plant growing until the Gb resources are used up. Often this chaos is mistaken for sustainable growth or increases in GDP and so a stimulus and bailouts can be like adding fresh wood to a firestorm or more healthy people to an epidemic. This is often because exponential growth appears more steady in its initial stages and then suddenly seems to start growing faster and more noticeably. A stimulus then attempts to create steady growth but without I-O policing it can go directly to this slower looking exponential growth. In this phase though it is more likely to quickly burn through a stimulus giving a small rise and fall in output as the resources are quickly consumed.

The problem with this Iv-B and V-Bi disconnect in the political and economic professions is when it comes to working out what to do in an Iv-B chaotic crisis or V-Bi random stagnation there only seems to be four extreme positions, V random far right, Iv chaotic right, Bi random left, and B chaotic left. This can be seen in comments in economic blogs for example where the blog owner as moderator acts like I-O to police them for excessive abuse. The mistake then is to see the moderator such as in the current Republican debates in 2011 as not being part of the process but any debate would usually fall apart without them. The result then is a kind of philosophical paralysis where the two position of V and Bi and the two momentum colors of Iv and B talk past each other or actively attack and misrepresent their rivals when the I-O moderation is weak. There is nothing wrong with this, they are just acting out the color codes they represent but when it comes to actually doing something to fix the crisis or in the case of the 1970s get out of V-Bi stagflation the opposing sides have to be reconciled into some kind of compromise or a faction will try to torpedo the process.

For example when the stimulus and bailouts were needed in the US with the GFC the Iv-B experts advocated a chaotic remedy like Mellon at the start of the great Depression to let companies collapse and liquidate so they can regrow. Others like V-Bi Paul Krugman said they should use far more stimulus, Ben Bernanke as a student of the Great Depression chose to flood the system with V-Bi liquidity like a lender of last resort. Ever since though the arguments about what should have been done have raged much as they still rage about what should have been done in the 1930s.

For example the rival Iv-B and V-Bi theories have come to a kind of stalemate where Iv-B urges for austerity contradict the idea of Keynesian stimulus. The problem is though that austerity is needed in some areas and stimulus elsewhere, to determine this the I-O market and regulators need to understand with random audits what is going on. Some Iv-B proponents think that tax cuts will spur more growth and prevent some collapses, this is correct because Iv-B growth is very sensitive to small changes in liquidity so Iv wants tax cuts for the wealthy and in the US B wants tax cuts on social security payments.

From this one would conclude either that no one really knew what to do, i.e. there was uncertainty in I-O as there should be, or those that did know did not have the influence to be listened to. The I-O centrist way then in the GFC was weakened and it was probably little more than fortunate relatively pragmatic and moderate people such as Henry Paulsen and Ben Bernanke happened to be in power rather than some rigid ideologue. For example if Alan Greenspan had been in the same situation without having been discredited by past events he might well have advocated less I-O policing and letting more businesses fail. If Robert Rubin had been Treasury Secretary at the time he might have advocated a similar path but this would have only increased the chaos by failing to randomize it with liquidity.

In such a situation according to Aperiomics it is quite possible there would have been a second Great Depression as bad as the first. It should be recognized then that the ad hoc approach to the crisis may have been partially successful because it was a series of compromises between chaos and randomness but this lack of knowledge about the opaque economy implies it could have been far worse.

This uncertainty was natural though, in I-O policing the process is always uncertain because it must reconcile the different tendencies of randomness and chaos. Randomness is about events independent from each other and chaos is about events dependent on each other, to reconcile them is by definition impossible to do exactly. It must also be remembered that remedies like this have to be taken in midst of an Iv-B crisis or V-Bi stagnation and so the situation dictates what will be done regardless of what should be done. Also the political and economic pressures, even those to do with the careers of those for and against any particular strategy are related to the situation itself. For example in a crisis of this magnitude economists who have based their careers on a particular interpretation of the Great Depression can find it hard to destroy their whole schools of thought by admitting errors.

If they are not in charge of policy then the temptation on behalf of Iv-B economists is to maintain their ideology, if they do not then others of that school will just denounce them and take over the movement. V-Bi economists such as Keynesians have the same problem in that after defending Keynes and having him being partially discredited in the stagnation of the 1970s, they face the problem of being seen as deviates to this orthodoxy if they do not defend it. Despite misgivings then they might call for more stimulus but be secretly relived if it is not forthcoming in case it causes more problems or runs up debt with few results.

Just as in a courtroom then both sides tend to want to argue their case but often secretly prefer to have the I-O judge work out the middle decision between the two. The chaos then reaches into the decision making of how to handle the crisis itself such as with which expert gets nominated to be on the Fed, to be a government advisor, to get a job at which think tank, which politician gets funding from wealthy people of V random or Iv chaotic beliefs, and so on. Of course this happens with police and judges as well, for example in the US judges are usually nominated by the president and confirmed by the Senate or face popular elections. To get fully neutral I-O guidance in an Iv-B crisis then is almost impossible, the best available is likely to be a moderate Iv position with strong ties to I-O regulators who are facing a resurgence of support from Iv as well as being backed by an angry Bi community.

Because of this the decisions made in the crisis were usually Iv in the US and sometimes more neutral in Europe where there was a stronger Bi community backlash with demonstrations and riots. For example the IMF and European bankers have tried to impose a more Iv weighted policy onto Greece, Italy, Spain, and Ireland but this has had far more opposition and anger from the population than in the US. The Occupy Wall Street movement in many ways started out as B and was accused of having all kinds of secretive B agendas by right wing pundits but has become more Bi team related to unions and angry as it made itself heard. It also connected more strongly with Bi communities over time who were sympathetic to their demands for more I-O policing of Wall Street.

The 1% they are against is Y-V who acted as Y predatory and V like a team looking after each other at the expense of the rest of the country. They however did not cause the crisis though they, like the Y lions at the top of a deteriorating food chain, are still relatively well off.

Ultimately the current situation suits them even less than the 99% as they are likely to lose more from decreased investment opportunities than gain from using shorts and swaps if the economy is not fixed. So these Bi demonstrations also affect economic policy, if they had been stronger in the US earlier on then more home owners would have been bailed out in some way and the resulting prevention of collapses from chaos in B and Bi would have stabilized the economy much more.

However again this confuses cause and effect, the Bi community’s lack of political clout was because of Iv-B economics and politics and so the left was seen as B individuals competing against each other and until the GFC seeming to do well as a result. It takes time then for the community to knit itself back together as Bi and realize they need to stand together and get angry like unionists to get the government to help them and not just the V wealthy.

In some ways these bailouts can create a zombie like the economy, for example Japan created zombie banks in its lost decade of the 1990s, the bailouts in the US and Europe have also created zombie like banks on life support with borrowed government money but still lending money to the community inefficiently. Bailing out home owners would have to some degree kept housing prices higher than they might crash down to chaotically but this artificially low price in the US in 2011 is often far below replacement costs of the houses and in many cases is not a real I-O market value. Instead it is like letting a house fall apart because of not repairing small parts like a hole in the roof, it causes more damage to the housing economy that creates more losses in values than some bailout money would have prevented.

For example where suburbs collapsed because of so many foreclosures Roy crime increased, many houses were damaged or looted resulting in losses for the foreclosing banks, businesses servicing the area went bust and would cost much more to rebuild, many people lost their savings and so lost the ability to weather smaller crises without losing their homes as well like a domino effect, and so on. The B roots have a similar chaotic problem to the Iv branches in that momentum occurs in waves, when there are collapses then these can become like tsunamis causing damage to people and businesses in those colors.

However if there is enough liquidity then the waves can generally pass without causing much damage, this is why the Fed was able to extend liquidity to so much of the financial system and lose virtually nothing as the chaos subsided. The liquidity allows Iv businesses to ride out the chaos by not running out of money so when the system stabilizes again the real amount of money in the economy is nearly enough to make it work without the bailouts. Some money is lost as roots and branches break and so this money becomes separated from the system such as with looters, thieves, hoarders, retirees who elect to not go back into business, those not willing to reinvest when the economy starts to stabilize, and so on. Other money is lost because leverage starts off again at a much lower level, this is like buildings that are too tall collapsing after an earthquake and the only safe ones for a long time are ones with low leverage, i.e. those not too tall.

Because of this lower leverage it is the same as a lower money supply and so has a contractionary effect that needs to be overcome with some quantitative easing. It may well be the leverage before the GFC was too high but the system got used to that amount of money supporting and nourishing the infrastructure of that Iv-B system, it becomes like an animal body that is used to having a certain number of blood vessels suddenly having to make do with fewer after surgery.

To try to do the same with lower leverage just means less money to go around and will cause more waves to be destructive with aftershocks, more parts of the economy to have little or no liquidity as it pools elsewhere like a pump failing to work because of broken valves, and with Iv-B still prevailing bad businesses will still tend to take what capital is available and leave more sustainable businesses without capital.

The situation then is the same reasoning as for bailing out the banks and the shadow banking system, the people losing their homes though did not have the cohesiveness of a Bi community or the anger needed to compel the government to help them as well. It may have been possible to support this housing market to a reasonable level historically by providing cheaper loans, the government buying up homes to rent out and support the prices by creating demand, giving loans to small businesses early rather than still giving little support to them as of 2011, and so on. The color imbalance made this policy impossible, the reason the current policies were adopted was that the Iv tilt to the US economy meant that this time V got their way more than they did in the Great Depression when Iv policies caused much more collapses.

In both the GFC and the Great Depression though bailing out Bi and B was hardly tried, the crisis itself was where V and Iv had prospered enough to lobby and donate enough to politicians to secure their bailouts. And this in turn is because B and Bi always fall apart first as they run out of resources and this travels up the Biv tree meaning that the wealthy always appear to be more prosperous and powerful in an Iv-B crisis.

This impoverishment of the Bi community causes them to back I-O policing and makes it stronger, the impoverishment of many Iv salesmen with layoffs from Wall Street and bankruptcies such as Bear Sterns and Lehman causes many of them to regret their opposition to I-O regulating the financial industry. This rise of I-O policing in strength then will cause some Iv agents to snitch on their V clients in exchange for commissions in whistleblowing cases and also cause some of them to become more regular informants for future crises at least temporarily. This will in turn cause more V businessmen to be prosecuted, so far they have evaded this by using the secretive nature of Iv business and the shared guilt of Iv agents. The Pecora Investigation in the Great Depression was where the I-O police strengthened enough to hold V accountable, equivalent to the FBI prosecuting members of the Y mafia in public hearings. When this happens there will be more of a call to increase the I-O policing and get back more of this fraudulently acquired money which will reduce wealth inequality.

Currently V management in the US and Europe has survived the GFC relatively unscathed financially. This is like the Y predators such as lions that fed well on the weakened R and Ro prey in a drought but have yet to feel hungry themselves. It may also be their ranks have thinned enough, many hedge funds did close up in the GFC but more likely the shoe is yet to fall with them. The problem they have is the lack of a prey to make money off, the B and Bi communities in the US and Europe are so impoverished that there is little chance of a bubble to make more money from, they are reduced in effect to speculating between themselves with such as gold, silver, oil, US treasuries, food futures, etc. This then has become a Zero Sum Game for them because for each that wins of their number another loses and so it is in some ways like a pride of Y lions feeding on each other in a dog eat dog environment.

Next this will probably turn into a Negative Sum Game where the contest will be who loses the least money in trading, for example as speculative bubbles like gold move around some will be losing but more likely gold will fall in price as more realize they lose less just by leaving their money in sovereign bonds. Then it may be who gets out of gold losing the least, in any case the returns for this group of investors is in effect zero in gold and virtually nothing or even negative in treasuries when inflation is taken into account. So they will either invest in this way for safety and slowly lose money, engage in a more risky carry trade but using Fed money instead of from Japan, or try to create more sustainable businesses but run into the problem of wage earners not have enough purchasing power left to make large profits from.

The current carry trade will likely end in some collapses because they are like smaller Iv-B bubbles in lending money to smaller countries that are likely being propped up by the amount of money invested in them. When this money tries to come out en masse from these investments then the fastest out like with the burning theatre example will likely do best. So as in nature eventually Y in Roy and V in Biv will falter and lose some wealth bringing both into a more balanced color ratio and creating more sustainable growth for a time. For example as the starvation moves up the Roy food chain from R prey to Ro herds, then O animals and Oy predators, it finally gets to the Y alpha predators such as lions. When they starve they reduce in numbers which helps the Ro-R prey to recover. It is also like Biv plants dying from the B roots up to the V leaves, then the top of the trees start to collapse this allows smaller trees a chance to grow without being overshadowed by a chronically sick V canopy.

## In the same way the rising V wealth inequality will eventually come to a head as they cannot make enough money to sustain themselves, as companies too big to fail do indeed fail this will create gaps for smaller and healthier companies to replace them.

This regrowth will create a sustainable boom to some degree because as Roy areas move back into a Biv economy they will become more efficient with resources. For example when resources are scarce there is more crime and destruction with predator versus prey. This is wasteful as one can see in nature films because often an animal is killed after a long and difficult contest and so much of the energy gained from the kill is wasted in winning. In Biv societies there is more of a double win and so the energy wasted in this contest is saved and used more productively. This then should translate into a small boom like usually occurs after a recession or after World War Two in the US. For example a recession causes many areas to become Roy and many resources are wasted with fire sales of assets, crime where assets are stolen or vandalized, etc. By comparison as the economy moves back to Biv people work together more and so there is less waste of assets, this gives an increase in growth compared to the Roy recession.

The GFC has shaken a lot of people’s faith in the ability of the market to regulate itself, but this depends on what definition of the market is used. If people define a market as not containing any O government regulators then the issue is whether private I regulators can do the same job. There are many of these, for example the bond appraisers such as Moody’s were arguably a private regulator of bonds, blogs and the media can out criminal behavior in many cases, consumers often boycott companies engaging in fraudulent or unpleasant behavior, professions such as doctors and lawyers have their own regulatory apparatus that can prevent fraudulent professionals from practicing, many companies and shops use private police as security guards and some mining companies even use mercenaries as private armies, a person’s credit history is analogous to a civil kind of criminal record and is maintained by private companies, tenants are often subject to privately maintained databases to check if they caused trouble in a previous tenancy, caveat emptor means that consumers have an obligation to do business carefully and not just rely on government protections, and so on.

The issue then is whether these kinds of private regulation or policing can be enough to keep a modern Biv capitalist economy running efficiently and prevent collapses. In some ways the answer is yes because all of these function like the I trunk of a tree by coordinating transactions according to civil laws. If someone does something wrong in a market economy then they can either be sued in a civil court for damages or lose their reputation. However the Biv system can only work without O policing when resources are exceptionally abundant because some people can be so greedy only jail will deter them.

But the question has a deeper significance because it depends on how efficient the market economy needs to be, for example it might be expected to fail if there is an invasion by a foreign army, with a large enough natural disaster such as a hurricane or earthquake, with an epidemic, etc. In that sense then the GFC was a triumph for the market economy because it did not completely collapse under the weight of unknown events, people usually mean by this however that the market system should somehow stay very stable producing prosperity in a wide range of circumstances short of disasters like those described. But even this is problematic, for example if there is a nation wide drought it is difficult for an economy to not have a slump from this.

If an economy’s exports suddenly become uncompetitive because of new Gb minerals discovered overseas that can be mined more cheaply then the market cannot change this. Also if new countries are discovered such as in the Middle Ages and it turns out they are better technologically at producing goods then free trade might close down local businesses and import the superior goods until there is a balance of payments crisis. The market cannot be blamed for this if consumers decide to buy from overseas even though it drives away their own jobs, this happened in many cases with Asian competition with low wages against the higher wage US and Europe. So while the market might coordinate these changes in an efficient way this does not mean that an economy will continue to prosper.

Even if the wages fell in that economy in response to the new overseas competition they might not be able to make the overseas goods themselves without the trade secrets involved or because of patent rights for example. In all these cases though the market is still working quite well just that it favors the overseas country instead of the local one, it is not enough then for the market to be self regulating and efficient but that it produces what the local inhabitants want. An efficient market is no substitute for food, if imports are bankrupting a country then it is logical enough for them to erect tariff walls to preserve some jobs.

In this way then a market is tinkered with to produce preferred outcomes, this can be for a clear reason such as tariffs to protect against predatory iports but it can also become confusing where ever more regulations are added to try and make the market work better. In some cases though such as a lack of Gb resources there is little that can be done.

In this case when there is a crisis it is natural to question whether it was the tinkering with regulations that caused it, whether more regulations were needed, or whether the crisis would have happened anyway as with the hurricane example. The situation is very complex and so examining the effects of different trade competition like this shows that some are likely to be better handled with free trade with I-O policing and others with some form of protectionism. In terms of Aperiomics theory the answer is that the market can indeed function as a self regulating mechanism, this is what Biv describes, so those proponents for the market are correct. The problem is this only applies to Biv parts of the economy, when other countries are Roy such as invading armies, when there are too many criminals that simply strip a market of its goods, when there is too much fraud so that a Y mafia can use businesses to take goods or money and then go bankrupt so there is no way to get it back, when a professional organization such as for doctors cannot make those struck off stop practicing medicine, when consumers complain about business transactions and then riot destroying their business property in protest, when someone robs a bank or embezzles from a company and then cannot be found, these are Roy actions that are part of the animal kingdom and so the Biv system cannot handle them properly. The government is also part of this Roy system because it deals with public property, for example it taxes people making their money publically owned and then spends that money on behalf of the public.

A Biv forest in nature can work quite well without any animals, even insects and birds to spread their seeds or pollinate their flowers. In the same way a Biv society can work without any Roy aspect but it still has the problem of how to stop these Roy organizations from forming, also some animals are useful to a Roy forest such as for spreading seeds and pollinating. Ideally then for the Biv market to function well it needs to control these Roy institutions and keep them from causing problems, use them to do jobs it cannot do well itself, and evolve them to work permanently in this role. This is what plants do to animals which is why insects and birds are generally not harmful to them. However some animals are not evolved by plants, rather they have the upper hand and evolve the plants to suit them.

For example in a grasslands the plants have little chance to grow large and are mostly defenseless against being eaten. This is like a Biv market in a poor or emerging economy where there is too much scarcity and crime for the market to work efficiently, people simply find it easier to rob a shop with O police than to save up money or find a job even if this is possible. The argument that these countries can somehow grow into Biv capitalist societies is similar to saying that grasslands can grow into forests, technically it might be possible with enough Gb resources but practically it doesn’t happen in most of the world’s ecosystems. The reason is that for some environments the mix of Roy animals and Biv plants just works more efficiently and in the same way some poor economies work more efficiently with a mixture of Roy and Biv.

One example of this is using O police to deliver criminal verdicts such as jailing or even executing criminals, technically this can be done with Biv such as with private jails and security guards but when the economy is poor businesses find it difficult to find the money to create and maintain these private police and courts. Technically then it is possible to stop bank robbers in Biv, for example banks might have alarms and trap the robbers when they try to break in. Embezzlers might be monitored by privately made software to detect intrusions. However in a poorer economy the bank might not make enough money to afford these countermeasures and it becomes cheaper and more efficient for a government to set up O police. Private security guards for example might rob the bank themselves or change sides if offered a share of the robbery.

It becomes as difficult then to work out Biv ways of doing everything as it is to find Roy ways of doing everything in a prosperous economy. For example banks might work better when nationalized in a poor Roy economy but they are far less efficient in a wealthy Biv one. Much of the US financial system was in effect nationalized as the government got shares in exchange for loans, however as the economy recovers these are being paid off and privatized back to Biv.

## Trying to make an economy all Biv can be inefficient and lead to a crime wave, this is like a Biv forest that animals find and attack reducing it to a grassland.

Elephants might knock down the trees for leaves, this is like criminals defrauding and bankrupting large companies. Much of the crime on Wall Street happened because there were only I civil penalties for fraud, businessmen and salesmen were then free to keep looking for the perfect fraud such as hidden behind tax havens with no more of a penalty than losing the ill-gotten money they made. As an economy becomes more crime ridden by an insistence on only using Biv market mechanisms it becomes poorer and so it needs Roy policing more than ever. If this does not happen for ideological reasons then the economy can collapse into Roy where the need for O policing becomes obvious. In terms of the forest this is like having animals evolving in it that defend the plants against animals that try to move in and destroy it, if these local animals are not strong then foreign animal invaders might destroy a forest completely. The government then is needed for many functions, most concede at least for the police and defense but any part of the Biv system can be attacked by Roy animals.

In the same way a rigid ideological need to use Roy only solutions was the downfall of the communist system, by insisting on only having public G property and no Gb private property, they were unable to compete with established Biv economies with private property like the US and Europe. However in the 1930s the opposite was true, the Soviet Union and Nazi Germany along with Roosevelt’s New Deal used G public works that were often more efficient than Gb private property based business. Eventually the USSR for example became prosperous enough so that the shortcomings of the Roy systems were obviously holding it back. This led to the dismantling of communism more than a disaffection with its principles. In many ways communism had become little more than a nanny or welfare state with extensive medical, pensions, consumer protections that exist in many Western countries. However the increasing wealth from technological made it obvious that the Roy system could not develop sophisticated products with G public ownership, and that it was unnecessary to insist on the continuation of only using G public ownership.

The same happened with China perhaps from seeing the Biv system working well in Taiwan and Hong Kong. Because of this reduction in wealth in advanced economies from trade deficits and weak I-O policing in Europe and the US there is now a stronger Roy aspect there such as nationalized banks, the Fed in the US lending money and selling off toxic assets, partially nationalized car manufacturers in the US, and increased oversight of the financial sector with criminal penalties more enforced.

These will seem obviously more efficient until and if the global economy recovers when there will be a clamor to make it more Biv and less Roy with more Gb privatization. If this privatization goes too far especially without enough Biv abundance of Gb resources then it can cause more crime in the financial sector again. It should be noted that many emerging economies have a pragmatic view on a mix of Roy and Biv in their economies, China for example has a strong state domination of Biv business with Roy banks, Roy tariffs, Roy subsidies of some industries such as electric cars and solar panels, a Roy lack of democracy, strong Roy penalties for corruption of police, still having a one child policy, etc. The same can be said of Russia and former members of the USSR and Warsaw Pact, Russia for example has a large G state owned oil business.

Technology and fears of opacity stemming from the GFC have made the financial systems more transparent but much remains secretive and deceptive. Even where it is relatively transparent this is often more like Iv-B where the people and companies involved use this to watch each other closely for signs of panic or greed to get to profits faster as well as escaping losses by getting out at the first signs of collapse. This is not the same as V-Bi working as a team where risk is shared and individual members are willing to lose some profits and so cover each other’s losses. Even organizations such as the Iv Tea Party on the right and B Occupy Wall Street on the left in the US are often not really acting as a team but as individuals looking for some gain or ideas from watching each other. For example many of the organizers and some protestors might be paid by donations coming in or secretive corporate or political sponsorship which can give the movements momentum. This can also be seen by their high energy and ability to grow and spread quickly like a contagion which then becomes a problem for the I-O police to control just like with a financial contagion. Both tend to be revolutionary unlike with many riots in Europe where there is more V-Bi solidarity and association with Bi unions.

This Iv-B fragmentation in protests also extends to blogs and comments in the media, people suggest revolutionary ways of coping with the crisis not realizing that it was partially caused by too many revolutionary ideas such as with derivatives, computerization, and subprime lending as well as the dismantling of the older financial system. Even in the social media such as Facebook and Youtube the system is mainly Iv-B shown by their revolutionary ideas in communications, the secretive and often deceptive nature of people’s profiles, the speed and energy of posting, the ephemeral nature of friends on these which could rarely be depended on to work as a team, the secretive and energy of flash mobs, the revolutionary ideas that fed into the Arab Spring often overturning Roy systems with little ideas on what to replace them and in some cases electing more Islamist revolutionaries, the exponential increase of apps in such as Facebook which often go viral in popularity which is now extending into mobile phone and tablet apps, the proliferation of so many blogs that cater for more different views often deceptively with pandering and which attract secretive and anonymous commenting, the increasing use of mobile smart phones that represent links or networks between people like roots and branches rather than more open V-Bi meetings where each person is heard by all, where privacy is being eroded not to be more transparent but to track people for deceptive advertising strategies and so people can watch each other anonymously for new viral trends, with music becoming more fragmented with more different musical styles becoming viral often selected for people by computer algorithms such as Spotify and Pandora, and so on.

These represent the continuing revolutionary chaos in technology changing society, this only slowed down in the financial sectors by too many new and unregulated innovations collapsing them with mutating ways of doing things that were not sustainable. These changes in the relationships of people are being driven by the Iv-B nature of exponential computerization and software which is also expected to produce AI as smart as human in decades.

## The GFC then cannot be viewed independently from the Iv-B technological changes transforming nearly everything else in society, when people are increasingly able to interact in Iv-B ways with computerization then this creates associations between them that could not exist before and which grow exponentially at the expense of V-Bi relationships.

Usually these Iv-B changes are not easy to see until the Gb resources are running low, the shadow banking system in the US managed to grow to the point of causing systemic risk without being properly understood or even its connections to other financial companies known about in the case of Lehman. This is like in the ocean where waves appear to not have much energy until they hit shallow water, the shadow banking system seemed to just have a high momentum and occasionally had small collapses like a series of tsunami waves that only encountered deep water as monetary liquidity. So these momentum waves were increasingly powerful but they were thought to be safe like tsunamis in deep water because there was still plenty of liquidity in the financial sector. Much of this however was V-Bi loans which were becoming exhausted, also the increasing trade deficits of the advanced economies ensured that when these loans were used up or redirected then financial liquidity would quickly become shallow making these waves more dangerous.

The hollowing out nature of Iv-B chaos however kept reducing this liquidity into ever more roots and branches until finally there was not enough to stop its destructive power and so it nearly destroyed the financial system. It was only that the lenders of last resort were well separated from the Iv-B system that they had enough money left to stop the chaotic waves, this is because as the system becomes more prosperous it becomes more Biv and so the role of Roy public institutions like central banks become marginalized.

If the system is becoming poorer as well as becoming more Iv-B chaotic then there are increasing amounts of Oy-R chaos as well which is secretive and deceptive crime. This was also happening as part of the GFC but happens even more in emerging economies such as Mexico when it needed a bailout in the 1990s. In the Great Depression there was not much wealth in the global economy partially because so much had been destroyed in World War One, this made it much harder for countries to find liquidity to reduce the chaos. Germany for example tried to increase its money supply to reduce chaos in the 1930s but produced hyperinflation, most other economies at the time were wary of taking on more debt for a stimulus because they thought it was bad economics. In that situation the Iv-B waves are much harder to stop and caused greater destruction in the world economy.

To rebalance modern society there will need to be more V-Bi interactions such as cooperation between individuals, organizations, companies, and government institutions acting as Y-Ro such as central banks, international police cooperation, the IMF and World Bank acting more to help countries rather than as a tool for Iv-B exploitation, and so on. It is also necessary to increase the numbers and severity of O penalties where Roy financial and related crime occurs rather than allowing their extra money to bribe the perpetrators out of trouble but again this is unlikely to be possible with an unbalanced system because the O police themselves are more corrupted into Oy themselves. The I-O market also needs to become more coordinated between buyer and seller, supply and demand, etc which in Aperiomics means that goods and services produced by Iv branches as agents for V talent need to be better coordinated with Gb materials found and developed by B workers and represented with their Bi communities such as with unions and cooperatives.

The exponential increases of Iv-B technology disturb this relationship between supply and demand, it creates ever more different goods and services mutating and looking to become virally successful often addicting consumers into throwing away older products. It then works against savings and insurance based systems that make the system more stable, people’s assets as well as expenditures can grow explosively and often collapse as the connection between supply and demand or buyer and seller becomes more like a glut and then famine. The system is also secretive and deceptive so people cannot easily predict these trends, this means more often people will get into trouble financially and more goods will be wasted by becoming quickly obsolescent.

The situation is like many different waves at the beach where the momentum is felt as a wave suddenly rises, this rising however is associated with running out of liquidity or resources just as the water wave rises because of shallower water. Like a bubble economy then this increasing rise might feel like a good thing economically but it indicates that eventually the water will be so shallow there will be a collapse into turbulence and tipping points like someone being tipped off a surfboard. The exception to this is like waves passing over a sandbar where they rise up but then instead of breaking become smaller again in deeper water on the other side of the sandbar.

This sandbar is like an economy with a restricted amount of chaos and plenty of liquidity, this was seen for example in the Tech Bubble of the 1990s so when it collapsed it did so in a more orderly manner because of the large amount of liquidity in the system. A financial bubble is much harder to slow without a crash because only liquidity can stop this and the bubble in effect has risen because of a lack of liquidity. This has happened in smaller countries that had a balance of payments or economic crisis such as in South America, the IMF and others can provide a pool of liquidity so the Iv-B waves fall down again hopefully before they do too much damage and then more I-O policing can sometimes resolve the problem temporarily.

This would be difficult and probably impossible in practice because of the revolutionary chaos driving the system’s changes from computerization, the I-O policing then will tend to be either Iv and Oy orientated generating resentment and rioting from Bi and Ro communities. There will also be a persistent disconnect between the Iv-B in Biv and Oy-R in Roy on one side and the V-Bi in Biv and Y-Ro in Roy on the other. Unfortunately to rebalance such a complex system requires a group strong enough to actually succeed in this and such a group cannot easily form at all by the pressures of the system itself. For example solving a crisis can be like saying a hurricane can be solved by some of the wind decreasing in speed, the system can be too interconnected for a large enough group to successfully push against the momentum of Iv-B or the stagnation in V-Bi.

In this sense Aperiomics is not so much a system of how to change society, which is often impossible because each issue has large groups pushing on all different sides, but to predict the changes that occur. Too big to fail is then a misnomer because the problem is not that some institutions become too large, for example the US is too large an economy for the world and when it has a recession the rest suffers and much of the GFC was exported around the world. There can be no suggestion that the US is too big to fail and creates a systemic risk from its large economy, the issue is not size but stability. It is common in Iv-B for companies to grow very large because in this competitive environment there are fewer and fewer winners over time. For example in the banking sector in the US there are large companies like Citigroup and Bank of America but in the Internet sector there are Microsoft and Oracle for example.

Becoming a large Biv tree is common in forests such as with the Sequoia, but having larger trees and fewer small ones leads to a kind of ecosystem that produces certain consequences. In the sense that some of these may be undesirable having too big a company may have undesirable results, this was the point of the Antitrust laws in the US that broke up Standard Oil. The fear is that a large company like a Y alpha predator will dominate the economy too much and few will be able to stand up to it, they may also use their money and power like an empire to crush and bribe their opponents. This is a different issue though of whether there is enough I-O policing to moderate these large companies, it is like having a strong mafia such as in parts of Italy which the police can no longer control because of corruption and intimidation. In this case the police try to break the connections between the different Y Mafia families hoping to get them fighting or competing with each other, this is like improving the efficiency of large companies in Biv by making them compete more and breaking up their V team mentality to some degree.

One reason companies get so large is unrestrained Iv-B growth which leads to some growing faster and either failing or overshadowing the others like a large tree cutting off the light from its competitors. So in the internet sector for example Microsoft, Google, etc can maintain their position by overshadowing their rivals. They can give out free software to bankrupt their competitors, run at a loss in the case of Xbox against its rival Sony Playstation, or if that fails buy them out. So it is not just the concept of too big to fail which is a positional idea in that the momentum of the system is ignored in that analysis. For example Microsoft argued in several cases that though it was large the momentum and innovation in the market could change this quickly, indeed it quickly lost its market share in tablets and mobile phones in 2011. The loss of this market share did not affect the economy much except in terms of the wasteful nature of Iv-B growth, this was because the companies involved were also so profitable that they had plenty of liquidity to ride out the tsunamis generated by such drastic changes in the market.

The problem then may not be too big to fail but too big to handle low liquidity and high waves from the momentum of the market. Smaller businesses might break under this chaos and quickly regrow much like replacing cheaply constructed houses after a tornado, however replacing large buildings will take longer and can cause much more collateral damage such as falling onto other buildings. Also a tornado might destroy schools, factories, and shopping malls which create a tipping point in a town that makes it unable to survive on savings long enough for them to be rebuilt. These tipping points then might create an economic downward spiral that hits the floor in effect causing a town to never recover as people and businesses move to an adjacent town and settle there.

The GFC may have permanently damaged some businesses who went bankrupt or moved elsewhere, for example if GM and Chrysler had been allowed to fail it is quite possible that they could not have regrown as they did because of the waste and carnage from the wrecked supply chain. Other competitors might have bought up strategic parts of them to shut down to make sure these brands didn’t survive, because the parts manufacturers had invested so much in specific types of parts all this money would have been a dead loss compared to the cost of turning them temporarily into zombie companies.

This was not a problem of General Motors being too big to fail, rather the chaos from its collapse was repeated in a fractal way among smaller businesses which is why the US and Europe remain stagnant. Because the larger V and Iv businesses have more money at the end of this color imbalance they have the clout to save themselves more often especially with lobbying for V government bailouts, then they use the argument too big to fail to differentiate themselves from smaller business that should have been helped as well. Too big to fail companies are usually those that reached the V canopy and connected with other businesses to overshadow those underneath them. When Iv companies try to compete with them they can reduce their prices to bankrupt them or to make them cheap enough to buy out, then they raise their prices to recoup their losses.

## Because of this they occupy a unique position where if they fail a lot of extra damage is done to the economy, they have in effect created an environment where they have no ready successors. It is not their size then that is the problem but the lack of replacements for them.

The issue behind this too big to fail problem was the Iv-B exponential growth which eventually hit the wall of limited Gb resources as well as becoming disconnected with the reserves of V-Bi money available, this reached a tipping point then hit the floor in the GFC. These kinds of companies then collapsed by the V canopy tended to survive or even prosper from decreased competition and bailouts from its V team political connections. Then they were in effect able as Y to prey on Oy predators, like V companies buying up the wreckage of their Iv competitors cheap. This is why the too big to fail companies grew and became even more dysfunctional from this size which approaches the limits to growth.

Protecting the Iv-B system is difficult because in the Iv-B growth there were so many collapses with smaller businesses that this impact was as bad as the larger firms collapsing, for example with so many housing foreclosures the effect on US GDP is arguably as bad or worse than the effect of banking collapses. This is because of the fractal nature of Iv-B, the system is self similar with smaller businesses as with the larger ones. The problem in an Iv-B collapse then is the government tends to pay more attention to the larger companies that collapse even though this is repeated in much larger numbers with many small companies collapsing, the smaller companies can be more of a problem because they are needed to regrow the Biv forest while the larger companies are often dead wood for a recovery. The chaotic collapse of larger Iv-B companies might not affect the smaller companies directly in the sense that they do business together, however powerful shock waves might upset and sink companies that are unconnected or even randomly arrayed compared to each other. For example coffee shops might collapse in a financial collapse even when not owned by the financial companies.

The exception then is where there is a domino effect so that a collapse of a larger business affects smaller ones causing waves along its supply chains or roots and branches. For example if GM had not been saved then many other companies making parts for them or aftermarket accessories for cars as they were sold would have gone bankrupt, this would be a more direct chaotic consequence like roots and branches breaking one after another . This would also reach into in some cases smaller stores such as fast food outlets near factories, however the shock waves can also act like a storm that knocks over trees even without one tree falling on another one.

Chaos starts from smaller cracks and collapses and then works it way up in size, joining up cracks into large shearing forces which can potentially bring down these too big to fail companies without V insurance. If this chaos is not being monitored by I-O policing then it will grow unseen and then later like with lax building inspectors the height of buildings in an earthquake will be blamed as the cause of deaths rather than inadequate policing of building design and monitoring for signs of metal fatigue and cracks in buildings. Like with using a banking stress test companies should have liquid reserves enough to meet these kinds of waves just as buildings need to be able to sway rather than topple in an earthquake, however this needs to apply to the whole economy not just to testing some buildings after the financial earthquake has passed. It is not enough to start checking for an epidemic after it has already occurred, doctors for example keep a close eye on early signs of chaos to nip it in the bud. This expression is itself like brances growing, in effect it is also like cracks growing in branch shapes that need to be stopped before they get large enough to crack wide open.

Too big to fail companies are supposed to be the protection of an economy like large trees and canopies can actually protect the rest of the forest from high winds, the Fed in the US for example succeeded in stabilizing the economy because of its size and the amount of money it could command. A smaller Fed would have just collapsed under the weight of the shock waves. AIG would have been able to quench much of the contagion by itself if it had not written its derivative contracts badly and guaranteed too many losses on Credit Default Swaps, its size then came close to being enough to quell the chaos with these swaps if it had been able to overcome its temporary liquidity problems. Countrywide could have survived if it had not risked too much to compete with subprime financiers with fewer moral scruples, they might have been Like Fannie Mae and Freddie Mac that helped to stabilize the economy with government bailouts.

The problem is low I-O policing drives out the good companies or they must turn bad themselves to compete in Iv-B and so even when they get big they are often chaotically fragile from being weakened in this race for growth to get to the canopy. In this sense then the problem is not that companies can be too big to fail but they can be too big to fail when they grow in Iv-B because these financial structures are designed to collapse when they use up all resources. A tree then that tends to grow stably might have to compromise its strength to win the battle against other flimsier trees that save nutrients by skimping on strength. For example Lehman might have been able to grow more stably but it had to compete in a toxic and competitive environment where subprime was the only way for it to grow. If they had not done it then another similar company would have, when that company failed the result would have been similar. Designing hi rise buildings which are intended to collapse with a form of planned obsolescence makes little sense in a crowded city but this doesn’t mean hi rise buildings are all bad.

Iv-B then can be bad for an economy as it can be bad in a Biv forest, but the issue then is not monitoring bubbles to determine when to prick them which is to bring on a premature tipping point and collapse. Iv-B grows like a plant and in the end is intended to have a fruiting or flowering phase creating seeds so when it dies there can be regrowth. So popping bubbles can just prevent these seeds from forming so not only is there a collapse but there is a sluggish growth afterwards because the companies not only failed but they failed to provide a way to regrow. One of the problems in the GFC was that few saw it coming and so the Iv-B plant like businesses were caught in risky competition and not attempting to preserve themselves by contingency planning for a collapse.

For example many B home buyers could have saved money they made in speculating on houses if they had some foreknowledge of the tipping points coming, they could then have used these savings to be ready to make more roots in the future such as being ready to survive unemployment, retrain, move to another area, etc. House builders could have paid off more debt and been ready to survive a recession as companies typically try to do, they would then like a tree shedding some leaves and branches like laying off workers and rebuilding equipment for the coming good times. Banks would have reduced their loans and staff, written off bad loans early and avoided subprime loans they knew from experience would default at much higher rates. Even the shadow banking system would have taken precautions reducing its leverage and increasing reserves, slowing the subprime pipelines of bond creation, and so on. The idea of Iv-B competition then is not always to compete or fail in the effort but to watch out for external shocks and have enough reserves to survive them, in evolution then those that can survive shocks like the GFC while still being competitive tend to survive more often.

This is like how Iv-B technological companies plan for disruptive competition, they know a new product might suddenly threaten their profits and so they are always trying to anticipate this with research and watching their competitors so as to not be caught short of reserves to adapt with. The problem though was the chaos was so hidden and deceptive because of the complete lack of regulation in derivatives and the shadow banking system, in effect I-O was nearly nonexistent and because they were the only ones who would look out and warn others about this chaos its arrival was so unexpected. It is like a freeway with no police at all, there is then no one to warn others about crashes on the freeway to avoid or to explain that higher speeds will suddenly cause a pile up rather than give people time to react.

Companies then collapsed in the GFC much as they do with disruptive innovation in tech businesses but not in a controlled way to reorganize or be bought out, they mostly collapsed in the middle of unrestrained competition which kept their profit margins low and the sometimes large profits had been ploughed back into more risky investments. The situation is analogous to the tsunami that recently struck Japan, being so unexpected it caused much more damage than if people had for example an hour’s warning. The financial sector had so little warning in the GFC as with 1929 that businesses everywhere had no seeds for regrowth and so the wreckage left was often useless for reforming new businesses leaving toxic humus and stagnation.

People tend to expect bubbles will pop because they understand the nature of Iv-B as fast growth and usually they expect a correction at the end, they can however think of this as like a bubbling economy like boiling water. When the bubbles are mostly unrelated to each other the randomness between the chaotic bubbles stops one bubble bursting another in most cases. In this balance of chaos and randomness then collapses in some businesses do not bring down many others like falling dominoes, others instead buy out the fallen business cheap like competitor trees use a fallen one as humus. When competition however is too fierce the trees in effect get oo close together and so when one falls it drags down others, in the same way businesses were too interconnected so one failing knocked down the others because it had no safe place to crash.

Most companies and investors then will commit some investments to a bubble but usually not enough so it creates a systemic problem, the Tech Bubble for example created few problems for the US economy when it collapsed because so many expected that it would and had made plans to survive it or even profit from the opportunities a collapse brings such as buying up competitors cheaply. Predicting bubbles is then a job for the market to some degree which it performs inefficiently but not usually as badly as in the GFC. However similar lapses by the I-O market occurred in the smaller crises in South America and Asia leading up to the GFC and these were generally caused by corrupt government and cronies which came from weak I-O policing.

This corruption was obvious to most doing business in these countries but the assumption was that this contagion was not bad enough to cause a collapse, like saying someone is sick and can work but not sick enough to die. Those that did think a collapse was inevitable either had more of an incentive to keep quiet about it to make a profit from shorting or buying out those caught in the crash. Even those civic mineded enough to warn others about a crash are usually ignored or drowned out by those in the media profiting, they say temporary weaknesses in the market are not bear traps but are opportunities to take advantage of those caught by them. Because collapses are part of the competition signs of problems are usually not a reason to panic and leave or demand more regulation, instead they are used to take over the assets of the faint hearted who do panic too early.

The solution is not to try to predict when a bubble is forming or when to prick it but to have enough I-O market coordination so that the market and police can see what is going on clearly enough to not misallocate resources in the opacity surrounding them. In this Greenspan was correct in not pricking the subprime bubble but it is necessary to also have sufficient I-O policing so the market has a better chance of reconnecting Iv-B and V-Bi without a collapse. Bubbles are formed from gaseous money which is where money has so much energy it distorts the value of assets around it, much like steam can make a boiler explode or hot air can make a balloon expand with increasing heat energy. Where there is a bubble then there must be excess Iv-B in the economy, too much momentum and speed of transactions which is distorting prices like people rushing into buy speculative bargains or panicking and dumping those goods as the bubble collapses. Both greed and panic can have high momentum but this was disconnected from the non bubble parts of the economy which are like liquid money or frozen money as debt, because of this disconnect it was impossible to predict when the shock of loan money running out would hit.

## Emerging economies typically either have high Iv-B growth insulating them, such as with China’s trade surplus in the GFC, or they might partially collapse like with Russia in the GFC when shock waves from other economies hit them in this transition from Roy.

Some economies can also be V-Bi stagnant with few prospects for growth if they are disconnected from the Iv-B parts of the global economy, for example African economies. When they have this high Iv-B growth it usually means they have a competitive advantage that is temporary such as a quickly used up Gb mineral resource, often however they exploit this opportunity with exponential growth rather than trying to mature into a stable tree and hence have a bubble and collapse. To work out what is likely to happen with an emerging Roy economy this competitive advantage should be analyzed with roots and branches to see where it is coming from, how long it is likely to last, if another economy or company can sabotage it for example by tariffs or setting up a competing industry, if a lack of local I-O policing causes so much corruption that the successful business will bleed too much money, if the Iv business has a loyal V backing often with government support that supplies the capital often with government backing such as in Korea Japan and China, if they can use a V-Bi cartel or team to get better prices or other economies can use a similar cartel to pay them less as with coffee, and what would happen to local roots and branches if this high growth aspect crashed or ran out of Gb resources.

## Iv and B are often left saddled with debt as they borrow for high leverage because their competitors are usually doing the same, if any company or economy fails to use every advantage not actively forbidden by strong I-O police then others with less scruples can send them broke.

Much of this growth is almost like a form of contagion because it coincided with the promotion of more free trade, this removes I-O protections for industries between economies and allows some to be bankrupted in a Y predator versus R prey relationship. For example Japan did well in the 1980s with semiconductors by dumping them at low price and damaging the US industries until partially overcome by the V team Sematech, when the competitors are bankrupted or taken over then prices can be raised to make up the losses from the previous Negative Sum Game. The situation is then similar to deregulation in the US around the same time as this Japanese dumping, the weakening of the I-O police led to a rising contagion in the financial sector starting with the Savings and loans crisis.

Free trade then is laissez faire capitalism which in Roy is like having a community with no police, when I-O is weakened it follows a predictable path of disconnect between Iv-B and V-Bi which leads to stagnation in some areas and a bubble that collapses in others. Another factor is the idea that trade by its nature can only benefit both parties since each decide to make the trade perceive an advantage by doing so. However someone can go bankrupt making a profit, spending all their money shopping is an accumulation of profits that leads to having no money for rent and food for example. Also sometimes because of a financial disaster people might have to sell assets at firesale prices in a Negative Sum Game, it benefits them more than starvation by not selling them but it is hardly a benefit.

So sometimes there is a greater profit or in Roy a smaller loss by not making a consensual transaction, this decision to not do a deal is in itself a kind of deal and so is often of mutual benefit as well. The manipulation of exchange rates for example was thought to cost the country that did it because it created more inflation and made imports more expensive rather than leading to a profit, however in Roy the idea of often not to make a profit but to make your competitors lose more than you until they collapse first. So China or Japan for example might have lost in some ways keeping a low exchange rate but overall arguably the US and Europe lost more industries because of this. When economies use this kind of Mercantilism the idea is usually to capture manufacturing industries which are usually Iv and V because they refine goods rather than produce them in a raw form for other to improve. Because Iv and V are overtones of Oy and Y this is in effect a strategy used between predators.

For example China might import Gb resources from other countries and refine them into electronic goods to make a profit in exporting, however Iv and V are typically the wealthiest parts of an economy as seen in the US with wealth inequality for example. This then exacerbates the trade imbalance by taking the industries that make the most money and leaving those with the fewest profits and lowest wages such as mining and farming. The result then is that taking over V-Iv industries makes an economy wealthier because it takes from another economy the part that accumulates the most wealth. Because of this a trade imbalance can be more dangerous when V-Iv industries are being eroded by it.

The end of this Negative Sum Game need not be good for both sides of this free trade just as a predator eating a prey need not be good for both animals even if it maintains a kind of color balance, Japan for example ended up with two lost decades after the growth from this strategy stalled with China using their Mercantilist tactics in their place as the US forced up the Japanese exchange rate. The US lost a lot of money and industries from this predatory Negative Sum Game, Japan created a huge Iv-B real estate bubble from its export industries becoming disconnected from its V-Bi banking sector, as a result this bubble caused more damage when it collapsed leaving V-Bi zombie banks propped up by the government but with no longer the Iv-B competitive advantage that made them prosper in the first place.

Japan needed to keep its exchange rate low and so money from its trade surplus had to stay invested in US dollars or other currencies instead of being used in Japan, this made it necessary to increase government spending from taxing savings in an attempted Keynesian stimulus of the economy but this only made more of it zombie like as there was no Iv and B growth in this part of the economy. According to Aperiomics they should have used this money in financing and subsidizing new exports and other kinds of industries to create more Iv and B growth and then try to mature those industries into something sustainable. Any crisis though will lead to a reconnection of Iv-B and V-Bi in a mixture of chaos and randomness, some areas will experience more small collapses and aftershocks because they are parts dependent on each other.

In these Iv-B interconnected parts of the global economy when one part collapses it leads to others along roots and branches experiencing waves along this conduits which could collapse the next economy or company along the conduit as well as the roots and branches themselves like the domino principle. Other parts will be more independent of each other and so shocks will not affect them as much, for example the software business in the US was not affected much by the GFC because it had enough liquidity like an industry trade surplus to ride out the tsunami like waves. It can however have other kinds of chaotic collapses as well as bubbles, for example the battle between Android by Google, iOS by Apple and Windows by Microsoft is causing bubble like growth in share prices of Apple and a collapse in some markets such as mobiles and tablets for Microsoft.

However the only real effect of the GFC for this tech sector so far has been selling fewer products to people impoverished by it, the Iv-B exponential growth of computer and software innovation continues. Restaurants for example might have experienced some shocks by the collapse of the subprime financial sector, Starbucks for example might have gotten sharply fewer customers in more upscale areas of New York but might have other industries as customers more insulated from the GFC allowing them to downsize and shed staff without collapsing like sustainable trees do.

Some homes after the GFC might be worth slightly less than their mortgage but if the owners have enough income they can ride out the aftershocks of price changes in real estate regarding their costs as similar to rent. They would then have enough randomness in their situation to not collapse because of housing prices, this is a situation where the Iv-B shock waves are rendered harmless by sufficient V-Bi liquidity.

## To show this on a map there would be some areas that could be color coded as Iv and B with some collapses and rapid growth occurring, tracing roots and branches from these would show connections to other areas of rapid growth and collapses.

Around them there would be more of a connection to the I-O market where there is some counteracting randomness, some housing areas nearby might experience less growth than the Iv and B suburbs but are more insulated with randomness from collapse. Insulation around hit pipes can retard the transference of heat and so Iv-B conduits of money might turn gaseous with the higher momentum and energy of this money and affect prices around them, insulated areas then tend to resist this price distortion such as with people who had good incomes and thus weren’t tempted to speculate in real estate or refinance their homes and use them like an ATM.

This randomness around the Iv-B speculative areas acted like friction and slowed the Iv-B bubble by showing so many V-Bi people not interested in participating in the bubble, for example some real estate areas might have been mainly owned by people who would never want to sell the home their family grew up in even for profit and didn’t need to refinance. This then is like a team spirit of V or Bi making them resist the Iv-B hype and be insulated from the high energy of the bubble.

Much of this can then be imagined as like a hot spring in a cold climate with a mixture of steam as Iv-B with high energy, momentum having some I-O tepid water around it, then there are V-Bi areas of frozen money like the ice as debt or savings. The steam might be more productive in machinery for using its energy such as with a steam engine or boiler but it needs to be safely I-O moderated by using water or ice if it starts to get too hot. Often in the Iv-B share market the kind of high pressure sales giving customers little time to decide is called a boiler room, there would be pipes of money coming from customers and banks or investors and then other pipes returning profits all under high pressure to perform and bend the I-O regulations in that industry.

Such a system like a real boiler might be shut down if it is unsafe by I-O inspectors or if the boilers or pipes are too weak it might explode and then the energy is lost which is like the situation after the GFC.

The I-O market is usually a place of chaos mixed with randomness, the higher energy and leverage of the Iv agents needing fast sales and a high momentum of sales volume meet with the low energy and more time to make a decision Bi community. If Bi take too long to decide then Iv agents can collapse from this delay or friction as they lose their speed and thin competitive profit margins may mean they have to take a low price from Bi, this is like steam as gas money which is chaotic in the sense that steam molecules push each other in a dependent way loses energy and becomes like water money moving more randomly. When the Iv agents lose their momentum often their business is severely damaged and take a long time to get back up to speed, this is like a boiler allowed to cool might take a long time and a lot of energy to create steam again.

Alternatively Bi may become more excited or energized by the Iv deals being offered and realize they have a limited time because of competition from other buyers, this raises their energy level and the shorter time means faster decisions for them and more profits for Iv agents. When there are no Bi deals the Iv agents might retain their high energy by dealing with high energy B buyers while the Bi community is more like ice frozen in indecision or waiting for bargains like the V community. Then Iv and Bi might remain disconnected, this is also like water sublimating from ice to a gas under low air pressure without becoming water. So the high velocity of this gaseous money lowers its pressure and in effect this makes the connections between the frozen money harder to make in I-O deals because of the huge difference in time pressure and momentum between the two sides of a transaction in the I-O market, this is why bubbles are so hard to resolve with a collapse because the I-O water or liquid money experiences such turbulence in the Iv-B bubble that real prices are distorted. Like trying to mix ice and steam to make water this can take a long time to reach an equilibrium as the market tries to find a middle price between the Iv-B sky high valuations and the V-Bi rock bottom offers.

The boiler room way of doing business in an I-O market is an attempt to force energy into a situation where there is too much energy in an Iv-B bubble trying to do business in areas that are slow and stagnant with V-Bi frozen money. For example subprime boiler rooms were trying to do fast deals with money from the Japanese carry trade so this money was gaseous and high energy, it then distorted real estate prices as well as increased prices for such as office rent, wages, furniture, software, etc in their offices because they needed to compete to get this infrastructure when they needed it to make deals. Because waiting for office space or furniture at the right price would lead to missed sales they needed to make these infrastructure deals quickly to maintain momentum and so had to pay more for the infrastructure of their business causing bubble like prices all around them even in things like coffee shops, stationary, writing software for the business, advertising costs, etc.

As they used up more of the I-O middle class business they came up more and more against the frozen money areas of ghettoes and stable Bi communities like country people who didn’t want to be hurried. These kinds of customers like to take decisions slowly while looking at a lot of other Iv competitors if possible, this would tend to ruin the momentum of an Iv business potentially causing them to go broke. So these Bi customers were trying to make deals for loans in a more balanced I-O market where there was less pressure and consequently a fairer price. In this boiler room atmosphere though the Bi and B customers were pressured into making faster deals while the Iv agents ended up taking on deals that were really more frozen and toxic than they seemed, as the bubble slowed these areas just resumed their stagnant real estate fundamentals and froze up again with massive losses for B speculators as well as Iv subprime companies. This is like in the Biv plant kingdom where fast growing Iv-B plants sometimes take in toxic nutrients as they need to keep competing for growth against other trees, however this toxic waste can end up killing or stunting them later. It is also like starving Oy predators needing to eat diseased Ro-R prey to survive and compete against other predators even though they might become sick themselves from it. They hope though to survive long enough despite this disease to have offspring, in the same way Iv-B business try to survive long enough with this toxic waste such as from subprime loans for the V management to cash out before the company collapses.

So when the Iv-B pressure was lost from the economy from broken roots and branches in the collapse it just separated again into Bi frozen money as debt or savings and products hard to sell without momentum. The Iv fast money couldn’t make deals with these Bi communities because so much deceit had been exposed, they were even more likely to take their time which slowed the Iv momentum even further. It is then a kind of insolvency in that the liquid phase of the money was gone when the pressure to business faltered as the boiler room atmosphere either led to blow ups in parts of the roots and branches or a loss of pressure as the demand for subprime bonds as well as the funds from the carry trade slackened off. The pressure was needed because there was not a strong market in these areas in the first place, they were so far part from each other in terms of price that usually Iv and Bi would not do business with each other at all, instead Iv agents sought out B workers and hyped each other while conservative Bi investors sought out like minded V companies.

## So forcing this kind of innovative business in the US for example by mandating more loans for poor people to buy homes created an unsustainable pressure that led to insolvency when the political pressure was lessened.

The alternative to subprime loans would have been using a strong I-O policing element to make more deals between these Bi communities and Iv subprime agents by examining random deals it all scrupulously for such as secret commissions and misstated income. Many people who got liar loans were eligible for honestly stated loans because their credit rating was good enough for a lower interest rate, there was then no advantage in those cases for the secrecy and deception inherent in no documentation loans as well as having to resort to paying high commissions for subprime loans. Iv-B deals like these with deception on both sides then could not fail to distort prices of real estate and loans, when this was exposed prices then had to shift suddenly leading to tipping points and collapses.

It may even have been possible for people to use black or secret money to get honest loans if there was a way for them to be honest and be indemnified against this disclosure. For example the government might be prepared to waive using any evidence from loan applications to prosecute people for welfare fraud or not paying their taxes, in exchange there might be heavy penalties for lying in this documentation. If so then there would be no need for no documentation loans at all and so finance could have been given much more sustainably to poorer areas. For example if drug dealers could prove income without having to expose themselves to I-O police prosecution then they could bring this money into the Biv system in a more sustainable way which benefits everyone involved rather than leaving money moving around only in a secretive and deceptive criminal way.

Since in many cases the I-O police are not trying to clean up these ghetto areas of drug dealing beyond token raids this is more of a way to make a Roy area into Biv by using civil I laws in some cases instead of criminal O law. For example if criminals and even welfare cheats could lodge tax returns on Roy stolen money and then not have this information be used as evidence in any future O prosecution then this would also map out the roots and branches going into Roy areas and help government planning. Receipts might have to be provided of black market income for these loans but then not be admissible in court. R-B people taking out these loans might agree to be civilly liable for fraud in relation to these loans while disavowing liability otherwise.

It is unlikely the government would lose much money from this, they could still go after criminals and try to recoup stolen and drug money but just not be able to use this information as part of a case. In the case of gangs and drug dealers it is highly unlikely they would be able to get this information any other way because it would be cash business. If criminals could show the police relied on this information to target people for raids than that could be a form of illegal search and seizure. The idea is not to condone Roy crime but to try to convert areas to Biv business by defining more closely what is O criminal and what is I civil law. Certainly this would have been less expensive overall than the subprime damage from liar loans.

One objection might be that Y mafia or Ro gangs might buy up large amounts of real estate without being able to be prosecuted but this also binds them to the Biv economy and gives them more to lose, for example if they did drug business in one of these homes then as money not disclosed they might forfeit ownership of the house as a result. So the incentives would be to run more and more of an honest business and perhaps get out of Roy completely.

This would formalize what the government was trying to do implicitly because the liar loan was supposed to be a way for poorer people with illegal Roy incomes to buy homes without incriminating themselves, if not then there was never even a rationale as to how they might repay the loans except from hoping with no evidence that some people might have been able to pay. This then can be the attempt to moderate a chaotic situation with probability, the relation between R people and the Ro community was however covered more extensively in my first book. For example a loan officer might calculate that people with a certain credit history or FICO score have a certain random probability of repaying a loan, this might also include being able to sell the house without loss if they fall behind in payments. However if the situation is secretive and deceptive with Iv often fraudulently altering loan documents and B often lying about their ability to repay. This mutual lying then is like trying to use probability to calculate in poker, it works to some degree but becomes distorted the more people lie. For example if all the claims people made about their poker hands were recorded the cards would have far more high cards and full houses than a fair deck contains.

## If probability worked in such a situation as subprime loans then poker would fail as a game, players would just be able to work out the odds of the different hands like in casino blackjack and beat everyone else whether they bluffed or not.

This is the same as taking people’s bluffs on both sides at face value, it gives a picture of the economy that seems far more rosy than it is until the time comes to show the cards. At that time there is a crash where the secrecy and deception is exposed, then as the economy shrinks exponentially people profit from deceptively painting things as worse than they are until it hits the floor and reverses again. The same happens in an Iv-B bubble, the statistics for example of home prices recorded and loans made are like taking poker bluffs as factual when there are no I-O police involved to regulate the market properly. The relation of poker to this is not coincidental, many quants are poker experts, outlined in the book The Quants by Scott Patterson. Many of the top hedge fund managers were world class poker players as well.

The same occurs with crime statistics and welfare in trying to model how R and Oy ghetto situations can be policed or helped. Much of the crime in these areas is not reported, welfare fraud is rife, people often give false accounts when arrested and even if found to be lying in court might still proclaim their innocence from prison. So interviews from people in these Roy areas contain stories meant to manipulate the situation with deception for profit or to minimize loss in a Negative Sum Game, the same occurs with Iv and B areas in a Positive Sum Game. The only way to resolve this problem of deceptive statistics is I-O policing which balances chaotic privacy with random transparency to let the situation be policed effectively and welfare including foreign aid to be used with less misallocation of resources.

The money in Biv moves in roots and branches but in an Iv-B boom the pressure in these can cause the equivalent of a financial aneurysm where they bulge or sometimes break, the pressure can also be released with people fleeing the bubble as they lose faith in it, an oversupply of real estate or other bubble asset dissipates the concentration of energy slowing prices and starting an exodus, or there can be a disintegration as the roots and branches break off much like trees in a storm.

When this happens some of the liquid money is lost and cannot easily move between buyer and seller or supply and demand without these conduits, it then pools in some areas and cannot easily surmount barriers between them because of a lack of remaining energy or rampant crime. This is more like a delta of a river that becomes blocked up with contagion like marshes, the water pools and only occasionally moves with a small flood or high tide, the roots and branches may also move because of these blockages like shifting channels to make navigation difficult and deceptive. This is like after the GFC where money flows more sluggishly, sometimes in the veins in effect of zombie businesses propped up by the Roy government, at other times businesses try to navigate these marshes of finance put together some deals and then finding finance has dried up like in the delta and needing to find alternative funding.

These pools of money are referred to as a liquidity trap in economics where V-Bi money cannot easily be loaned as the situation is so deceptive and uncertain as to whether it will be repaid, like the shifting channels companies may take a loan and then go bankrupt as their customers or suppliers dry up, investments might be made in a booming commodity that plummets in value when consumers cannot afford it any more as happened in the oil boom, analysts try to find reliable investments in this murky and shifting economic climate and the government may try to help with tax cuts and accelerated depreciation but this can often just cause more liquidity to be wasted because the channels just silt up more or the money gets soaked up by hoarders rather than circulated.

One solution for this of course is water moving faster, this is higher energy and low time and in effect is saying another boom like a flood of money will clean out the channels and make them into a more efficient delta. However a boom requires in this case more secrecy and deception to entice investors to put in enough money to make it a Ponzi scheme or self-fulfilling prophecy for a while, this is hard to do after a market has collapsed which is why a boom usually occurs in something else next such as tech to subprime to oil to gold, etc. The more sustainable solution is for the I-O police and market to dredge out the secrecy and deception from these channels so liquidity flows more efficiently through the swamp, it then has a better chance to convert back to a healthier ecosystem. However with no I-O police to do the dredging the other colors try to take advantage of the swamp like situation and adapt to it rather than trying to fix it.

Another boom in a swamp like stagnation is often not sustainable, Iv-B booms tend to use up Gb resources inefficiently and unsustainably then be in the same situation with even more collapsed infrastructure. A flood of liquidity into a marshy delta will make the water flow efficiently for a while but it has to overcome the V-Bi friction that has built up, often this flood of liquidity just causes more damage to the tributaries as they overflow rather than clean out the silt by themselves. This is like trying to pump stimulus money through the financial sector after the GFC, the money just pools in some areas or the energy of it is used up in welfare such as in Greece. When money gets into some deeper parts of the economy it might stage a small recovery but this can easily be throttled by the money pressure easing as the stimulus is used up, also this pressure might be diverted to another area of the economy that seems to revive and so the first area withers again from lack of money.

Even with a sustained flow of liquidity the ecosystem still has to change to something more prosperous, however often the businesses there are still Iv-B because I-O policing has not cleaned out these areas of the economy. For example businesses and consumers become used to this marshy kind of economy and there needs to be a lot of retraining, faster and more adaptable business practices, selling goods faster to make them cheaper with overhead costs, and so on to get people to change or go back to their previous high energy or high animal spirited ways. If the energy is not there to make this sustainable then the money spent will be wasted like it often is with foreign aid, often Iv-B people will deceptively make it look like the stimulus is working to keep the money flowing rather than try to build sustainable Biv businesses as without I-O policing the V-Bi lenders cannot tell the difference.

People by then might have a habit of doing things the old way and may not have the V talent or B willpower to make the newer technology or aid worthwhile. So the longer this kind of stagnation goes on in areas after the GFC the more reserves of energy and money are used up by resources pooling and not being able to connect with each other like fish dying in pools waiting for more water to come down a river. Eventually nature tends to adapt to the new conditions and so Iv and B make revolutionary changes to profit in new deceptive ways, they may turn into Roy with more petty thieves or even in Biv have more shifty kinds of businesses selling flimsy and quickly obsolete products.

This is like in depressed areas where well policed stores with higher quality goods are slowly replaced by more fraudulent ones selling cheap and flimsy products and B wages plummet in finding working there. To revive this economy then wages have to rise to afford better goods and then better goods have to urge employers to train people better and pay higher wages in a virtuous circle rather than keep collapsing in a death spiral or vicious circle. Also a poorer area might have more either O criminal or I civil law infractions which create more inefficiency, the best way to revive them is to subsidize the I-O policing to keep it more honest and wasting fewer resources. For example the more shoplifting there is in businesses in a recession the more likely some businesses will go broke wasting large amounts of capital that will need to be rebuilt in a recovery.

To create a sustainable recovery it is also important to connect to either new Gb resources for B workers to make money from and pass the wealth up Biv trees like a capillary action or new V refining capacity like manufacturing techniques with higher paying jobs which allow more wealth to trickle down. If overseas Gb resources swamp the local produce like people finding it cheaper to buy farm produce from Africa rather than have farmers grow it in Britain, or V refiners and manufacturers overseas swamp the local industry with cheap imports, then this is like an overseas ecosystem invading a local one. For example Y predators might come from a nearby but previously separated ecosystem, kill off the local Y predators and then decimate the local R prey which collapses the local Roy food chain. Their own R prey might also try to move into the area but might not be able to survive on the kind of grasses there so the area loses its accumulated evolutionary heritage with extinct animals. This is like overseas imports from Y-V refiners acting as predators to kill off local manufacturers and then they exhaust the savings of the local Bi-B people with trade deficits until the economy collapses. The local economy might try to revive itself with immigration from the successful economy but they often do not do well there, in effect they are usually coming from a better economy because it won the trade war.

Also an R contagion such as malaria might come from another ecosystem and kill off animals until many local ones are gone but animals from elsewhere might not be able to live there either, if they can adapt it might take thousands of years for them to evolve to eat the local food. The result is the ecosystem is cleaned out of animals like might be seen in some marshes were the local animals sicken from the stagnant water and are attacked by healthy animals making incursions into the marsh, also like the well known example of the Dodo made extinct from domestic animals. In the Biv plant kingdom foreign plants might come into a local ecosystem and crowd out local plants with their roots and kill them off and then not be able to live there either once they use up the accumulated humus.

The result is the local plants get killed off whenever they create enough humus for the foreign plants to thrive for a while and then they disappear again to wait as seeds. Foreign plants might be high in V allowing them to grow and overshadow the local trees stunting them and killing them off, then the foreign trees might fail because they cannot adapt to the poor Gb resources as nutrient deficient soil once the other plants are no longer making humus and improving the soil. Then those trees die off and as the local trees recover they accumulate enough humus to enrich the soil for another foreign invasion.

The process can then be very wasteful, the long and arduous process of evolution can result in rapid extinctions in this way. In an emerging economy they might remain chronically weak as any local businesses get targeted by imports until they go broke or are taken over, periodically then the savings of the economy are used up on imports until it collapses or people stop buying them for a while. When the companies are taken over the overseas businesses might fail to turn a profit with them and they go broke, this is like the local plants and animals dying out and leaving an ecosystem no good for the foreign plants and animals.

This is what can happen with free trade, a Roy area might have Y and Oy criminals from another country come into it like Y soldiers from Uganda or Rwanda coming into the Congo raping and pillaging or stealing Coltan. They then destroy much of the local business and people can starve because women are afraid to work on their farms, then the R prey is decimated and so the Y soldiers withdraw until the local economy revives enough to attack again. It might also have R and Ro criminals coming in and like a contagion taking up resources like foreign immigrants taking local jobs. This displaces the locals who cannot make an income any more and might starve or leave, then the immigrants might find there is not enough there to eat because they cannot adapt to the economy and they cannot make money off the locals any more.

This might be like whites or Chinese immigrating to Africa and then finding after they run through the resources of the local economy, such as ruining their soil with over farming or using up minerals, that they cannot survive there without living off the natives so they leave. They might then come back later as the local economy revives, the soil recovers and new mines are found. This can be Roy if it is done illegally, it can also be Biv if it happens without criminal illegality such as foreigners buying up local farms and pricing the locals out of being farmers, and then abandoning them after the ecosystem is ruined. V and Iv businesses might also attempt to set up in a country and ruin local businesses, then when the local people have lost their sources of income the foreigners find they cannot find customers to make enough money and leave the economy in ruins again.

The same can happen with imports without immigration, a local economy after the GFC needs to revive by using Gb resources or V refining of such as farm produce or minerals. It might do this by importing Gb resources from elsewhere like Japan did, V refining or manufacturing them, then exporting for a profit. It might prefer to use its local Gb resources such as farming locally and mining local minerals rather than just relying on imported produce and minerals while leaving their local resources unused.

However being able to buy cheaper food and minerals from overseas shuts out the local farms and mines so their Gb resources are wasted, without a local advantage in resources these V-Iv companies might regularly start up and fail under pressure from competitors in the global economy. In this case then the local Gb resources become G public property because they are not economical to use in the Biv economy, as a result people remain unemployed and there is no wealth creation once people exhaust their money buying imports. Instead they might do better with tariffs preventing businesses from competing with local farms and mines by using imported materials, as long as the goods produced don’t need to be exported the local Biv economy can be better off.

This is like the Biv plant kingdom where if the local plants could somehow keep foreign plants out they might create a better forest than by trying to incorporate foreign plants into their ecosystem.

Imports of V manufactured goods then can keep collapsing local industries in part because of dumping goods at a low price to bankrupt the locals and then raise the prices later, American semiconductor companies nearly suffered this fate because of Japanese dumping and then there might have been no Intel making chips today. When the local industries start to recover or adapt to this foreign competition the foreign goods manufacturers might see this as future competition, they might then try to innovate more to make them uncompetitive and ruin them in this way. For example China would be doing this to prevent other Asian economies getting strong enough to threaten its domination of exports.

## The flaw then of free trade and unregulated competition is the idea that a short term victory by one product or economy is necessarily better for the global economy long term because older and more evolved businesses might be wiped out.

With a trade deficit then an economy especially after an Iv-B collapse can find itself chronically wasting resources and capital trying to compete against Roy practices like dumping or foreign economies subsidizing their exports and spending Roy government tax money on research and development. This becomes like the marshy economy of a delta that keeps trying to revive with occasional amounts of rain or river water, the evolution of new life and revolutionary leaps in adaption of animals and plants is wasted over and over when the changes are only temporary or foreign plants and animals take advantage of them.

The alternative to Iv-B free trade is a form of protectionism, but to avoid this turning into a trade war like most wars it is necessary to have strong and neutral I-O policing, like with the World Trade Organization to hear grievances like an O criminal and I civil court. For example a trade war might involve artificially low exchange rates, dumping of goods below cost to damage industries, industrial espionage, buying up of local strategic industries as V or local Gb mine resources to take the profits directly out of the country like foreign plants using up the local soil, counterfeiting of V talented artistic products like Gucci or Versace, stealing copyrighted and patented ideas, and so on. In some cases protectionism is already permitted such as with an economy protecting newer industries from being collapsed by foreign competition like a new tree before it can grow large enough to hold its own.

Reforming the world economy is always difficult because of the weakness of I-O policing causing Iv-B booms and collapses from trade deficits, also from creating V-Bi stagnation in some economies from being left out of this chaotic cycle, a stagnation from an Iv-B collapse, turning a Biv economy into Roy from scarcity as it cannot compete and gets it local industries crushed by imports, an economy getting bankrupted by corrupt loans where the money is recycled through tax havens as fast as it is given for foreign aid and development projects, and so on.

The IMF has a limited ability to resolve these problems because it cannot easily act as a neutral I-O police, it often acts more like an Iv agent for investors trying to get their money out of a struggling economy or looking for fast profits, it might also sometimes be associated with Oy financial hit men to load a country up with loans designed to fail to control it politically and strategically in the Great Game of business and war. Just as there were often inadequate I-O regulators inside even advanced economies to protect against financial contagion there is an inadequate framework to even establish neutral I-O policing global in many parts of the global economy and so this creates constant wasting of Gb resources.

For example Roy economies can sometimes turn into Biv if the waste associated with crime from a lack of O policing can be reduced enough, the world spends more on weapons than would be necessary to make each country into a Biv economy and eliminate world poverty but each spends money on weapons to protect itself. This is like a city were the citizens are bankrupting themselves by spending so much on personal weapons to protect themselves because of a weak or untrusted I-O police. Also Y criminals might be buying weapons to prey on R people in Ro neighborhoods where the O police are too much in danger to go. The result then can be a kind of arms race, like in the US for example where there are about 192 million guns owned by private citizens.

Individual countries also get into a competitive Oy-R arms race which grows exponentially and often leads to a collapse in their local economies from the strain of paying for it, this is partially why the R Soviet Union collapsed after trying to keep up with the US in the arms race. Another example of this would be the amount wasted by India and Pakistan on nuclear weapons as opposed to feeding their people or the many wars in Africa with warlords and failed states using up Gb mineral resources which when finished will leave them permanently impoverished.

Much of this is also because peoples in many economies have adapted to a particular lifestyle based on their traditional Gb resources and this might reward Roy criminality as a way to survive rather than starving. For example in Somalia unless there is a strong enough O police or UN peacekeepers many Y and Oy militias and criminals find it easier to steal and kill rather than being killed themselves by other militias, R and Ro people can also act like a contagion taking over resources and driving away these Y and Oy to starve. This then becomes like predator and prey in Africa where R and Ro animals try to evolve ways to evade and drive away Y and Oy predators and the predators to overcome these in a perpetual kind of civil war.

This is made more stable in the animal ecosystem with a stronger O middle of the food chain which is why the UN peacekeeping helps the situation. However the people in these areas have evolved for so long with weak I-O policing that it is hard for them to develop their own police without international aid. Even then it takes time for people to give up their previous criminal ways of survival and conserve Gb resources enough to make a Biv society, this is even harder in areas that can have these resources decimated by drought and then the scarcity causes a rise in destructive crime. In effect then this is like Roy animals in a drought stripping a Biv forest in a drought and reducing it to a dust bowl or grasslands.

While it may seem that this is unrelated to the GFC and financial crises in more advanced economies the same color code interactions occur in poorer economies, for example as Biv economic systems collapsed in the GFC there was a rise in Roy crime such as subprime fraud that I-O police regulators were unprepared for. Like with Somalia this wave of crime inefficiently wasted so many resources that it caused an even deeper recession. With an Iv-B collapse then the resulting waste in resources needs to be quickly stemmed with stronger I-O policing, but this is usually futile advice because the Iv-B boom would not have happened without periodically weak I-O policing from V and B pressure in the first place.

## As I have said many times Aperiomics is not about suggesting solutions for the GFC but showing what processes caused it, to say that I-O policing would have prevented it or will hasten a recovery is like saying that more food will save people in a famine.

It begs the question of whether it would be even called a famine if there was enough food to feed people in the first place or if foreign aid was already sufficiently motivated to prevent the famine with agricultural aid or donated food. The problem with such places as Somalia is the same as with advanced economies in the GFC, it is not enough to give trite solutions that no one is prepared to implement. Rather it is necessary to understand the process as to why the world community lets countries like Somalia fall apart or waits until there is a crisis just as it waited until there was the GFC to do much about derivatives and subprime I-O policing.

The answer often is that people will not do anything about the next crisis from weak I-O policing beforehand but even this is useful advice for investing as many short sellers make their money from anticipating this inaction, for example some investors saw that deregulation would cause a collapse in subprime bonds and shorted the market. Recognizing this fundamental instability of I-O policing does have the potential in the recovery phase of a crisis to expose some of the secrecy and deceptive contagion plaguing the economy. However Aperiomics shows that, just as many economies remain corrupt and do not ever clean up this contagion, just pointing out this weakness of the I-O police may not lead to any changes. It is like providing aid to Somalia that will just be wasted because there will not be the resolve to keep it going for long enough, the I-O policing or UN peacekeeping might come up against local Y-V warlords or R-B secretive people not trusting them and like I-O police in a Biv economy find they are not trusted enough to fix all of the economy.

The situation is not necessarily hopeless, the world economy is experiencing V-Bi evolution and Iv-B revolution which also make the I-O police improve by a mixture of Bi-Ro evolution and Iv-Oy counter revolution to keep up. The natural tendency of all these systems is to grow and improve just as plants and animals are still evolving to become more fit over time. The number of world institutions that are involved with policing then also multiply and improve such as the G-20, the World bank, the UN with its many sections such as for world health or food aid, the way more potential wars are prevented by using Biv sanctions as a civil response to disputes rather than O policing such as providing weapons to victims in wars or bombing such as with Bosnia and Libya, intervening militarily such as in Afghanistan and Iraq, putting dictators on trial such as Milosevic for war crimes, using AI Drones to get at criminals though they can also be used to prop up dictatorships, and so on.

It is likely then that I-O policing will catch up with more global problems such as reducing starvation with Roy government based food and foreign aid or Biv foundation work such as with Bill Gates and donations by private individuals such as with Oxfam, lessening dictators and warlords raping a country’s resources such as with blood diamonds, and so on. In this context the Great Depression and GFC represents lapses in I-O policing that grew chaotically to a crisis and collapse just as World Wars One and Two happened chaotically in ways that in hindsight could have been prevented. For example Bruce de Mesquita specializes in simulations of foreign policy and believes that World War One could have been prevented by a British show of force at the beginning, this might then have prevented the communists taking power in Russia and the ensuing Cold War.

World War Two might have been prevented by a fairer treatment of Germany in the Treaty of Versailles with war reparations, by the British attacking the Bolsheviks while they still had troops stationed in Russia, by treating Italy more leniently in its claims for the city of Fiume, by keeping the Austro Hapsburg Empire intact to some degree as a bulwark against Bolshevism, by drawing the borders of many Eastern Europeans countries such as Hungary and Poland differently, by the US being more considerate of Japan’s interests in China and desire for a clause about racial equality in the League of Nations charter, and so on. World War One inspired the I-O League of Nations which attempted to police these kinds of disputes globally but was unable to prevent World War Two. The UN has been more successful as a global policeman with peacekeeping forces and a venue where all members could air their grievances and expose Oy-R secretive and deceptive behavior before the chaos can grow too systemically dangerous and start major wars. The global system then as it changes has various color imbalances that occur and then when there is a crisis the effect is usually a great deal of analysis and soul searching to expose the secrecy and deception that caused it, usually this does not go far enough to solve the whole chaotic problem and the damage takes time to heal which is why the Great Depression and GFC lasted for so long.

However the situation is not like a failed state such as Somalia because the I-O policing globally as well as internally in advanced economies is still working although it does not always prevail. It also has to fight the economic philosophies that deny I-O policing is even necessary in a free market, this is like V and B constantly trying to benefit at the expense of the rest of the Biv economy. These changes can be seen as V-Bi alliances and cooperative behavior vying with libertarian Iv-B competitive behavior which remain in balance depending on the amount of I-O policing as well as genuine attempts by experts of all kinds to reach compromises and enact laws that both sides can accept.

This process will always proceed in an uncertain mix chaotically and randomly, sometimes the way will seem dark and deceptive with pitfalls or tipping points in Iv-B, at other times the way will seem relatively bright and transparent with deviations from a normal situation. These future paths are both from color imbalances as I-O cannot keep them in perfect harmony, at times there will be domination by different colors and then a pushback from others in war or economic collapse. At other times there will be more of a calm period through I-O police and compromises but it remains to be seen how much understanding this process in Aperiomics can help to avoid these wilder imbalances. It has long been my belief that Aperiomics essentially makes no difference to these color imblances because all it does is describe them, it may be though that exposing some of the secretive and deceptive areas might create more I-O compromises.

The global system will remain highly volatile because there are still huge imbalances between V-Bi and Iv-B, with frozen money and gaseous money trying to come together like with the previously mentioned hot springs in an ice field. So far the revival of I-O policing after the GFC was been very slow and this is unfortunately as expected in Aperiomics, it has caused much more wasting of Gb resources and larger areas of the global economy turning into Roy than might otherwise have happened. The world economy is now much more dominated by a network of tax havens that subvert I-O policing almost completely, this causes much of the foreign aid and loans to emerging economies to be siphoned off corruptly leaving them in debt, over half the world’s business is filtered through these to avoid and reduce taxation and I-O policing, criminal funds from Y mafia and Ro gangs are concealed and often laundered back into the Biv advanced economies, governments are corrupted into allowing this as well as continuing tax loopholes with political donations and lobbying, it also creates a global pool of money immune from taxation and policing for predatory short selling which increases government indebtedness.

For example some of this secretive and deceptive money might be behind the 2011 problem with the Eurozone in rising interest rates for distressed economies with short selling of their bonds, agitating to reduce the V-Bi welfare state in Europe, to give more tax breaks to the V and Iv wealthy, and so on. As with other aspects of Aperiomics tax havens are not a problem to be solved but color interactions to be studied, as such as there is nothing wrong with this situation except that it impoverishes much of the poorer economies and increasingly more advanced economies by starving them of taxation revenue. To suggest this is wrong is to imply a V-Bi transparent utopia where no one hides their money is the normal state of the economy and excessive use of tax havens a deviation from that ideal.

So this is a common imbalance, secretive and deceptive areas such as tax havens are maintained by Iv agents for the V wealthy trying to weaken and evade I-O policing. If some develop a conscience while laundering stolen money from murderous Y African dictators for example then they just leave the business and the profits in the industry attract plenty of others with less scruples. The system then is the same as with the subprime crisis, Iv tax haven agents work to try to outwit B workers who in this case are either the poor R people of African countries or their B workers.

These tax agents compete with each other to use up this resource while it is available or until the I-O police manage to regulate it, they wax and wane in their effectiveness so the inefficient Roy wastage of aid in many of these economies stops them becoming Biv in some cases. The process is similar to tax minimization in advanced economies which usually happens without O crimes being committed or at least found out, there can however be civil penalties such as where a company might be randomly audited to expose chaotic schemes that then fail in an I civil court and so the company pays more tax. These tax havens also randomly fall foul of I-O regulators such as the SEC in the US and sometimes then have to give up some secretive and deceptive money or businesses. Sometimes they also get exposed by looking for secretive money used in terrorism which goes into these tax havens as well.

The strength of the Iv-B and Oy-R tax havens also relies on the corrupting power of their money to influence governments to give them more tax loopholes, or not to investigate them sometimes because politicians might have secret accounts there. Companies that don’t want to avoid tax or use tax havens find themselves at a competitive advantage compared to those less honest, another case of a modified Gresham’s law where bad businesses drive out the good. The system then causes these tax havens to grow as long as I-O policing is weak in exposing their O and I infractions of the law. Sometimes these havens cooperate with O police such as in tracing money laundering by Oy criminals, looking for R terrorist financing, often this strengthening of I-O policing comes after a crisis such the 9/11 attack by R terrorists.

At other times governments and their secretive and deceptive Oy and R intelligence agencies use tax havens to funnel money to mercenaries and deniable funding to rebels such as the US government using the failed bank BCCI and tax havens to get money to the Oy Mujahedeen in Afghanistan to fight the R Soviet Union occupation, or getting money secretly to aid the Contras in South America using proxy military aid from Saudi Arabia and Iran. Sometimes these imbalances can be exacerbated by the shape of countries as they were laid out by the movement of tectonic plates forming the continents.

This geological process created winners and losers because some areas ended up with a more moderate climate that restricted R contagion such as R malaria from mosquitoes and Y predators like lions that slowed the growth of civilization in much of Africa. The world economy has arguably been dominated in ways good and bad by the sheer size of the North American continent and its isolation protecting it from invasion. This gives a wealthy and protected area that enables Y multinational companies to exploit more R and Ro areas of South America and Africa, in the past however there have been no end of Y Empires doing far worse such as the Spanish with exploiting South America for gold and warring with most of Europe, with the French in countless wars and its Empire in South East Asia and elsewhere, with the German Empire in World Wars One and Two as well as colonies, the Austrian Hapsburg Empire which led to the start of World War One, and so on.

Much of the chaos and randomness in the global economy then stems from the unequal distribution of Gb resources and naturally weaker I-O policing then leads to wars, colonization, world trade with its predatory aspects, and so on. As seen in the Peloponnesian War the strategic position of countries and their resources can dictate a chaotic series of conflicts where as soon as a country gets wealthy enough it makes itself a target for invasion, it must then struggle to get strong enough to defend itself and by then gets tempted to invade others with its strength. The same occurs in Biv societies economically, these also resort to Roy tactics such as the ruthless exploitation of colonies when there is no effective I-O policing to stop them.

The rising wealth inequality in many advanced economies such as the US causes a lack of demand from the Bi and B parts of their communities because when the rich have more money the others, now depicted as the 99%, have less money to own their own homes without loans, get higher wages to stimulate demand in the economy, etc. In some senses this is a Zero Sum Game, two people cannot own the same dollar and unless an economy becomes more wealthy then the rich owning more dollars or other assets means the rest have less money unless they borrow it, and then often they cannot repay it as there are no ways to get money from the rich to do so.

This in effect is another cause of the GFC, that people cannot repay loans taken out to counter rising wealth inequality and so these loans must grow as Iv-B because the demand is increasing for loan money as wealth inequality rises. Then there must be a crisis because eventually they cannot borrow any more and cannot pay the money back either. The same happens with trade deficits, a country might borrow to try to balance this deficit but eventually if it cannot then it might default. It can only succeed in reducing a trade deficit by selling more to other countries and if there is a good reason for the deficit this might not be sustainable, also as they become poorer the collapse into more Roy areas in its economy waste more resources which increase its indebtedness.

Some of the GFC then might have been caused by Iv-B increases of money siphoned off to tax havens and then reappearing laundered as rent seeking capital, this then tries to earn interest from B people who often are just deceptively borrowing as a last resort and so cannot repay. The main difference then is this tax haven money is harder to tax back once it gets there, so I-O policing not only can cause instability and crises by being weak but it can leave long lasting damage with wealth inequality. This is the same problem with criminals like the Y mafia or right wing dictators who save money in tax havens or even launder it in their own communities, unless it is possible to prove the money is obtained criminally then taxing it also catches more honest businesses in higher taxation which can make legitimate businesses less viable.

This can cause economic stagnation or more widespread evasion as previously honest businesses turn to tax crimes to survive and the system spirals into deeper deficits and higher state debt.

When chaos gets out of control in secretive areas then it is much more difficult to get under control completely because like with an explosion of cockroaches every secretive place they can hide must be exposed or they just move elsewhere. If one tax haven is closed or regulated then the money will just shift to another or it will be an economic incentive for more tax havens to be started by poorer economies eager for the financial benefits in operating one. It may also be the money from these tax havens will reenter the Biv world economy as V and steadily lose money trying to lend to B workers reestablishing a more sustainable wealth equality over time, more usually though the lack of I-O policing in some areas will cause the chaos to continue to grow there as it is impossible for Biv finance to stabilize without I policing. This is the same as in Roy societies where it is impossible for them to stabilize without O policing because the financial incentives for crime are too attractive without them.

In the same way the financial incentives for rival Oy warlords in Africa to compete with each to try to become the top Y alpha predator, overshadow the others and get most of the corrupt spoils is too much to resist. Those who have more scruples will just be replaced by others more sociopathic in nature and for their morals those who refrain would probably get killed off as a potential future threat. So even the dictatorships and rival warlords cannot be blamed for the process of corruption that takes out so much money through tax havens, it is the same situations as rival subprime lenders losing their scruples or losing their market shares. The absence of I-O policing in these countries simply makes this situation inevitable.

Often as well the local I-O policing is subverted, corrupted, and weakened by those who benefit from it. This is not only local warlords and dictators who might attack I-O police, this was seen for example in I-O police being targeted for their attempts to prevent the killing of Rhinos for their horns and elephants for their tusks. Often this weakening of local I-O police occurs from stronger foreign interests too strong to be resisted by police, for example proxy wars were fought in many of these countries as Oy with the US and R as the Soviet Union destroying local economies, Y multinationals seeking Gb mineral resources might use Iv economic hit men to corrupt local police or local governments into defunding the police, and so on.

Even these people cannot be blamed as the source of the problem because with intense international competition companies with more scruples simply get shouldered aside and then overshadowed into a lower market share by the more dishonest ones. Companies find if they do not offer bribes then their competitors do and get the business, this is how Iv agents grow chaotically until they cause an economic crisis in many emerging economies. So it is not a matter of finding a few bad actors or some secret Iv society controlling world events, starting wars and sowing chaos, but the system itself being inherently unstable and only able to restore itself to some degree with the waxing and waning of I-O policing.

How long it might take for this I-O to strengthen enough to resolve some of this chaos is usually unknown because chaos itself is secretive and deceptive, however for many countries this chaotic turmoil can go on for decades if not centuries with such places as the Congo in Africa. As long as they have Gb resources and there is little chance of effective I-O policing then the disconnect between V-Bi and Iv-B will cause the situation to continue through countless collapses and revivals as with the aforementioned local ecosystem invaded by foreign plants and animals.

As this secretive Iv-B money becomes hard for governments to get at through taxation it leads to a kind of deflation where money is scarce for most of the population of advanced economies, because of this house prices and other consumer goods have to fall to be affordable. Deflationary pressures in the US are then associated with wealth inequality from the Iv-B boom and continuing weak I-O policing. A similar situation happened in the Great Depression where the high wealth inequality created a bubble of debt where people tried to borrow their way to prosperity but then had no chance to repay the loans.

Then with little prospect of making good money the economy became mired in deflation just as it did in Japan in its two lost decades. For example when the real estate bubble burst in Japan many people were left with owing more on their homes than they could afford, this created a deflationary effect because people saw this and were reluctant to spend or they might end up in a similar situation. After the GFC inflation has also been moderate because people usually don’t have enough money to pay higher prices that inflation would command, for example when oil when up in a bubble a lot of people just stopped driving until it fell again. Adding extra money to the economy doesn’t help with deflation unless its gets to the people who would spend it, when the roots and branches are broken from the GFC the money tends to pool in some areas creating small bubbles with speculation and leaving deflation elsewhere. A Keynesian stimulus can work by in effect losing money to create economic activity, the same happens with a budget deficit which injects money into an economy, but unless these are directed into creating sustainable businesses then after the money is used up the economic activity will die as its monetary reserves are consumed.

This is similar to pumping money like blood into a zombie business, if there is no reason to believe the business can ever be self sufficient then it will die as soon as the life support is withdrawn. Perhaps some kind of negative tax could be a sustainable stimulus that would create stable businesses, for example if someone pays tax they might get a temporary tax cut but if someone pays no tax and is working then they might still get a rebate as a percentage of their income. If they were earning $10,000 a year they might not pay tax but if they received a tax rebate anyway of say $1,000 a year temporarily by doing a tax return then this might be spent on sustainable businesses, it might then stimulate more employment and end up pushing up wages by the $20 a week and even be paid for by a small tax surcharge later.

Another way might be people on unemployment insurance might be required to work a free day for a company every week, this helps businesses by giving them cheap labor and is a potential way for these people to be employed permanently. This could be subsidized for example by paying these people a little extra for bus fare or fuel to get to and from work. Some companies might even be able to start up paying no wages by using five unemployed people like this to cover the whole week, to compete other businesses would want to take on these workers as well which would take many of them out of the labor market over time.

The idea is to create roots and branches of Biv trees with a stimulus just like a gardener might do this with fertilizer, water, removing contagion, trimming, etc. Deflation then can occur because parts of the economy become V-Bi and money doesn’t get into it easily because there are few pathways left for it to flow in. In effect the economy can be too random in these areas and even if money does eventually flow in it might well cause inflation without business activity or stagflation unless the money can flow in sustainable B roots and Iv branches.

Another way to combat this kind of deflation is to stimulate sales by subsidizing them, companies might be able to make say a 10% loss per year and claim all of this off their income in effect making them do business that otherwise would not be economical. So they might be able to sell goods and services 10% cheaper which is much more affordable, this might lead to their employing more people and making a profit as the business expands so they end up paying more tax overall. This would be targeted preferably at depressed industries and not ones involved in a bubble, for example it might be used in construction, food outlets, etc. One advantage is it is only useful if companies actually are unprofitable or only marginally so, if a company is already profitable and paying tax then it might not apply to them.

That is, they would not calculate their profits from the 10% loss point but from the usual break even point as they do now. If they are making losses then they receive this subsidy which might help them back to profitability, the more businesses taking advantage of this the more money is pumped into depressed areas through sustainable roots and branches. This is like the negative tax rebate, if wages rise then the rebates disappear and start paying for themselves with tax income.

If profits rise for these businesses then the 10% subsidy disappears and they start repaying this with tax revenue. It could even be targeted to specific industries to help them regrow, for example some food manufacturers might use this to inject extra savings into ghetto areas so people feed themselves for less and the money might then come back to some degree by people needing fewer food stamps and less welfare. These kinds of stimulus counter deflation because they can also overcome the objection of prices dropping and causing losses for businesses holding stock or people putting off purchases as prices become cheaper.

Because these businesses can break even in effect with a 10% loss then prices can decrease 10% while they hold stock without their losing money. This creates more ordering of stock which itself counters deflation. One problem can be with Iv-B as competition might make many businesses sell at this 10% loss to try and drive each other out of business but generally companies are trying to make profits and will often end up posting an overall profit and paying some tax. Another way to stabilize Iv-B businesses would be to make each pay an insurance premium like a tax surcharge, for example they might pay 1% of their profits a year to go into a fund like with banks that can be used to bail out bankrupt businesses if they commit no fraud. This would reduce a lot of the chaotic effects of businesses going broke and not paying their bills, this can cause other companies or workers that don’t get their severance pay to go broke like dominoes falling.

Another problem with deflation is it can be caused by people hoarding money because of uncertainty of employment, or because they expect prices to come down. One way to stimulate purchases is to count some of them towards their tax returns as a depreciation deduction, for example if people retain proper receipts for a car purchase then it might be written off partially towards tax paid. This might cause car sales to increase and prices of cars to go up, the resulting profits car companies make might then go towards paying tax to defray the deduction on car purchases.

It also creates more roots and branches of car purchases that are sustainable because usually people would then buy more cars when the price was close to being affordable rather than avoiding buying one rashly and causing misallocation of resources. To counter excessive savings the government might offer temporary loans to taxpayers which would then be recouped by a tax surcharge on their wages or a lower tax refund at the end of the financial year. This could allow people to borrow money instead of saving to some degree and this lessening of hoarding could also help to revive the Iv and B velocity of money rather than it pooling in savings. Another way is the government might guarantee an overdraft of a certain amount for people with a low income tax threshold, the money might be provided by banks and the defaults covered by the government.

Those with savings already would not need this, it would work in effect like an insurance like credit line secured by the taxes people pay. Many welfare agencies already provide this to people, the same system would protect more poor people from chaos with few chances for defaults as sooner or later it would come out of people’s taxes. This could replace a lot of predatory Oy loan sharking for example.

For example if someone pays $2,000 a year in tax then they might be able to borrow half of this back through banks at any time but have to pay it back by the end of the financial year or face penalties and extra interest. This would be of most use in a recession and might even be revenue neutral because people have to make up the money, it makes it unnecessary for them to have for example a thousand dollars in savings which can then go into the economy as a stimulus for those most likely to be hoarding it instead. As those people do better financially they would stop using this facility so it would promote sustainable roots and branches.

People might also be able to borrow small amounts against their unemployment insurance and social security, for example they might get an advance of a thousand dollars which is paid for with higher social security taxes for a while until it is repaid. The main idea is to use this as a kind of insurance policy which randomizes chaotic situations, for example someone is short of money early in the week and cannot get to work losing their job. Another might get sick and because they are unable to afford medicine they lose their job.

The government could also soak up some unemployment and get businesses working by subsidizing the basic wage to for example half its current level in the US. Companies that employ people on the basic wage receive this subsidy, there could be a sliding scale of subsidy up to for example double the basic wage. This allows more employment and since people get more money into the economy they spend more and also the government saves on welfare and unemployment insurance. The system would be about as resistant to fraud as the current wage system because people would need to register Social Security numbers and also pay some taxes towards this. It might also draw some of the R-B black economy into the system, once people were registered for this subsidy then they would tend to keep paying taxes later.

Cheaper workers would tend to drop some higher wages but since the US economy typically has much higher rates of employment and wages such a subsidy should phase itself out as the economy improves, in the meantime it creates more roots and branches in businesses as a cheap stimulus. To help reduce fraud in the economy whistleblower laws could be extended to social security and other welfare, for example of someone is working in the black Iv-B economy while claiming welfare an anonymous whistleblower might receive a percentage the government saves. As less money goes to criminals and cheats of the system the incentives for honesty would improve and the same amount of welfare might then target real need rather than R-B contagion.

If Iv agents commit fraud then whistleblowing might reduce this, people might complain with hard evidence about misrepresentation and then share in any fines or a class action suit against the company. This might have reduced the amount of fraud in the subprime industry if borrowers were able to whistle blow on the Iv lenders with fraudulent up front charges. Also though Iv agents might be able to whistle blow on B workers, for example when they used liar loans fraudulently.

Other Iv agents would start to use this law to make profits and to get rid of their less honest competitors like with Gresham’s law but in reverse, one of the main ways to police Iv and Oy is through their snitching on each other. It is inevitable as the advanced economies become more Roy that government intervention such as with loans and stimulus, G nationalization, aggressive O criminal policing of business, public works programs, public welfare programs, etc are used because they become more efficient than Biv solutions when there is enough scarcity of resources.

The long term prospect of the advanced economies will probably depend on how efficient they become in the face of import Iv-B competition, but also how much they can avoid losing more wealth in chaotic collapses by using V and Bi insurance to quell its effects. They also need to avoid stagnation from too much insurance, for example some people on unemployment insurance might prefer it to working or at least it may reduce their desire and motivation to innovate. Iv-B tends to have winners win even more, like the saying the rich get richer and the poorer get poorer, this is partially because economies of scale favor the larger manufacturer like with larger trees who while overshadowing their competitors has not usually lost efficiency with chaotic collapses.

In some cases the V companies may have goods which sell at a loss and so branches of their Iv and B product lines may break under the competition but this is buffered by the randomizing effects of their capital which combines the profits from other roots and branches. For example a laptop or mobile phone manufacturer might have some that sell well and others are a disaster, overall however they might make a good profit and can use tax havens to reduce apparent profits to dump goods on other companies trying to recover from a collapse. For example Nokia in 2011 is suffering from a chaotic collapse in part of its market share from the sudden innovation from Apple in the iPhone which was partially mimicked by Google’s Android. However it still has good sales from ordinary phones which helps to buffer this Iv-B competition which might drive other company’s into bankruptcy, being permanently overshadowed with small sales and higher costs of manufacture, being taken over, etc.

In an attempt to recover they are using an Iv-B strategy of making Windows Phones instead of forming a V alliance with other Android manufacturers. If they failed it might be very difficult to start another mobile phone company in Finland because it grew at first under weaker competition from lower wage economies in Asia. The US and Europe face a similar problem except in many cases their companies have already gone bankrupt, the US for example lost most of its steel companies in the last twenty years to Asian competition with lower wages. To start up again now is more difficult because foreign manufacturers might try to reduce prices to bankrupt them over and over. The main prospect is to use non union labor to compete with lower wages and lower transportation costs to local markets than goods having to come from Asia, however this downward pressure on wages by using competitive B workers breaks up Bi unions and reduces demand of other products.

Like any Negative Sum Game in Roy the strategy is to reduce losses and cause more losses on Asian and other Iv-B competitors which may lead to collapses in export industries there, then they have the inefficiency of starting up again unless they get government subsidies. This may lead to so many chaotic collapses on both sides that the global economy may lack overall growth even if the trade imbalances are moderated, a similar situation happened in the US in the Great Depression even behind tariff walls where businesses would collapse from a lack of demand wasting capital over and over.

There was an attempt to force unionization on businesses to keep up wages but this also led to some V-Bi stagnation because B workers could not easily take jobs competitively at lower wages. In these cases it is necessary to clear these kinds of policies in the I-O market to avoid heavy handed economic policy that favors V-Bi or Iv-B too much, if Bi wages are kept high with unionization then Iv and B growth might be muted leading to less wealth in the economy overall. A similar dilemma faces advanced economies now in whether to support unions with higher wages and create more demand for goods and services with their higher purchasing power at the expense of losing businesses to overseas competition with lower wages. Such a policy decision cannot be easily made by a government, to attempt to do so becomes like central planning in the Ro Soviet Union. It is most important to get to the real issue in that some kinds of O criminal and I civil laws are being broken and this causes stagnation and collapse.

For example there is some injustice in letting some companies go bankrupt to favor cheaper goods for consumers as well as higher profits for local importers. Often the exporting countries are subsidizing their exports with currency manipulation, low interest rate loans from government banks, research grants, etc and this should be seen as a legal question to be resolved. Free trade might be fair in some cases but in others might just be favoring one group in an economy over another, after all the economies of most Western countries are heavily regulated and so the insistence of free trade in a mixed economy with endless numbers of subsidies is not adhering to a principled position.

If then a country can make a fair case for tariffs then it should be able to use them, also to subsidize industries if the others are doing it as well. To not have some fairness in I-O international policing is to create a trade war much like the real thing in terms of destruction to various economies, even one that is temporarily winning can lose vast amounts of money in a crisis as the GFC and formerly the Great Depression showed. To maintain an economic Iv-B domination or overshadowing of other economies is as difficult in trade as it is in a forest, other trees there try to break down the V canopy by growing fast at any gaps that open up, some Iv-B vines can strangle trees and so on. This is like in Roy where a domination by Y and Oy predators leads to resistance evolving in Ro herd like animals and more deception and speed in R animals.

For example the trade deficit in the US is leading to more angry protests and pressure from Bi unions for protectionism, also B workers are adapting with lower wages and faster retraining to compete. This eventually may lead to revolutionary reverses in this trade imbalance with Iv-B local businesses that will suddenly grab market share from imports, make good profits to fund their growth, and drive back foreign competition.

Bi unions and communities might force exporting economies to raise their wages, improve worker safety in expensive ways, and reduce pollution that reduces their competitiveness. For example tariffs might be imposed on economies that don’t provide accreditation with workplace safety regulations or allow unions to organize their freely. This pressure can also raise local demand for products in exporting economies, for example China might sell more goods and services internally with higher wages and this randomization in Bi would cushion it more against a chaotic collapse in exports. The V business communities in the US and Europe also have lost a lot of money from this foreign Iv-B competition, they have also made money from manufacturing in foreign countries undercutting the Bi higher wages locally.

This then can become part of the V struggle to bypass B unions to get cheaper workers that usually ends in disaster, it is also like Y predators in Roy trying to get at R weaker animals such as young buffalo that can collapse their own ecosystem and leave them starving. Forcing more V alliances with companies in exporting economies can help them as foreign Bi unions can take the pressure off the local ones. The temptation is for exporting economies to stick with Iv-B growth as it is making money now rather than moderating this growth with Bi and V partnerships but in the long run it will make their own Biv economies more sustainable.

For example if the advanced economies suffered another GFC and a slump in exports or had to default on loans to these exporters then they would transmit a chaotic collapse to the the trade surplus economies as happened in the GFC to Japan, Taiwan, Singapore, etc. If this became more permanent or was accompanied by tariffs then China might experience a lost decade similar to Japan as their subsidized export industries either became zombies with government support or collapsed sending them in large part back to a Roy economy and perhaps even communism which might then be more efficient with Roy scarcity.

So these exporting economies might well benefit from opening up to more foreign ownership of companies against as well as submitting to more I-O policing of trade to identify where the mutual waste in trying to collapse each other’s economic base is heading toward a disaster in their own countries. Much is said about whether the so called American Empire will collapse and be replaced by a Chinese or other one, it should be remembered that Empires collapsing usually cause enormous waste of resources and China for example is in no position to create an I-O market that others can export to if the advanced economies keep contracting. It could be argued for example that the collapse and economic losses of so many Empires in World War One led to their only partial recovery and a domino effect in Iv-B that caused the American Empire to collapse economically in the Great Depression giving aftershocks back to Europe.

This led to an expanded time of Roy poverty which in turned caused R communist and Y authoritarian governments and another world war, so far the GFC is leading down a similar path where the collapse of Western economies is not likely to produce many winners in the long run. In a similar way the collapse of the Biv aspect of the Roman Empire under pressure from the costs of foreign wars, like the costs of trade wars, led to the Roy Middle Ages and a painful return to more Biv society centuries later.

Trying to induce collapse in other economies with Iv-B then has a habit of unleashing secretive and deceptive chaos in ways that rebound on the so called winners, few have ever won this way and created a sustainable economy out of it because there is usually no I-O trunk to make stable trees.

For example if the GFC was caused in part from the loaning of money to advanced economies to hold down the exchange rates of exporting economies then this strategy rebounded on them with a lot of damage to world trade in the resulting tipping point and slump of imports to the US and Europe. The best way then to resolve these chaotic dangers is to have international I-O agreements and organizations such as the World Trade Organization police them according to I-O criminal and civil laws that make for justice to all parties rather than succumbing to economic pressure or ideologies such as all free trade being good when it obviously is not. If this can be done the chance of future global crises can be lessened from lowering trade imbalances justly, though there will always be cyclical changes in I-O policing leading to economic crime waves and contagion of all kinds.

Some I-O policing then will create stability though at times they will fail, to not have effective I-O policing in trade imbalances and wars however will sooner or later lead to certain disaster. For example before the League of Nations there was no mechanism to mediate wars and so Europe had many wars in the previous few hundred years, it failed but the United nations has had a lot more success as a global I-O policeman compared to no policeman at all. Even the World Court is deterring a lot of atrocities from being committed by Y dictators.

It is important not to ask the question of what probability there is of future crises because crises are chaos and have nothing to do with probability. Once this idea of probable crises is used there follows the concept of normality as being the opposite of a crises which is not true, a deviation from normality can happen in probability but this is still from random events. One reason for thinking in this way is quite often chaos is causing these deviations, however this chaos is looked at and often corrected and then the economic system returns to a random normality.

This however is nothing like playing Roulette for example and getting ten red numbers in a row come up, this is still random and the odds will return to equal numbers of red and black numbers over time. It might also indicate something has gone wrong with the Roulette wheel or it is being dishonestly manipulated and that would be chaotic numbers coming up not randomness. Often then V-Bi and Iv-B trade places in an economy when they are not connected in the I-O market, for example economists might be mainly V-Bi and talk about random markets and use probabilistic models in their economic forecasts. Suddenly chaos might cause a sharp recession or in this case the GFC and for a while the random V-Bi economists don’t know what is going on, then the Iv-B economists like the Austrians start to say they can explain what is happening.

They can be supplemented with doomsayers in the media who are often similar to those predicting bubbles in good times, they see the economy mainly in terms of either a bubble or disaster. Then the crises slowly fades under the weight of random liquidity and the random V-Bi economists eventually forget what happened to their theories while the Iv-B economists retreat in confusion with some rationalization as to why they will be vindicated in time. Then the cycle may repeat, but usually it is muted because of I-O policing and the I-O market becoming stronger temporarily.

It is only when deregulation occurs that this problem occurs unless there is a sufficiently large natural disaster or warfare causing the chaos, the problem is the V-Bi and the Iv-B economists can both espouse deregulation because their antipathy for each other means that compromise is avoided. So I-O policing is pragmatic in resolving the differences between the two kinds of economic policy, the V-Bi economists think the economy will just return to normal and recessions are deviations so policing is ultimately unnecessary, the Iv-B economists think that collapses should be allowed to occur to toughen up the economy and so are not inclined to police the contagion that might stop these collapses.

This is why crises and recessions keep happening, because it is in no one’s interest to police the economy except I-O. This middle way between chaos and randomness makes a mess of equations and graphs in both V-Bi and Iv-B and to simplify them the other side’s valid ideas are usually left out. One of the best examples of this is how so many papers and books were written about the Great Depression but when it came time to use those ideas in Japan’s Lost Decades and the GFC it was found none of them really worked.

The only thing that did seems to be to ignore the ideologues of all stripes and just muddle through it which is what I-O police usually have to do. The same will happen again as each color rewrites history from its own perspective, there is nothing wrong in doing this as, like plants and animals, people will do and think generally according to their color coded position in the economy and move it towards another crisis in time.

One of the first economic crises that is usually analyzed is the Tulip bubble that occurred in Holland in the early 1600s. It is useful to start with this crisis here because it concerns a plant and many of the aspects of this bubble happened because of the nature of the Tulip plant itself, in Aperiomics the Biv economy is plant like and founded on abundant resources traded in free markets. In this case then the Tulip bubble that forms relates quite well to the parts of plants in Biv that refer to bubbles. For example the Tulip in effect invaded European society from the Turkish Empire, it grew as plants do by putting down roots in more and more gardens across Europe and as the bulbs were harvested its numbers started to grow exponentially. This then is Iv-B growth, also the beauty of the tulip would be violet, or V which refers to the flower or leaves of a plant. So the desire naturally arose for some V connoisseurs to breed better tulips which became over time extremely expensive but they were not the main part of the boom. V usually does not have a boom though it can profit from one, in this case then V collectors made money from the speculation mania but their real desire was for secure investments and few of them were bankrupted in the bubble.

Another interesting aspect of the bubble is that it was literally caused by a contagion, here the Mosaic virus which created so many beautiful colors in the tulips. This allowed chaotic growth through contagion, for example someone might plant infected bulbs which produced beautiful colors and then those were more intensively cultivated. Those new bulbs then would be infected with mutations of this virus and so the contagion spread through roots and branches of sales into more and more gardens and Iv-B marketplaces for tulips. A tulip could propagate either from bulbs it produced or by offsets, or outgrowths like clones giving exact copies of the original. This then was the equivalent of a limited edition set of prints by an artist, if a tulip was very valuable then these offsets could be separated from the mother bulb several times a year for about two years before the original bulb gets exhausted and dies.

Initially then there is scarcity which made tulips valuable, they became highly prized by the aristocracy from Turkey to France. The exponential growth at this point is B as it comes from Gb resources or roots of the plant in the soil. Later Iv agents and salesmen see a way to speculate in them and so this contest of pricing between Iv agents and B farmers leads to unrealistic prices that V connoisseurs or Bi middle class families would not be interested in, for example at the height of the boom a tulip bulb might be worth more than an average house.

## Weak I-O policing also helped the tulip boom to grow, they were never traded on a stock exchange and when the prices collapsed the government declared that tulip contracts were unenforceable.

The next step in the Iv-B bubble was the scientific evaluation of tulips by Carolus Clusius who attempted to categorize all the different variations. This laid out a root and branch model of the different tulip varieties so that purchasers and collectors could begin to determine which were more valuable or desirable in the I-O marketplace, or more usually to bypass this market in more secretive deals to try to get bargains. Holland then experienced an economic boom because of its position as a crossroads in world trade, also because they had just managed to drive out the Spanish and thus had to pay no tribute to Philip in Spain.

This meant everyone had more surplus wealth which is like prior to the GFC where savings meant people were looking to loan money and buy up good investments. At this point the exponential growth of the Iv-B tulip bubble was still quite slow and looked safe, there were more and more tulips available but the more expensive ones were still highly restricted in numbers and so maintained a steadily increasing price. This is like the real estate market in the US where increasing numbers of homes met the ability of more people to buy them because of subprime loans and extra cheap interest rates from the carry trade and Japan. Most people in V-Bi were not interested in speculating in tulips, they wanted some in their garden perhaps but preferred to save against disasters by developing deep reserves of savings.

The more wealthy V traders saved rather than speculated rashly though some of them used Iv agents on shipping expeditions to the Americas to make large profits, also the Bi middle class grew prosperous from not having to pay tribute to the Spanish. It was only when the tulip bubble really took off that some of these Bi people were drawn into the chaotic speculation leaving their random business models.

There had been a severe recession similar to the US in 2000 and this may have made some usually Bi tradesmen try chaotic speculating in tulips to make up for their lost business, this would be similar to many B workers trying to use liar loans in the US to make up for the erosion of manufacturing jobs. After this recession in Holland there was a boom and this would have caused other goods to increase in price such as real estate, this allowed more profits to be ploughed back into tulips. There was also a sense of fatalism with the plague striking Holland at the time, the high numbers of deaths increased wages of workers and made them able to afford more tulips and also it perhaps made people see less point in trying to get V-Bi security.

## This is like in the US prior to the GFC where lower interest rates acted as the equivalent of higher wages for workers, also there was a sense of fatalism and desperation from the lack of higher wages from legitimate manufacturing jobs.

There was also the element of credit and a kind of futures trading which had recently started at the Amsterdam Stock Exchange, often deals were done before the tulip had sprouted and so people could never be sure what the colors of the flowers would be and if they were worth the money paid which allowed for secrecy and deception especially with no policing of the tulip trade. In between the original deal and the tulip flowering the contract to buy the tulip only needed a deposit and in many cases multiple sales and profits higher than the deposit happened before settlement. This is like in the US real estate boom where a house might be resold before it was even paid for and like with derivatives that might also change hands many times before they expired.

As the market developed and prices went ever higher more florists got involved in growing tulips and supply grew, eventually with exponential growth it would outstrip any possible demand for them and so prices had to collapse eventually. However this now enabled many more people to speculate in tulips, often buying much more common and inexpensive ones. The markets were not policed at all, usually the buyers and sellers met in taverns and were also generally intoxicated which helped the prices to keep rising. These deals were then secretive and not recorded on an exchange so there was no real way to see how the market was growing and what the real supply of tulip bulbs were, the situation then was similar to the explosive growth of derivatives.

Futures had only been invented a few decades before and many commodities were traded on the futures market, there was even concern about the effects of short selling. Tulips were not the only speculation, people often took a share in a ship that set out to do trade with the Baltics and some made spectacular profits they pyramided up. There were many success stories around in a boom after a severe recession, a fear of being poor from the plague was like being poor from the contagion of Roy crime in poor areas in the US where the desire was to get out and make money. As it progressed it also used less valuable kinds of tulips to fuel the bubble, some were even sold by weight rather than individually.

This is like how subprime derivatives used lower qualities of loans as the bubble progressed and the Gb resources were being exhausted, people wanted to trade in tulips and essentially used worthless tulips as they did not have the colors that most found attractive. These then were like toxic assets in the GFC, when the time came for the I-O market to reconnect with real V-Bi buyers then it found that no one wanted to buy unattractive flowers, this is like the boom in real estate created houses and subdivisions where often real buyers did not want to live or there were no employment opportunities in those areas.

The Tulip bubble did not affect the Dutch economy much when it collapsed, in this way it was more like the tech bubble than the GFC. Even though this market was opaque like derivatives some traders in tulips had become uneasy about the prices before the crash and sold out early, or tried to. Many would have shorted the market if it had been possible. When the market had burned through all the money available and there was a shortage of quality bulbs there was no way for prices to rise, the Iv-B exhilaration in the face of opacity people had felt earlier then turned to panic and waves of selling like tsunamis or people trying to get out of a burning theatre.

Later many of the deals made were annulled because of long chains of buying and selling of tulips with only deposits paid before they had even sprouted, so many people became bankrupt in these roots and branches that it was impossible to complete many transactions. This is like the subprime bonds that were sold prior to the GFC, many did not have the correct titles to properties and it could not be easily worked out how to foreclose on homes when B workers stopped paying the loans. It was also alleged anonymously that the bubble had been manipulated by a secretive and deceptive cabal of dealers and growers, if so then this would have been the V team behind the Iv agents as occurred with the subprime bubble and derivatives manipulation contributing to the GFC. The other Dutch people would have been V-Bi in this, some might have loaned money to the speculators for example and got burned by the high energy of Iv-B.

A boom tends to begin slowly and so is hard to notice, this is because the exponential curve rises very slowly at first. Also Iv-B deals are secretive and deceptive so they seem like with the tulip sales to be highly innovative and unpredictable. Usually what happens then is Iv-B reaches several righting points, like a tipping point is where a vase might fall over and loses energy but a righting point is like the energy or resources needed to fix the damage from the tipping point. This often causes a jump up to a new level which spurs more growth. This can also appear like S shaped growth as Ray Kurzweil shows in the Transcendent Man.

With the tulip bubble there were various wobbling points that would have allowed exponential growth such as Clusius cataloguing tulips so they could be evaluated for comparative values, different shipments of new tulips, the invention of the futures market a short time before which no doubt inspired buying and selling tulip bulbs on a small deposit, certain spectacular and revolutionary colors of tulips were bred getting high prices and spurring people to try to breed more for profit, and so on. This wobbling points are where, like a vase that might tip over, the chaotic situation might survive a situation that could cause a crash. For example if Clusius had not been there to catalogue and promote tulips then the subsequent exponential growth of people planting and selling them might not have happened or would have been delayed. Without the advent of the futures market in the Amsterdam Stock Exchange the idea of buying and selling tulip bulbs many times before they sprouted might not have taken off, in that case there might have been a tipping point where interest in tulips as an investment cooled off and the prices would have remained low. In terms of contagion there may have been wobbling points where the mosaic virus creating the different tulip colors mutated into making new colors that sparked more speculation, if there had not been enough mixing of bulbs to spread this virus then many mutations might have died out and stopped the bubble much earlier.

## Derivatives had many righting points on the way to Iv-B eventual tipping points, for example the Black Scholes formula anticipated by Edward Thorpe after which LTCM was righted by a bailout, their remaining unregulated and each mini crash was righted by an influx of liquidity, the creation of Credit Default Swaps by Morgan Stanley where claiming on these swaps allowed people to recover after a chaotic crash of some companies,, the use of computers to search for small price advantages in arbitrage and using computers to ride recoveries after chaotic losses, and so on.

Since the GFC there have been many wobbling points in the global economy such as whether Greece would stay in the Eurozone as of 2012, if their economy crashes chaotically they may have to leave in a Grexit or if this wobbling stabilizes then there might be enough growth in Greece to enable it to stay. This wobbling is similar in some ways to oscillation in chaotic situations, for example a heart might experience an irregular beat before a heart attack and prisons might have unstable outbursts of complaints before a riot.

If Iv-B is not regulated in I-O then it may start to feed back on itself stronger and stronger like a microphone too close to speakers, this initially seems like a good thing for the economy just as a transistor is useful but as this feedback grows like bluff and counter bluff in a game of poker, or increasing current in an amplifier connected to the microphone and speakers, eventually it overloads something and leads to a meltdown.

Like with microphone feedback creating distorted sound this can create distortions in the market as price signals when amplified with secrecy and deceptions become like louder Chinese whispers where the real prices of goods and services can be lost.

In many parts of the economy this feedback and distortion stops early on because of fear of the I-O police, for example someone might come up with a new scheme for tax avoidance and money starts to flow into it but accountants warn that eventually the I-O tax department will shut it down and penalize everyone who uses it. In this case then Iv and B participants might get frightened away even though there are no I-O police watching it yet because they fear an eventual exposure and crackdown when they can no longer hide their involvement. Also some countries might have tax havens but not be used much because Iv and B are naturally timid and there may be some timidity in the local authorities. There is often a sense then that if an Iv-B scheme is really more Oy-R and like petty thievery that dishonest people will be prosecuted and lose their investments, police then work often by deterrence and selecting some perpetrators to be made an example of to scare away the rest.

However one problem with the subprime and derivatives bubble was that I-O policing was explicitly not allowed to get involved in many aspects of it, derivatives for example were not regulated in the US starting with Clinton. In this case then there was no reason to be timid about getting involved so the attributes of being faster in getting out, more deceptive to the I-O police, etc had no disadvantage here like cockroaches learning they no longer need to hide. Also in the early stages of a boom in Biv there is no obvious victim because the rising leverage tends to give profits to nearly everyone and so no one to prosecute in I civil law, for example people might buy real estate apartments on deposit and resell them before they have to pay. This is like with the tulips being bought on deposit and not settled until they sprouted, the colors are not very disconnected with Iv-B and V-Bi at this point and the I-O market is still operating though fewer transactions are going through it.

## Often though people are beginning to be puzzled about what is happening, some are still fearful of a sudden collapse and this keeps most of the money out of the Iv-B bubble because it is still highly transparent and people can see there is no obvious reason for prices to go up.

At this point then people can usually see that investing money can be a self-fulfilling prophecy, the more they invest the more prices will go up and many realize that this cannot work for long. Some that are faster and more deceptive might still get in early so they still profit even if there is an early collapse, this is more like arbitrage where real estate for example might be seen to have an upward momentum in prices and so some jump in as they think it will take time for this momentum to turn around in a collapse. The mystery of prices going up might become filled by rumors that are often deceptive, for example some sellers might promote pump and dump schemes where Iv agents use deceptive sales pitches that try to rationalize investing.

The media might start to float ideas about the forming bubble because they profit from more viewers and readers, they can then deceive to some degree and create chaos or exponential growth of their readership themselves. In effect then in this early stage the Iv-B chaos starts to infect sales organizations with deceptive advertising and presentations, the media starts to promote dubious experts either claiming to know prices are going to go up or others that may warn of collapse. Because those making profits will deceptively tend to exaggerate their good fortune or keep secret their methods then the information given will usually be self-serving or steering people away from the best deals, for example a real estate agency might tell others they are not selling much to keep competitors out of the business as long as possible while at the same time telling investors that many more sales are happening and they need to jump in quickly or miss out, etc.

A good example of this early situation would be the sales tactics in the movie Glengarry Glen Ross. A boom can then be seen growing as the chaos moves into other areas but it is also important to realize that it probably travelled by roots and branches from another area of chaos such as the GFC coming from the tech bubble and previous crises building up around the world as in South America and Asia. It would also have come from the chaos building up in Japan. For example there was a trade war in the 1980s between japan and the US where Japan was keeping its exchange rate low and dumping cheap goods into the US to bankrupt industries and then transfer them to Japan. This was Iv-B as there was no I-O policing to work out when it was too predatory, also however the US was helping countries in that area such as Taiwan, Japan, and South Korea by in effect subsidizing their export industries to make capitalism look good for the communists in China.

This then was a chaotic situation that eventually led to some collapses in the US with industries and a trade deficit, but it also led to a real estate boom in Japan followed by a collapse as well. The effects of this trade deficit to Japan, Taiwan, South Korea, etc started to drain the US of ready liquidity and so they borrowed it back through the carry trade. In effect then instead of Americans making profits from manufacturing jobs this path was now increasingly closed because of the competition from exports, all that was available more and more was the influx of cheap loan money and this fuelled a boom as B workers tried to speculate their way to financial security.

Because the amount of money was so large and it was only easy to loan it with security in a few areas such as real estate mortgages this led to a concentration of this loan money into real estate which had to go up under the pressure of so much money. As people were making money in this boom the pressure was to deregulate this subprime lending as well because it was coming from a deregulated trade war between the US and Asian economies. Since this influx of V-Bi loans seemed to be creating wealth then the temptation was to not look to closely at this opaque carry trade and shadow banking system, also V banks were using lobbyists in Washington to protect their Iv business by keeping the I-O police weak and sidelined. In effect this is like in Prohibition where Al Capone paid off judges and police to leave his moonshine operation alone.

Once enough money starts flowing then it is hard to avoid the corrupting influence of it on I-O police just like hot water and steam corrupt valves and pipes in a boiler. The subsequent boom became a US election issue where both parties vied to be most for housing development for the poor. It seemed an ideal issue because for the V-Iv Republicans businesses were making money building houses and loaning money, the Bi-B Democrats were for it because their base was making more profits from rising real estate prices as well as more people were buying homes. The secretive and deceptive nature of it however made it impossible to see how all this wealth was being generated, since the I-O police were weakened it was in no one else’s interest to see what was going on but only to enjoy the profits from it.

Since the chaos was growing into real estate and subprime loan areas with little or no chaos nearly all of this business was new and revolutionary, subprime bonds with tranches were invented as well as many new kinds of derivatives. The more rapid and growing a revolution is, whether it be in finance or politics such as R communism or Oy authoritarianism, the more it should be watched by I-O police as it moves into a virgin territory with little ability to fathom its deception. For example when there was highly innovative new ways of financing poor housing and new markets rapidly opened up in older suburbs it could only be a rapid disconnect of Iv-B from V-Bi. When this was accompanies by weak or non existent I-O policing then the path it would take was quite foreseeable, for example without enough policing the lobbyists would keep breaking down any new laws they could.

Also Bi Fannie and Freddie stood in the way to a large degree as they were more protective of the B and Bi communities and thought they didn’t need I-O regulators just as Ro gangs think they can protect their neighborhoods without the police. V and Iv were mostly just out for profits, predatory if necessary but the Oy lenders were still timid when faced with the strength of Fannie and Freddie. At the same time the chaos crept more into economics itself, it was the time for vindication of Iv Austrian economists who believed deregulation would produce profits and it seemed to be.

B workers were always subject to Bi and Ro socialist ideas and so this lending induced boom was also pitched as being better for them than socialism could be, just as the US used V-Iv incentives to help Japan and Taiwan to make communism look bad the V-Iv Republicans hoped this subprime boom would steal some Bi-B Democratic voters. For example Marx as R believed only revolutionary violence through Ro mobs could overthrow the Y domination of imperialism and capitalism, to defuse some of this worker anger V-Iv capitalists in the 20th century made many concessions such as welfare, union, higher wages, etc to head off violent Roy revolutions in many advanced economies. As B and Bi workers became angry again after the Soviet Union because they saw the welfare state being dismantled it was necessary to persuade them they were getting something better in its place, that capitalism in Biv would somehow trickle down to them like the sap in a tree from V-Iv and thus there was no need to cling to all the welfare state given to them in the cold war out of fear of a revolution.

So as the money came into the B and Bi communities it did seem to be trickling down but it was mainly only rent seeking with loans from the Japanese carry trade with V-Iv Wall Street taking a hefty commission from it. In effect then it was deceptive Iv in nature similar in some ways to the New Labor ideas of Tony Blair where the market would give the British public more through relentless Iv-B competition than they would get standing together as Bi unions. To sell this then the Republicans needed money to flow into these areas, the bubble created appeared to be generating profits for workers as it did in Britain and much of Europe but it could never have worked because it all had to be repaid from a rapidly depleting manufacturing base.

It was like a Ponzi scheme but one in which no one had really set up. It in effect had created itself through Iv-B because competitors tend to not share truthful information with each other. For example there is only so much money in a country representing assets owned by someone, if one person borrows money then he has to pay it back with money he can earn. If everyone is just speculating with the money then unless someone can actually earn money to give them all enough profits to repay the loans then it must collapse as the payments become due.

The problem is Iv-B is so secretive and deceptive that no one could really see this obvious point because everyone was trying to use this secrecy and deception to make profits for themselves. To tell the truth about the situation then would only collapse the bubble early and people were still hoping to at least make some profits at the expense of their more deluded competitors. At the same time so called Iv-B experts as Iv salesmen and agents were promoting these ideas of competition as the path to prosperity, they were naturally employed by companies who thought they would profit most from competition such as financiers and others growing from deregulation. This along with donations to politicians from lobbyists created and bolstered an Iv-B philosophy as something new and revolutionary, easy to do because the times are usually so secretive and deceptive that it is difficult to put together a clear history of how Iv-B as a philosophy corrupts, causes bubbles and collapses like desert plants. Another factor may have been the heady concept of a new century, the 21st century seemed to imply new possibilities and many seemed to think that the new technology that would undoubtedly exist at the end of the century was somehow much closer to 2000 than 1999.

Much of the budget surplus under Clinton in the US was due to Iv-B growth from computerization giving productivity gains, but also from deregulation causing the financial industry to grow like fractals and pay more taxes. Under Robert Rubin as Treasury Secretary this seemed to be producing money for everyone, it was however mainly fractal in that this money was in roots and branches and so it seemed like a Sierpinski sponge to be much bigger than the actual cash it represented. For example companies were making more money with higher leverage, Americans were buying more houses with higher leverage and taking excess equity out with refinancing.

At the same time loan money was flooding in to keep the Japanese and other’s exchange rates low so the effects of borrowed money and leverage seemed to be paying off the national debt as well as making the economy boom. However this money was being loaned to the US at the same time as the means to pay it back were being stripped away by bankrupting much of the US export industries so in effect they could only repay it with speculation. The problem was if they were only speculating in America then they had to make these profits to repay the debt from someone who was making money that could come from exports to offset the growing trade imbalance. Since the interest payments had to come out of the US then only assets could be sold to overseas buyers or exports could pay for this, the US manufacturing jobs however were being decimated by the manipulated exchange rates.

Because of the Iv-B opacity none of this could be seen, it seemed that somewhere in the US people were making profits that somehow would repay this debt. The situation becomes almost paradoxical, with increasingly sophisticated mathematics used in finance it seemed that plus and minus were somehow refuted when it came to trade deficits. It was not even known by the government how much money was being borrowed from overseas in the Japanese carry trade so it could not be determined that the numbers did not add up, in any case with weak I-O policing neither the Republicans or the Democrats had any incentive to probe deeper. If the Democrats had realized they were causing a disaster then they like most politicians would have calculated the Republicans would be in power when it turned sour, even if they had tried to warn people the Republicans would have wanted it to continue because their donations were from companies benefitting from it just as the Democrats were inundated with cash from the same lobbyists.

And since there was no evidence for a coming crash in such opacity politicians that were naysayers and doomsayers would not get campaign donations from anyone else in sufficient amounts and hence not get reelected. After the Savings and Loans crisis there was a tendency in Biv to only use I civil law instead of O criminal law to police the market, this is why many went to jail because of the Savings and Loans frauds but so few in the GFC in the US. There is a tendency to think in Biv that fines and court ordered payments are a sufficient deterrent for wrongdoing because if people are doing frauds to make money then it would stand to reason that a threat to make them lose money would stop them.

In effect this is like an eye for an eye but instead a dollar for a dollar but in Biv society there are always Roy people because there is always some scarcity even if just because people are excessively greedy and see poverty in any amount of wealth. Iv-B tends to do this as well, because it is getting windfall profits by avoiding regulation in the I-O market the deals they must do under the watchful eye of I-O regulators seem penalized by comparison leading to more pressure for deregulation. Just as it is unnecessary in most cases to police poker games it is sometimes presumed by regulators that the participants in some kinds of business such as derivatives are sophisticated investors they can in effect sign away their rights to be protected by the I-O police. This should not occur though, just as no one can contract to become a slave no one should be able to forfeit their rights to police protection and redress from injustice under the law.

It is often difficult to work out how the I-O policing system should work in some areas, for example with drugs that might hurt some people and not others such as marijuana, tobacco, and alcohol. Generally the process is to look at the effects, if there is a disconnect between V-Bi and Iv-B in Biv and Oy-R and Y-Ro in Roy. If so then it means that the police are weak or absent completely as happened with derivatives in Biv. This is like the absence of police in Roy failed states such as parts of the Sudan in 2011, when the police are weakened from pressures of other colors as happened in the lead up to the GFC, the situation is too difficult to police accurately in many areas. For example a weak I-O police can have trouble trying to determine if someone can smoke marijuana safely or not, or the manpower cannot reasonably be used for example to watch every parent with police to make sure they don’t leave out alcohol or cigarettes where their kids can get them.

So any society will always have some disconnects in these colors, the extent of them will depend on where they are in cycles of waxing and waning of I and O, also though some issues will not be policed and always be disconnected. For example music and movies are creative industries and so there is often some unfairness, someone might get a movie role by offering a bribe or nepotism, some might feel aggrieved at this but it might not be practical to actually sue people for it. The result in movies for example might have V and Bi people such as where V top actors tend to team up with each other while the Bi actors and people working on sets might be presented by a union. Iv agents might represent the V actors and try to get B actors and other workers to go around the Bi union.

It is difficult to police something like this and so unless Iv agents and Bi unionists make deals in the I marketplace there will always be a lot of disconnected deals. There are then three kinds of movies made, the first is V-Bi where Bi unions in Hollywood make deals between V actors and the various Bi workers involved. Such films are more normalized in that they evolve in the genres normal people like such as romances and thrillers. Usually they avoid any untested ideas unless they do demographic research which checks people randomly for what kinds of movies they like, also they might invite people of their target demographic to view the movie before it is released so they can change parts that offend these normal people.

The second kind is Iv-B and is usually independent with lower paid actors and workers, they try to be revolutionary and score a rapid growth in the box office or often a collapse if the movie is not liked. The third kind of movie is a balance between the two where the I-O marketplace reconciles the two kinds of movies into a mixture, they are often revolutionary with some new ideas but also evolutionary in keeping to themes the public is comfortable with. The saying something new about something old applies here.

It is not really possible to police Iv-B and V-Bi films because they are forms of art and don’t really harm people with these disconnects but some might also say that excessive violence and sex for example are from a lack of I-O policing such as ratings of movies. So an Iv-B movie might try to exponentially grow in the box office with an offensive amount of violence to some people, such a movie like some video games might get complaints from the Bi community who see it as abnormal. V-Bi movies can also get complaints from being too safe and the equivalent of a stagnant economy, they can easily be boring and hard for Iv agents to sell.

## Minorities and gays might complain about these kinds of movies for not representing them, for example gays in the movies have often been required to stay in the closet as Iv and B because their actions might be seen as abnormal in the V and Bi community hurting sales.

Chaos then as the real estate bubble developed tended to grow in areas where it was either not practical or not really deemed necessary to police because of a kind of caveat emptor principle. For example Iv real estate agents might have hyped real estate prices to some degree in the early parts of the boom but B and Bi people were presumed to have some sophistication in business deals. To some degree then having I-O policing does not mean people have a license to be foolhardy, however as the boom grew partially from these small misrepresentation and frauds usually the situation would come to the attention of the I-O police who might crack down on misrepresentation and scare away the Iv agents for a while.

This then is an awkward time in a boom where it is not systemically dangerous, people are not losing or gaining much money and Roy crime is very minor. Iv-B then grows in this area secretly and deceptively and so like a contagion that is still not hurting many people. When the I-O police start to look deeper into the situation they might uncover far more than they realize existed. In some ways this was the situation in the US leading up to the GFC, a lot of people seemed to be making money and few had legitimate complaints as many B workers were getting liar loans and so had little standing to accuse Iv agents of misrepresentation.

In situations like this it is vital that I-O police do random audits of the situation to get an overview of the deception that is growing, they need to do this like with the example of the food inspector earlier, before there is any sign of a problem just as O police should patrol some areas even though there are no signs of a crime occurring. Iv-B bubbles then can quickly become out of control because of their secretive and deceptive nature, their fractal shape means that a lot of money goes a long way until there is a collapse when Iv-B money panics and runs to a safe haven like the example of escaping the burning theatre.

This then leads to a sudden shortage of money from hoarding as well as reduced leverage which is highly deflationary, also though as the branches and roots break and money is no longer tightly controlled in these conduits it becomes quickly apparent how little money there really is in the system. This can also be estimated by looking at the amount of money as currency circulating in the economy divided by the total wealth of assets overall, this fraction represents the leverage in the system but this can also be done to some degree in a bubble by estimating the value of the assets in the bubble divided by the other assets the owners have.

For example few people in the US real estate bubble had substantial assets outside their homes, by looking at the total equity people had in real estate potentially disappearing in a crash it shows the real amount of leverage in the system.

This was shown after the crash where so many had negative equity in their homes and few other assets, the Iv-B system had in effect leveraged this small amount of real assets into owning so much real estate. This disparity between real net worth and assets in a bubble was so extreme in some areas it was almost as if a third world economy had somehow managed to build million dollar homes for a nation of paupers.

This can lead to V-Bi stagnation where there is always a shortage of money because of the lack of leverage because saving up for goods and services can never replace the convenience of borrowing, this is the same as mechanical concepts like gearing and using a lever. For example without using gears and levers energy is more random and diffuse in machines, we then use a lever to generate faster movement in a shorter time or to concentrate a larger amount of energy in a small area. In the same way an economy uses leverage to make borrowed money acts like it has more energy, this can be to make things happen faster like borrowing money to buy something now rather than waiting, an economic stimulus uses leverage with borrowed public money to pour energy into the economy which usually responds with faster sales and employment hires, also leverage can concentrate money velocity into a small part of the economy like it does with derivative trading and high frequency stock trading. Sometimes this leverage can be with a guarantee, for example the government might guarantee a loan rather than have to raise the money itself.

Booms and busts in Iv-B tend to move in steps where there are wobbling tipping and righting points, for example there might be a collapse in share prices like a rout, the equivalent of R animals like gazelles running and scattering from an attack by Y-Oy predators. Afterwards they calm down and regroup in a righting point, in the same way after a rout on the share market investors tend to come back timidly and buy back in, this represents a righting point where the shares recover in price. Usually in charting stocks there is an attempt to work out tipping and righting points, there might be a trend line like a 200 day moving average that could be broken or a psychologically significant share or index price that if broached signals to many they should panic and sell or rush in and buy.

When there is an Iv-B collapse people tend to think the economy is in better shape than it really is because of the deceptive amount of fraud and corruption in it, they then tend to get caught in bear traps where there is a recovery and then another collapse. This is like the R prey regrouping and then being attacked again by Y-Oy predators waiting for them, it is like a bear scaring off its prey and then hiding until they come back to catch them more easily. In the Biv market Iv agents might have some idea that the market will collapse more and so sell into any recovery creating a bear trap.

B workers might also know there are chaotic problems, for example liar loans in the subprime crisis in the US were taken out in many cases by people who knew they could not repay loans but the lenders thought they were a good risk or their Iv agents didn’t care. A bear trap then can be like Oy predators chasing R prey, an Oy bear trying to catch R salmon in a river, this can be like Iv stock brokers looking to sell into the momentum of the recovery to offload stocks and bonds, they might also short the market to take advantage of their panic. For example Oy predators might chase R prey away from a waterhole and then hide near it. The R prey as they return might at first be timid but then move with a greater momentum perhaps to get to the water and grass first. The Oy predators then use this momentum to catch more prey because when R realizes the trap they have to slow down to a stop and turn around, often there are others behind them pushing them towards the Oy predators as well. In the same way a bear trap has R-B investors investing with some momentum and it takes them time to realize it is a trap and not a real recovery, in that time they lose some money.

## A prey trap can be like where R people lure foxes in because of their predatory greed and then kill them for their fur, in some ways the GFC was a prey trap because B people took out so many loans as a cheap way to speculate on housing with the Iv agent’s money.

These bear traps however can be a deeper problem, the R prey are being chased and the attempt to trap them can imply they are becoming scarce and so there can be a collapse in the food chain. In the same way once the Biv market is using too many traps to make money then it means that Gb resources or V refinement gains are running low, it also means that people are not as willing to do business at all unless pressured or tricked into doing so. To create a bear trap stocks might be bought to mimic a recovery and then as others rush in to take advantage of the rally they dump stocks to make an overall profit. However since the buyers would not have bought the shares unless trapped like this it means they see the market as bad unless it is made to be ever more deceptive in Iv-B to attract them.

Not only then is this evading I-O policing by stock market manipulation it also means the Iv-B system is possibly collapsing quickly from a lack of resources to feed on and the remaining people doing deals are trying to feed on each other rather from the resources at the bottom of the food chain. For example in the boom before the GFC hedge funds in the US made money from each other with the best at the top but most made some money. When the GFC happened it often became a Roy Negative Sum Game where the idea was to lose least by tricking and trapping the others with false recoveries, some even made money out of this with shorting the market. As Iv-B then grows it becomes more secretive but it can also compete like this to be the most deceptive to survive like animals using camouflage or mimicking other kinds of animals to survive.

The bear trap then is in a situation where there is so much secrecy and deception that the bad state of the economy and the broken roots and branches leaking money cannot even be analyzed properly and so a lot of money is wasted like blood leaking from veins and arteries of a person. It can be like the final round of poker where it is discovered everyone is bluffing and no one has a good hand, often the one who wins the hand and survives this kind of Iv-B collapse is just slightly less in trouble than the others. For example arguably Morgan Stanley and Goldman Sachs could have been allowed to collapse like Bear Sterns and Lehman, they were hardly in better shape.

However generally large V companies should not be allowed to collapse without some help in falling more gently, like large trees being cut up as they become unstable to protect the plants below them.

Often also Iv companies and B workers don’t realize the extent to which the roots and branches have broken, they might then be in a section that no longer connects properly to more sustainable parts of the economy and so their situation, though unknown to them, might be hopeless. This can be enormously wasteful in resources in a crash, whole areas of the economy might be salvageable with random I-O audits to determine which parts are cut off. This is also like trapped miners or possibly trapped people in a flood, without I-O police willing to check on all these areas some people lose more wealth and possibly their lives. This was seen in the collapse of the Soviet Union where shock therapy caused even more collapses and an increase in deaths among the elderly, it is similar to using shock therapy on a patient without first determining if it is going to kill or injure them.

For example as the subprime conveyor belt of making loans and packing them into bonds fell apart some companies were still making loans and keeping more of these bonds as investments or as inventory to sell, not realizing the market for them had already become broken off because of a lack of liquidity with the banks buying them. This is why many financial firms ended up being stuck with so much toxic waste in bonds, when these chaotic cracks are widening some parts of the economy will understand this better than others and will be deceptive to reduce the panic in others until they get out first and in effect tie off the roots and branches causing the losses. So for example in the GFC Goldman Sachs realized earlier than most the crisis that was coming and looked to clean up its balance sheet without alerting others, then at some point these other businesses realized they no longer had a connection with Goldman Sachs to borrow money after having paid them.

Some such as Magnetar, Scimitar Capital, Deutsche Bank, and Paulsen were shorting the subprime bonds having become aware of the impending crisis. They avoided passing on this information until they had shorted these bonds as much as they could, then it became more V-Bi public knowledge so that investors were not available to buy into any bear trap like recoveries which hastened the collapse from the withdrawal of liquidity. Those unaware of this breaking and tying off of roots and branches then found themselves with no way to get liquidity and collapsed much more quickly than they thought possible, often the money was still around but had gotten out first and from their lifeboats in effect these investors watched the others sink.

The roots and branches also broke off from excess contagion, also in some areas excessive toxic waste in securities became clearer to some earlier on that it would be a problem. This then is like a tree falling apart from rotted roots and branches but also from some of them built with inferior resources like mineral deficiencies making them brittle. For example some areas were far less policed by I-O and it became apparent to some this corruption was to be avoided in a crash and so the subprime part of the market started to become broken off as investors refused to buy their bonds, investors refused to loan them more money to relend to borrowers with liar loans, B workers refused to take on loans as the housing prices stalled, etc.

These companies then found their roots and branches to be breaking off or no longer supplying liquid money and failed in many cases not long after they suddenly realized they were cut off from any lifelines. CDOs in some cases became more suspect and investors started to avoid them, those who had invested in them or manufactured them started to be marginalized while other parts of the market were ok. Then many companies such as Merrill Lynch realized that they could not resell these and that this created too many losses for them to continue. It is however very difficult to tie off part of the monetary circulatory system and expect the rest to work well, the same can be said for example of using a tourniquet on a leg of a person and expecting the rest of the leg to stay healthy or even for him to walk around like normal.

This progressive tying off of parts of the roots and branches then was like R and Ro prey in Roy being trapped and eaten completely or being trapped in an area with no food rather than enough surviving to continue to grow their numbers, it is also like in a Roy war where parts of an army might be trapped and encircled so the whole is lost even when they could have fought on with enough logistical support. So with Merrill Lynch or Lehman for example much of their business was still healthy and viable but getting cut off from credit because of some of their toxic assets caused the rest to sicken and have to be sold off much cheaper than otherwise. So this happened all over the global economy in the GFC where sometimes relatively small amounts of contagion brought down large banks and investment companies, this was unlike the tech bubble for example which damaged few healthy parts of the economy when it collapsed and also caused few healthy parts to be cut off from the rest of the economy.

This cutting off can then happen very rapidly in Iv-B particularly because the most successful use high energy and low time as high velocity to make money, when it comes then to cutting off other companies from credit then those who do this the fastest survive most but often at the expense of their own demise as the economy that is left is shattered into pieces that cannot nourish each other. If the asset forming the bubble is particularly widespread then this increases the likelihood of different sections of roots and branches being isolated. For example with the tech bubble some companies no doubt were isolated from funding because of the general panic over the prices falling in other tech stocks, they would have struggled to survive but they were also helped by their being genuine Iv-B innovation going in with computerization and the internet while the kind of innovation in finance was mainly in trading for deceptive profits not creating value.

The oil bubble in the GFC also caused some roots and branches to sicken and be isolated from each other, for example as gas prices rose in the US people drove much less and this hurt restaurants and gas stations along roads in remote areas. These businesses might have been Iv to some degree and competitive so too many might have been built on the car traffic available so each was making less and less money. When the oil bubble rose with Iv-B it created tipping points with these businesses and a shaking out, this is like branches being shaken off a tree and falling. When this happens then the accumulated capital of the business and training of the staff is wasted because it is unlikely much of it will become humus for other companies when the gas prices fell. Also some workers might have moved away like humus blowing away, housing prices fell causing other businesses to fail, and so on.

This breaking up of roots and branches can appear like a hydraulic system freezing or seizing up from a lack of liquid money, without this the leverage fails and there is only frozen money as debt and gaseous money still driving the bubble. For example gaseous money drove the oil bubble along with frozen money as debt but gas only works in hydraulics when its energy level is maintained, when this gaseous or steam money caused collapses in the general US economy like pipes of a boiler bursting liquidity drained away and the business circulatory system seized up leaving mainly frozen money as debt not being able to be serviced.

When the bubble burst the frozen money was for a long time after this not serviced which in many cases created more loss and wasted resources in the economy, because the bubble at this point was a Negative Sum Game the competition was to try and minimize personal losses by dumping them on someone else. Some won and some lost in this collapse but overall it lost money for the global economy because even the winners were just losing less. For example secretive manipulation of a collapsing market causing losses to other businesses should be actionable in I or O law as fraud or perhaps trading while insolvent. By preventing fraud in a collapse people can more easily work out what is going on and where the dangers of further collapses lie, for example it might be criminal behavior to assure others that a collapsing building is safe so one person can get out without being trampled. In a chaotic collapse then honesty policed by I-O is crucial because like people trying to escape from a burning theatre wrong information can be far more costly.

## This dynamic is still being played out in the Eurozone in 2012 where much of the media coverage is either panicking people for readership or in service to short sellers or to reassure others to prevent panic and increase personal profits. There are still few random audits being made to determine the economic problems however many banks are getting stress tests which are the equivalent of damaged bridges being stress tested to see if they are safe.

Many parts of the economy also work as Ponzi schemes whether they be BIV, G-Gb or Roy. For example a positive Ponzi is where profits are generated and the investors make a profit but so does the business. A bank is an example of this, it uses people’s deposits to pay other people withdrawing their money. A lot of welfare and insurance companies are also like this, for example unemployment insurance is withdrawn by people often different from those paying taxes for it, this however creates profits in the system by reducing the chaos of someone losing their job and perhaps starving before they get another one. A G-Gb Ponzi is a Zero Sum Game where money comes in and pays out other people without making or losing much money, for example a gold storage facility might give people different gold bars if they withdraw their gold than the ones they deposited but the overall amount of gold does not rise as a profit or fall as a loss.

A cash float in a business can be another Zero Sum Game, it allows deals to be made and people might buy things paying money, later they might get a refund and get different currency notes back to the ones they paid with. A Roy Ponzi is like the one Bernie Madoff created in its final days, it lost money and kept going only because more and more money to minimize the losses had to be attracted. It could not be a Biv Ponzi because it offered returns that were too high to achieve by honest means, it is then a kind of predator prey situation where many suspected it was a Ponzi scheme or an illegal front running share operation but still calculated they could make more money on it before it collapsed than by denouncing it.

In Biv these Ponzi schemes can be like bubbles of gaseous money in that they appear to increase the overall amount of the money supply, for example Madoff’s scheme made there appear to be billions more in money in the US economy than there really was. A gaseous money bubble does the same thing with its high energy forcing up prices which appears like a localized inflation. For example the real estate bubble was caused by the high energy of gaseous money distorting prices around it, this made it appear as if there was much more money in the US economy even including the leverage being used in loans.

A real estate auction might have this hot money bidding outrageously on some properties, this makes other properties appear to be undervalued by comparison and so many vendors would put their selling prices up or even take their properties off the market expecting more profits later and creating a shortage. The same might occur in art auctions where enthusiasm for some paintings might cause others even of much lesser quality, some like toxic waste or the cheap tulips mentioned earlier sold by the pound be pushed up in price by comparison. In the region of this gas bubble then there are stress fractures around these prices, some sales attract this high energy money and go sky high which creates tension with other properties nearby where the I-O market struggles to make realistic sales that end users can afford.

Between the two there can be a rift between Iv-B speculation and V-Bi normal real estate markets, also even in Iv-B stress fractures occur with trying to reconcile prices in areas with different energy and also different levels of deception. For example in the art bubble prior to the GFC there was often market manipulation where one dealer might buy back his own painting secretly from another who had bid higher prices for it or he might provide easy finance arrangements or a money back guarantee to the buyers. This would push up the whole market and create an expectation the same exponential increases would occur at the next auction, if not then there could be a panic or collapse where people are left with frozen money as the debts they used to buy the art.

When a bubble bursts the result is separation of roots and branches where each can sicken and die from a lack of connectivity, in this art market the bubble burst and so the lack of cohesion meant that prices became very uneven with some collapsing into huge losses and others still trying to rally in bear traps. This is like a bubble busting in nature and breaking into different parts in a turbulence, the gaseous money breaks into small areas of high energy with still some enthusiasm for isolated parts of the art market surviving while other parts have cooled into liquid money or what they will sell for in reality. Other parts remain insolvent with frozen money meaning they cannot be dissolved or sold as liquid money because they owe more than the art is worth.

As these bubbles burst the implosion of liquid money causes tsunami like waves through the system further breaking roots and branches and separating sections from each other to sicken or die off like trees being smashed into driftwood by waves. This implosion then is like a sudden dose of deflation which causes a wave to go through the system of inflation and deflation after it, for example as money fled the subprime and other markets in the GFC it went into gold which made the price of gold go up, this is like the wave rising. It also might have gone into the oil bubble to escape other losses making oil go up, then when the money realized the bubble was losing energy it fled oil and this is like the wave front dropping and often tumbling into chaos and turbulence. Before this then can be a drop in liquidity like water preceding a tsunami, for example as the art auctions collapsed a lot of money rushed in at first to snap up bargains before they realized it was like a bear trap. The difference though is a bear trap can be a Roy predatory trick while in a bubble implosion this money gets drawn in initially even if the system is honest.

As this bubble bursts then there was a lower level of money in businesses surrounding the bubble as people sold up other assets and called in loans to cover their losses on paintings or to snap up bargains. When the art owners saw the art market collapsing this caused the money at first brought into the market to shore it up decide to flee instead into other assets for safety, this creates a high level of liquidity in a shock wave after the drop in liquidity around the bubble coming out of the collapsing market. This raises prices wherever the money goes, like putting their money in the oil bubble or lowering interest rates in bonds making older bonds worth more, and then the asset values drop again as they move their money on looking for safety.

In another example businesses around the art world might have become used to a level of wealth associated with the bubble’s investors, then the liquidity around them would have lessened as people stopped buying cars, eating out, etc when the market started to implode as people rushed more money in to shore up the bubble. This left other businesses further out from the bubble also collapsing and laying off workers for lack of sales, for example as investors lost money on art or invested more money in the bear trap they would have postponed other purchases. Then the money would at first come flooding back as people gave up on saving their art investments or buying bargains and started dumping them for what they could get in bear traps for others expecting the market to recover.

Those who got their money out would be looking for new investments and might at first put it nearby, such as in local banks, buy up local businesses as an income producing investment, buy real estate to rent out, etc as somewhere familiar and close by to safeguard their money. As it became apparent that the bubble bursting was imploding with a lack of liquidity causing collapses in businesses around them they would sell up again causing more collapses and move their money further out from the implosion, and then perhaps do this over and over again raising and lowering prices destructively until the force of the implosions was dissipated or they moved further enough away such as an a safe harbor with US Treasuries.

## A safe harbor is where the tidal waves of money can be ridden out safely, there is an expectation that prices may wobble up and down with the waves but will come back to a normal price without any collapses occurring because of it.

The Iv and B people involved in this boom and bust can be like termites in wood, hollowing out a tree on the assumption that it will still be strong enough to stand and then it breaks from an external shock like a storm. They might then progressively move into other areas and hollow them out even more quickly because of their larger numbers. The creation of roots and branches from nutrients also usually creates a solid piece of wood as the I trunk of the tree. A sustainable economy grows from a balance of the twelve colors, a strong tree grows by having a thick trunk that enables it to withstand external shocks even if it loses some of its roots and branches.

For example some B roots might get eaten by animals and the trunk contains reserves along with the lower trunk or Bi to regrow them. As can be seen when a tree is cut down leaving a stump it can often slowly regrow branches but a weed without a trunk needs to rely on the Bi area in the ground to survive and regrow. In the same way a Biv economy is made strong by the efficient use of its resources, some of these materials might be used in ways that are fragile and can be damaged but are easy to repair like roads. A storm might damage roads by causing potholes, by making roads relatively weak they don’t waste resources in good weather and so they can be patched when there is a tipping point that causes holes to develop. The same occurs for railroad tracks, water pipes, electrical power wires, telephone cables, optic fiber cables for internet and so on.

A balance then needs to be set between wasting materials on making some parts of the economy too strong and being so weak that they cause disasters like a poorly built railroad track. The same problem occurs in Biv products, they need to be strong enough to handle rough usage by consumers but not so well built that they cost too much compared to their competitors. These kinds of roots and branches are prevalent through an economy and usually the I-O market determines how much to spend on constructing them properly in the first place, maintaining them, and patching or replacing parts of them after an external shock.

When an economy becomes poorer it can become more Roy and so there may be an increase in crime where R or Oy people secretly and deceptively steal from this infrastructure like for example people stealing copper wire from traffic lights, the Roy system can also skimp on fixing or maintaining them such as the US fixing roads less often in 2012 and risking more chaotic damage like larger potholes, etc. This can be the equivalent of R termites or an R contagion attacking trees which may be internal and hard to monitor, for example RB workers might steal some concrete that is supposed to go into a building’s foundations to protect against hurricanes.

One day though we find a tree might collapse as its roots have rotted or a termite ridden branch falls and hurts someone when it reaches a tipping point. This is also like Roy electrical utilities that are privatized and then in a poor economy the companies fail to maintain the equipment properly leading to power outages. Oy predators can also attack trees secretly, for example ant eaters might wreck parts of a tree looking for the ants and termites though they might prefer to not damage the tree too much to preserve the food supply. With too much Oy-R competition between animals though they might cause more damage to Biv plants because they might be only saving it for one of their competitors. In the same way an Iv-B economy as it becomes sicker becomes Oy-R and then corporate raiders are less concerned about their acquisitions surviving and more about getting all the profit they can.

## Then a storm might occur and the tree might fall with a combination of predator and prey damage that people didn’t realize was happening, in the same way the GFC was a collapse of many financial companies that had been hollowed out too much by greed and a lack of care in maintaining the Biv economic infrastructure.

In the same way this Oy versus R predator prey relationship causes damage to a Biv economy, more so if the O police are weakened or the economy is become poorer and the Roy areas increasing in influence. For example a poor economy might have Roy areas where people steal copper from power and telephone lines, steal water pipes, live in drainage pipes and sewers causing damage or blocking them up, substitute cheaper and more fragile components when repairing infrastructure, get bribed to allow substandard construction work such as poor quality concrete in pipes or buildings, sabotage elevators to make it easier to mug people on the stairs, break lights and cameras in car parks to make it easier to steal cars, break public phones to get at the money inside them, and so on. As this progresses the Biv economy can become sicker as more areas are consumed by Roy contagion, also they can be affected by Ro and Y attacks which are more visible such as by Ro gangs and a Y mafia robbing banks and businesses.

In the same way the GFC by its unexpected nature would have been caused by Oy and R contagion as well as by Iv and B deals in Iv-B. For example criminal activity in the financial sector used tricks such as money laundering, laddering of stocks, stock brokers front running client’s purchases of stocks, using the media to spread bad news about a company while shorting its stock, borrowing money from their customer’s trust funds and then getting caught in a downturn as with MF Global, negative Ponzi schemes which lose money constantly and then get exposed in a downturn, corrupt earmarks in the US by politicians in exchange for donations which misallocate resources, union funds being siphoned off by a mafia, companies being set up by criminals to take in goods on account and then they steal these and bankrupt the company, protection money bankrupting and starving businesses of capital, drugs causing people to waste their money as well as trying to addict others to make money for their own habit, toxins corruptly allowed in the environment or secretly being dumped making people sick and losing their jobs, politicians or those working for them favoring companies and then going to work for them as a payoff, lobbyists secretly bribing politicians, and so on.

As can be seen these are all controllable to some degree with I-O policing but some such as the drug problem are far harder to police than others such as watching pension funds for mafia infiltration. When these criminal influences act secretly they are highly chaotic and then like cracks they can join up and form a combined contagion still consuming the remaining wealthy areas of a neighborhood as it collapses around them, for example lobbyists corrupting politicians might cause deregulation of the financial sector and a crime wave, front running of stock purchases might weaken the profits of investors and might join up with the stock brokers betting against their clients causing collapses as Goldman Sachs was accused of, and so on.

When the economy goes through a cyclical time of weak I-O policing then these kinds of R contagion or Oy predatory damage occurring secretly can get out of control quickly, joining together they can create powerful shearing forces that tear an economy apart like animals pushing down plants as they chase each other. It is impossible to get rid of all these kinds of I civil and O criminal infractions of the law but the idea is not to remove them but to moderate and domesticate them so they are manageable. Also when they are kept at a low level petty criminals like this can be bargained with to expose worse criminals in exchange for leniency, this keeps the overall system from getting too sick with Oy-R contagion.

Deregulation then can be dangerous but more usually the effects become obvious earlier such as with warning cracks and smaller collapses in the system alarming more and more people like shocks before a major earthquake. However perversely when there is a recovery from these smaller collapses this can be seen as evidence that I-O policing is not necessary, for example that US people shoot intruders in their homes can be seen as a crime wave needing more I-O police or evidence that police are really not necessary. The difference is that police usually stop crime with far less damaging effects to an economy than a Bi community might do with what is effectively a lynching when someone is shot like this. This then is a deeper problem where V is looking to reduce I-O policing to get more profits from B workers, any excuse then become self-serving to achieve this end. More chaos then is a false sign that the system is working ok without police and less chaos gets the same answer.

Usually this kind of contagion tries to avoid detection, the hollowing out of the Biv economy goes along under the radar to avoid police action and so it becomes more and more fragile while just avoiding a collapse. This can be seen sometimes with termites when floorboards might suddenly collapse and virtually turn to dust as there are so few areas not hollowed out. In the same way the Iv-B process of hollowing out the financial sector of the global economy avoided triggering more I-O policing and tried to hide itself such as with deregulated derivatives with few records of what deals were being done. In this process then it is like converting a solid piece of wood to a house of cards where an external shock like the termite ridden wood turn the economy into fragments that then cannot communicate with each other or be able circulate money properly for a recovery.

Just as the termites are fragmented after a collapse of a tree companies become fragmented and cannot find customers and skilled workers even when they are close by and looking for them. This is reduced to some degree by the I-O jobs market still functioning but long term dislocations are more opaque, for example students might select the wrong career while companies are not sure of what kinds of workers they will need. The shock causing a collapse can be from an external event like 9/11 and Hurricane Katrina causing collapses in parts of the economy or it can be the panic induced by external events that creates the collapse, like a small and containable fire in a theatre causing so much panic that people get trampled. Arguably this happened in the GFC where the amount of panic including panicky reactions from governments and regulators caused much of the damage as was seen by the ability of the Fed to quell most of the chaos with liquidity and then hardly even lose any money overall by doing so.

In the Great Depression this was summed up by Roosevelt, written by Napoleon Hill, in the saying we have nothing to fear but fear itself though the same can also be said for competitive greed. This is like termites in effect panicking in a tree and then collapsing it by trying to eat their way out of it, the financial hollowing out of the economy made it so fragile that the attempted movement to safe harbors for money created liquidity shortages, made parts of the system such as with Bear Sterns and Lehman die off and then this panicky movement of money spread to widen all the cracks in the system until it fell apart.

A contagion in nature like in an economy is composed of individuals acting alone and competing with each other, they are then trying to eat enough for themselves while not causing a panic that might collapse the system and hurt themselves. They do this by being deceptive to each other, masquerading that things are better than they really are and this can manifest like a wave or miasma of euphoria in the economy just like a wave of panic might propagate the same way later. The problem is each person in Iv-B is better served by lying to each other and some lies are more useful than others, these lies then become a conventional wisdom about the economy that ends up feeding back to the original liars and reinforcing their own views. This is again like a microphone feeding back on speakers, like the microphones hearing stories of a bubble market continuing and feeding it back into speakers and then it hears these stories as a validation of this euphoria.

Rumors then spread through the deception and timidity of Iv-B people, they also spread rapidly because to be faster is to profit more in Iv-B. These lies also create a kind of momentum so that skeptics against the bubble economy encounter a pressure against them that becomes stronger as the feedback increases until it collapses or is policed by I-O in time to restore the economy, then opposing lies forecasting another boom might be pressured in a similar way. This panic then can propagate like hysteria and depression in the population, when people act hysterically they tend to induce hysteria in others and when people are depressed they tend to make others feel this way too.

This kind of lying in Iv-B then permeates all parts of an economy to create mass delusions of crowds but in the sense of a crowd being composed of loners watching each other. It can also create these delusions in politics such as in R communism and Oy fascism where people became swept along with the momentum of false ideas that nonetheless worked for a while because of the pressure of the people to make the situations conform to their delusions. In the same way religions can also in some cases delude people with cults into suicide or being exploited eventually drawing the attention of the I-O police, panic buying of supplies or failing to plan properly can create a crisis even when no natural disaster or end of the world prophecy materializes, militias can feed back radical ideas and be confronted by police as well, and so on.

These forces can feed back on themselves and act as leverage, they then borrow from the V-Bi parts of the economy that normally stay away from these manias and panics preferring to rely on the randomness of events. Iv-B then in a bubble can draw in money from V-Bi in loans which it then often wastes, this is like roots and branches in a tree growing too much and causing a tree to sicken or fail. It is also like where more stable people got sucked into the GFC by the euphoria around them making them risk much more than they normally would. Crowds in Iv-B might have a miasma of fear or euphoria and then if strong enough draw in V-Bi people to also protest, this was seen for example in the Arab Spring in 2011 where R people were protesting against the Y military government in Egypt and their heavy handed responses made Ro crowds join in solidarity eventually toppling the regime.

In the last days of the Soviet Union there were Oy and Iv protests championed by Boris Yeltsin, these eventually developed so much energy that the more stolid Y and V parts of the economy threw in their support and it led to a tipping point for R communism and the rise of V oligarchs. Usually Iv-B manias are about a new R-B revolution such as gold fever from discoveries in America and the green revolution where more resources became Gb and food production increased though it was also followed by more R contagion as insect pests in the Biv plants grown in this. They can also be an Iv-Oy counter revolution as a new way to handle R-B problems usually by refining goods more.

For example there was an R-B problem globally in advanced economies where poor people could not afford homes, this was supposedly solved by innovations in finance that with better handling of risk could balance the defaults by poor people enough so entire communities could become more Biv and prosperous through this extra efficiency. This created an Iv-B euphoria and led V-Bi people to loan money into it and then lose enormous amounts, it had to happen with an innovation though because previous failed Iv-B experiments would not be easily trusted again and Iv-B is innately about innovation. Lies then usually need to be about new things and not about things that can be checked against known facts or experience.

Where reality intruded on the Iv-B bubble leading to the GFC it tried to denounce this with a new reality with more lies believed by people swayed by its momentum or it mutated into variations that sidestepped these previous experiences. For example it was well known that poor people would default on house loans and also lie on loan application forms to some degree, this led to a mutation where such lies were not important overall with higher interest rates charged and also that many were not lying but just worked in a black market economy such as selling drugs in poor areas. When the US trade deficit became larger it was ignored in a new reality that it just indicated that more people were investing in the US and that it was not important in the momentum of this new economy. When deregulation caused more fraud it was argued that this was counterbalanced by the extra wealth generated for the economy as a whole.

When workers lost high paid manufacturing jobs to imports it was argued that overall they were better off because they could buy cheaper goods and that the global economy was diversifying, this despite the difficulty in repaying a trade deficit without having jobs that export products. All of these ideas had an Iv-B momentum but came to a tipping point and caused parts of the crisis, each though still has much face saving and defending previous statements preventing Iv-B people from acknowledging the new reality was often a mass delusion. Often this acknowledgement comes with increasing I-O policing after a crisis, for example it is one thing to claim that allowing some fraud in an economy is better for it overall and another thing to be jailed for fraud or try to defend massive criminality like with Bernie Madoff or subprime financing.

In a more sustainable Biv economy there is some usefulness in all these cases, the problem is when the situation becomes extreme and chaotic. For example a trade deficit can often be self correcting, some bubbles are better left to run their course, some global efficiencies can come from not embracing tariffs and protecting manufacturing jobs, some fraud is inevitable in an economy and the disruption of red tape, and a police state is often not worth the loss of efficiency to remove all crime. The problem is balance, the I-O police when strong enough can allocate their resources to domesticate these problems and let them occur and resolve themselves naturally as a tree itself grows naturally along with some level of contagion and pests.

Instead when the global economy became Iv-B it was like the desert plant that had no intentions of being stable and long lasting, but just to use up resources before others got to them first and then collapse as toxic waste. The Iv-B lies then have uses in a Biv economy just as they do in Roy, for example it is essential for predator and prey in the animal kingdom to use misdirection, camouflage, and deception to survive because of one doesn’t do it the other will. In the same way there is no possibility of banning lies in business, only to the extent where they can be proven to be O criminal and I civil infractions of the law and be worth while prosecuting. For manias to happen in the population, euphoria followed by panic then is nothing wrong at all as long as it doesn’t dominate too much when it can be destructive.

An economy where no one could lie about anything would be V-Bi and stagnant, often businesses are founded, thrive, and deliver value to the economy using bluff and misdirection about their business strategies otherwise they would just be copied by others. It would then be of no value to innovate in business because others could just sue a company for lying about their plans and then take all their ideas without having to pay for the research and development. This is what happens after a crisis, the economy becomes so V-Bi that investors panic and any deception and so businesses cannot get off the ground because of suspicion that it might be fraudulent. For example a shop might open and use expensive furnishings to appear prosperous and get accounts, if this was seen as deceptive than any new shop would have to look nearly destitute to comply and the people would be afraid to do business with it.

Just as people often have Iv lawyers agents to use deceptively and hide behind, the V part of society is a permanent kind of bubble that overshadows smaller businesses and contains the most talented artists, businessmen, sportsmen, aristocrats, etc. This is like the fruits and flowers of a society, usually these people receive a great deal of deference from others and their having more money, looser morals, drug use, wasteful spending even in a financial crisis is tolerated. In the GFC though this increasing wealth inequality was more questioned as the V part of the Biv economy like the leaves, flowers and fruits of a tree consumed too much of the resources of the economy compared to its use. When a bubble bursts the people who lived as V profiting from the Iv-B exponential growth often lose money and the seeds they create such as new business startups for the recovery are lost.

For example the movie industry is where new seeds of ideas for movies are nurtured with the large amount of wealth there to create beautiful art like flowers that the whole economy enjoys. The tech bubble burst and destroyed some valuable internet companies but others such as Google and Facebook have profited from an extensive V team of venture capitalists that overshadows the competitive startups in the industry. After the GFC the economy needs new businesses to regrow and use up the unemployment and extra capacity available, this is like humus from trees that shed parts of themselves in the previous downturn.

It is natural then to have recessions because the future is partially unpredictable and so misallocation of resources will always occur to some degree. When these failed businesses collapse the parts of them are fashioned into new businesses with some waste, for example machinery built for one failed industry such as textiles might not perfectly suit another industry such as making furniture that buys it. It is less wasteful though for businesses to shed parts of themselves in a mixture of chaos and randomness rather than trees collapse into dust with contagion and then expect a new forest to quickly regrow from it.

For example trees might shed leaves, fruit, flowers, etc and then regrow more by using the humus that enriches the soil around them. This is like furniture auctioned off from downsizing businesses being used in startups, a desk and chair for example are not wasted as much as a building that collapses and the rubble is auctioned off. In an Iv-B boom however there is little humus produced for regrowth, the mutations are often so unusual that when they collapse after using up the Gb resources or just from being not viable that little can be done with the parts at all. This is where the devastation of the GFC was similar to the Great Depression, in the meantime innovation continued in both cases and people unemployed became even less useful over time for working on the newer goods and services.

## The Great Depression was partially lengthened for example because the US and other countries were becoming nations of clerks rather than of farmers, the new economy needed people capable of making this transformation when often in the great Depression they had become hoboes or lived hand to mouth for so long they were no longer as useful as workers as they had been.

Perversely then it is this continuing Iv-B innovation in the economies that makes people hard to employ after a crisis as well as being able to use the old equipment efficiently, there is also a panic among Iv-B people who are reluctant to invest in businesses for fear they will be obsolete before things settle down and they can turn a profit or overseas competition from companies that did not go broke might dump goods on them before they can get on their feet.

The V part of the economy then is damaged by Iv-B and cannot easily produce longer lasting seeds in this environment, the innovation has to be slowed and some industries protected to allow them to recover enough to be sustainable. In the same way the Bi part of the community is damaged by the Iv-B boom as it lost a lot of money in savings from failed banks that have to be paid for with higher taxes, it lost money from pension funds getting burned by subprime bonds, it lost good jobs in businesses that collapsed because they could not get enough liquidity in the GFC, the waves of foreclosures reduced their asset values making it harder for them to borrow money for retraining, and so on.

This part of the plant needs to have enough resources to grow the I trunk of the plant again, then Iv branches form and the V canopy, it will likely go through a period of savings which is needed in Bi but will be complained about by Iv-B economists. There are still plenty of B resources in advanced economies but so much money was lost in the Bi communities from real estate that this also makes it harder to pay for I-O policing of the economy and it then allows more crime to continue. Iv agents need to sell to someone, in the financial sector they now have fewer and more suspicious buyers in Bi pension funds and so V banks such as on Wall Street have lost a source of funding to invest in new seeds of businesses.

This showcases the problem with bailing out the V banks of the economy while letting the foreclosure problem in Bi communities fester like a contagion that has overcome the immune system, there is then no easy way for businesses to have sustainable markets for their goods to grow and then compete in the global economy so they keep collapsing creating more waste of resources. If instead Bi had been bailed out more losses to V banks would have been avoided this way as real estate prices would have recovered more and there would have been fewer foreclosures, however this tendency to favor V is usual in a crisis because V tends to have more money and clout to get their way as the B and Bi communities run out of money and influence first.

Using government money to overcome crises in Bi and B is a good way to redistribute excessive wealth accumulation at the top of the tree, this is something trees naturally do to have reserves to overcome chaos in their roots. For example government health care prevents chaos such as heart disease or cancer from causing a family to go through their whole savings to survive, the government can then make a profit from providing this by getting back more taxes. To handle Roy scarcity then public insurance is more efficient, there can be added to this private health insurance for extra benefits such as picking the hospital or doctor, faster surgery, etc. Unemployment insurance also generally reduces the chaos from losing a job, especially in a recession not caused by the unemployed.

Generally then where people are poor and scarcity of resources threatens to cause more damage to society financially than the cost of the insurance it is better to provide Roy benefits. More of this was discussed in my first book but insurance in general needs to be policed to make sure people are not profiting from it such as malingerers with health insurance and those not wanting to work. These people can become like R grazing animals who feed permanently like a welfare state on the V wealth or leaves of the Biv economy. There is a tendency for a Biv economy to create this R welfare state willingly because the money going to them comes back into the Biv economy as purchases anyway. This is like R animals eating grass and when they die they become fertilizer for Biv plants. R people then have a special use in Biv societies such as being a reserve labor force that can hold wages down.

For example the V part of society usually donates money to R charities as a V-R interaction like plants in effect donate free food to R animals in exchange for their helping to spread and grow their seeds, spread pollen, etc. When R animals eat too much plants can become stunted or wiped out, then they start to evolve bitter tastes, thorns, poison, red color to signal danger, etc. In the same way the V part of society usually spreads its wealth around but if they have to pay too much to people who never join the Biv system as B workers then they start to feel like they are being attacked by parasites.

Often the poor are then like R termites destroying Biv roots and branches, but the rich have also found in history such as with the Ro French Revolution that it is dangerous to appear too wealthy and not share with the poor.

Otherwise this can cause an R revolution as happened with the R philosophy of Karl Marx. He said that the V wealthy and often the Y imperialists would never share the wealth of society voluntarily and so it could only be seized violently by toppling in effect the Biv society that created this wealth. This was like R animals thinking they need to topple trees to get food because they would never feed them voluntarily, the trees would instead try to grow higher and make thorns to stop them like wealthy capitalists profiting from the R people and protecting their wealth with armies. This happens with Acacia trees in Africa for example, Ro elephants often destroy the trees to get to the leaves while R giraffes have adapted to eat the leaves while avoiding the thorns and being tall enough to reach them.

Much of the violence and anger that allowed R and Ro communism to prosper went away by the advanced economies giving aid to R people with Biv capitalism getting a good name with this, also they protected themselves from R-B revolutionaries in their own countries by creating welfare for the R poor and higher wages for B workers. This eventually seemed to make communism appear to be unnecessary and made it seem Karl Marx was wrong about Y-V sharing the wealth with the poor and workers, many communist systems then changed to democracies such as the Soviet Union and the Warsaw Pact countries.

However once the threat of Roy violence went away much of this unwillingness to share the wealth has returned to V in Biv economies and so there is increasing wealth inequality in many advanced economies. If this continues then there might be a series of crises from this wealth inequality like top heavy trees falling over, arguably the GFC also happened partially because of this as inequality was the highest in the US since the Great Depression and has not yet declined as of 2011. When people cannot make money and reduce this wealth inequality then they often try to speculate on borrowed money from the rent seeking V and Iv, this is lke the Bi-B roots of a plant trying to get nutrients back from the V-Iv part of the plant.

## Since they often cannot make enough money to repay these loans the result is a series of defaults but this is a destructive way of getting nutrients from V and Iv to the bottom of the trees in the economy, the V-Iv parts of the tree might be anticipating a return on these nutrients and continue to grow.

Such a tree would tend to die out because of natural selection, other trees that shared the nutrients more equally would be more likely to survive rather than become top heavy while starving at the roots. However it can also be a survival strategy if V uses these nutrients to create many extra seeds, in effect it is sabotaging its own health for future plants. In the same way wealth inequality might be creating an aristocracy of rent seekers as in effect a top heavy plant that survives by quickly seeding to make more top heavy plants. This is why for example the V-Iv aristocracy in Europe often put up with B revolutionary anger from workers, sometimes they would be attacked and their property ransacked but more often they would hold onto more money overall.

Often though this tendency for a top heavy Biv economy to collapse can become very dangerous for this V-Iv aristocracy. For example the V wealthy lost money in the GFC from these defaulted loans, they bailed themselves out with the government but because most of the wealth is V-Iv they are in effect bailing themselves out or socializing their losses with their own self insurance in V. At this point then the plant might be so top heavy that it cannot repair its own chaotic cracks by getting more nutrients from the starved lower parts of the plant. So these V banks might continue to look for good investments in the Bi-B economy but the B workers will still usually default because they cannot find enough Gb resources to pay it back. This then is like a top heavy plant in soil that is exhausted. The B workers then like the B roots try to get these nutrients to heal their own chaos and try to grow speculatively as a way out

## The problem then is how to make money and assets be distributed more efficiently in the economy rather than causing this disparity between supply and demand by Bi-B consumers not having the money to buy goods from V-Iv capitalists.

The problem is the same in Roy societies and the animal kingdom, for example a Y dictatorship might be corrupt and keep most of the wealth of a country for the elite and as Marx said are not likely to share this money without threatened Ro violence or an R revolution. In Africa for example Y lions generally don’t overbreed and so they and Oy predators don’t decimate the R and Ro prey unless by accident. If they did then the situation might be similar to Marx’s theory, too many predators chasing too few prey and leaving themselves open to suddenly starving and dying out themselves. Just as Marx said the Y imperialists will take all available wealth unless overthrown violently the Y lions tend to eat all the food easily available which is why Ro prey learn to defend themselves violently.

For example while Y lions might be instinctively good at not overeating their prey Ro buffalo still had to evolve tough hides and strong horns to keep them in check. To suggest then that Y-V capitalists will learn to share the wealth of an economy is unrealistic, this is why wealth inequality has soared after communism collapsed and capitalists were no longer afraid of bring overthrown. In the same way if Ro animals lost their ability to defend themselves they could not rely on Y predators to be responsible, they would just overeat until they starved themselves. In the same way then unless Y-V capitalists are threatened they will rip off workers so much that the resulting wealth inequality will collapse the economy as happened in the GFC. For example subprime lenders used the opportunity of lower Bi-Ro community anger to rip off R-B workers with incredible amounts of fraud. If those communities had been more militant they could have stopped these rip-offs much earlier and prevented the economy from collapsing. The I-O regulators then not only went along with Y-V efforts to deregulate, they were not backstopped by Bi-Ro communities demanding protection as they should have been.

This then is the communist theory, that Y imperialists like lions feast off the exploitation of the poor like R gazelles who if they could would dream of not having any predators around in their worker’s or grazer’s paradise. Marx then was basically saying that the food chain was unstable and would always have collapses when the predatory financial Y and Oy exploited the poor too much as prey rather than a resource to be conserved. Eventually the system would have a revolution when these financial predators would die out as a useless part of society while the former financial prey would enjoy the benefits of their grazing in full.

We now know however this is not true in nature by looking at most ecosystems, Y lions for example don’t multiply too much as they have no doubt evolved to be more prudent and not overeat or have too many offspring. In fact most predators in Africa have trouble eating and the prey is relatively abundant and either R hard to catch or Ro working in teams like buffalo to defend themselves. Because the predators hunt the old and weak they tend to strengthen the genes of their prey until the predators struggle to find food, in the same way V-Iv businessmen tend to prey on gullibility and other weaknesses in Bi-B customers and so they evolve to be smarter and harder to trick. So V-Iv serve a useful function in that Bi-B people would become more foolish without this danger, in the same way Ro-R animals would devolve without the evolutionary pressures of Y-Oy predators.

By taking away the V-Iv parts of society then communist economies slowed their own evolution which is why innovation plummeted there. In the same way without predators more Ro-R animals with genetic defects would survive and degrade the genes of their different species. This is the result Marx did not see, the predators in Biv society are still there but are rarely threatening the prey’s numbers because of the I-O police acting like the middle of the food chain. In the same way then the European mixed economies in the 1970s represented a much higher degree of wealth equality and a welfare state by overprotecting workers from being exploited but this also produced economic stagnation from not enough inequality to form capital for businesses.

In the Biv plant kingdom the theory of Marx is also proven to be inaccurate, plants generally have well developed and nourished roots systems and plenty of storage of nutrients lower down in them like a wealthy class of workers, few would evolve to topple over from being top heavy with too much wealth or nutrients in the Iv branches and V leaves. If Marx was correct then plants should evolve to become larger and larger until they topple over and the grass would become more successful. To some degree though this does occur, plants tend to test the limits to growth and will grow as large as they can so some will indeed go too far and collapse.

If they become too top heavy then external shocks like storms or Ro elephants might easily knock them down so an entire forest might get destroyed by a moderately strong wind or attack from grazing animals. This can happen sometimes like a hurricane destroying trees but generally evolution has found that the healthiest trees are not top heavy with this kind of wealth or nutrient inequality. This inequality in the Biv economy then partially caused the GFC but it also must have a reason for its existence as it is unnatural for any Biv system to keep growing too big and collapsing unless it is following the strategy of desert plants, partially then this can happen because of weak I-O policing which is like the middle of the Roy food chain in the animal kingdom collapsing or a weak trunk of a tree allowing it to break in a storm.

Also however it can happen when a tree grows at first from abundant Gb resources and these become rare over time causing it to weaken in the roots while still supporting a large set of branches and leaves becoming top heavy. In the same way as R prey starve in a drought it can appear the Oy and Y predators are causing the problem when the real culprit is a lack of food throwing the colors out of balance. So the cause of this wealth inequality is probably a combination of weak I-O policing from V-Iv corruption causing them to deregulate the economy, but also because of harder to find natural Gb resources.

For example oil as energy has become steadily more expensive over the past several decades and this takes more money from the Bi-B workers than the wealthy, this is like trees where it becomes more cloudy but with no more rain. The leaves still get enough energy for themselves but have less to share with the rest of the plant. Supporting the welfare state then becomes more expensive like plants being able to support fewer R grazing animals. Oil companies then still make plenty of money but the higher costs of energy hit the Bi-B workers harder leading to more wealth inequality as they can find fewer Gb resources to pay for this energy. If V companies could find and produce oil for $10 a barrel then this would transform the economy because cheap energy can be used to dig for more minerals, run more farms, use more machinery to produce goods, etc.

As oil becomes more expensive then this causes more poverty in Bi-B areas and many businesses are no longer viable, many times since the GFC recoveries in advanced economies have been held back by a surge in energy prices.

This declining energy is also occurring because of the aging of the populations in the advanced economies which means fewer workers have to support more retirees, also these remaining workers have less energy and stamina to work and recover from injuries. Many homes have to have the husband and wife both working to maintain a good lifestyle whereas in the 1970s one wage earner was more common, the more complex economy requires more energy to run but higher energy costs mean that people need to work harder to make up the difference. For example if people cannot afford petrol for their car then they have to exert more energy walking or catching a bus.

Health insurance costs in the US have continued to climb with this aging population and because this is paid by employers there it often soaked up wage increases in paying for this instead of putting more money in their pockets. More mineral resources in advanced economies have been used up and instead of being able to coercively get cheap Gb resources from colonies these prices have also increased with more wealth transfers to developing economies. However when energy is cheap enough then less rich mineral deposits can still be mined.

Also free trade has transferred more higher paying manufacturing jobs to low wage economies but the profits from these have often accrued to the V-Iv parts of the advanced economies. The result is a steady loss of wealth from the bottom of these trees which makes wealth inequality increase though in many ways it is from wealth decreasing in the Bi-B communities as they age and cannot work with as much energy. To compensate for this V and Iv have pushed for less regulation, this is like Y and Oy predators pressuring and eating the middle of the food chain as they can only reduce their predator numbers by natural attrition such as sickness and starving. So in just maintaining a previous amount of prey for food these predators start decimating their numbers leading to an eventual crises for themselves.

## This situation then can occur from the O middle of the food chain collapsing but also from less energy in the ecosystem, for example the V leaves get less energy from cloudy weather and this causes R grazing animals to starve.

This weakening of Bi-B in the advanced economies from higher energy costs can then cause V-Iv to seek more opportunities for profit, this is like Y-Oy predators taking advantage of lower amounts of energy in V leaves of plants to catch starving Ro-R prey. In the 2000s then the higher cost of oil from the war in Iraq weakened the advanced economies so poorer people could not easily afford to drive around, pay for heating oil in winter, factories had their costs squeezed and had to fire some workers or reduce their wages, etc.

This created more wealth inequality because many jobs had to move to low wage economies such as China to remain viable, as Bi-B people got into more trouble this allowed predatory subprime lenders to offer deceptive refinancing of homes that looked good but actually contained high upfront costs and higher interest rates later.

Many B people then responded to this high cost of energy with deceptions, they took out liar loans to try to speculate their way out of trouble and in a finely balanced real estate market this sudden increase in home buying caused prices to start rising creating a bubble mentality. Many markets are like this where Iv and B people are looking for small reasons to buy and sell, greed to get in when the market is rising and panic to get out when it is falling. So once people started to see the market going up many on the sidelines jumped in and made it go much higher, this also happens on the stock market where a sudden rise in a stock makes others think there is inside information behind it.

As these opportunities for deceptive profits increased the subprime V-Iv companies such as Ameriquest worked on weakening and evading I-O policing and banking regulators which helped the fraud from both Iv agents and B borrowers in the real estate and subprime bubble to grow exponentially. This lead eventually to a collapse when the poorer Bi-B communities in the US couldn’t repay enough of the loans nor buy enough houses to keep the real estate prices high. The situation for many of these energy intensive industries is likely to get worse because energy costs will continue to rise, while there is probably enough oil and gas to last for centuries the cost of it will make many industries uneconomical unless energy can be conserved enough.

For example as oil prices rose in the George W Bush administration many industries in the advanced economies started to become uneconomical, they had to move even more quickly to low wage economies to remain viable. This was seen in the 1980s when cheap overseas 4 cylinder cars started making inroads into the US market, many people found that unless they had a car that was cheap to run that some trips were unaffordable. Also some companies found that in a highly competitive market involving a lot of driving the cost of petrol allowed some Iv-B companies to win by undercutting the others in price.

This is because a product requires time and energy to become more valuable in a market compared to its raw materials, a courier company for example might cut costs by reducing the time spent on deliveries or sorting of parcels, they might also do this by using planes and trucks that are more efficient with energy. As Marx said many products can be priced by the labor theory of value in that they are worth the time taken by workers to create them. In Aperiomics there is a time energy relationship in the colors which means that products can also be priced according to the amount of energy used in their manufacture.

For example bread might be priced according to the time workers spend in growing the ingredients and making the bread, it can also be priced by looking at the amount of energy workers expend in growing the ingredients such as the number of calories in food they consume, plus the energy used in an oven, petrol in delivering ingredients and the finished bread, etc. When time or energy are more abundant then a product or any goods and services can be made more cheaply and this can turn some G resources into Gb as being economical to make into private property, if there is a glut of labor then generally people will work for less money and prices will fall. If there is a glut of cheap energy then farmers might be able to grow more on marginally fertile G land by using tractors, importing fertilizer cheaply, etc because it costs much less in energy to deliver the fertilizer and to create it from fossil fuels, etc.

Conversely when unemployment is low it is harder to find workers to take the time to do marginal work such as clearing and sowing poor quality farmland because they can get more money for their time expended. When energy prices are high it becomes more expensive to move anything as a part of goods and services, transport for example become so expensive in the oil bubble in the US that people stop driving which then causes some roadside businesses to go bankrupt. A farmer might find the high cost of oil makes a field uneconomical for crops just as much as the high cost of a worker’s time, in both cases the land might become fallow G public property as it is not worth farming any more. This then can create unemployment, when energy prices go up then high energy means time as labor is also too expensive unless it can drop enough in wages to compensate.

An additional problem is that energy is chaotic in an economy while time is random, this means that energy prices can spike and collapse more easily than wages can. Also it is easier to start a boom with low energy costs and have it collapse with higher energy prices such as the oil bubble in the GFC. For example the real estate bubble could be viewed as an increase of energy in money as explained earlier, this creates steam money which moves faster with more momentum forcing prices higher until the system explodes like pipes carrying too much steam pressure. People are in effect using up more energy in the real estate market by trucking in more building materials, using more construction equipment with a larger use of electricity and petrol, etc. Some of this bubble energy came from the crash in oil prices in the 1990s, this made many industries more economical in using this cheap energy and probably helped to create the tech bubble as well as the real estate bubble after this.

## A similar crash in oil prices happened throughout the 1920s in the US which would have caused some industries such as transport and car production to boom, this price crash ended around the time of the start of the Great Depression and according to statistics either rose or stayed at least flat through the 1930s.

As oil prices rose in the 00s this created a strain on the real estate bubble but the influx of money from trade surplus economies helped to keep it growing with low interest rates. After the bubble burst however people and businesses were confronted with the higher cost of energy and so transport companies for example found it harder to deliver goods economically with the lower volumes of goods after the GFC. Higher electricity prices from Enron’s other companies’ deceptive market tactics also caused economic damage. With cheap oil people could live in outlying suburbs and afford to drive to work even in cars that used a lot of petrol, when prices rose these suburbs became unaffordable by comparison with closer in areas for workers to commute from and with unemployment they became too costly for them to live in and then drive around looking for work. With cheap oil many of these areas would be more economical and the real estate market there would revive much more quickly.

This was seen for example in the US oil embargo in the 1970s which created a stagnant economy because the underlying cost of using energy in goods and services made many of them uneconomical. Often it was not so much that the higher prices were unaffordable but that they made other cheaper goods and services more attractive by comparison, for example as petrol prices rose people turned quickly to buy other goods and services that used less energy. This caused high energy products such as SUV cars and long overseas plane flights to crash in sales, it also hurt some international trade if these goods were only slightly cheaper than local ones.

This lack of cheap energy resources problem then is probably impossible to solve, advanced economies that built their wealth from a past Empire are not likely to get it back from future colonization because there are no countries left to create a new Empire with. Also R and Ro communism under Lenin’s urging sought to break up these older British, French, Belgium, Spanish, Empires etc by fomenting a desire of independence, the result was in some ways consistent with Marx’s vision for a reduced Y-Oy and V-Iv global economy where these empires had to reduce their predatory imperialism.

Another factor is also the emerging economies all want the same kind of lifestyle as the advanced economies and it is an open question whether the Earth can sustain this for everyone, labor or time is relatively abundant to use in making goods and providing services but modern consumer goods need high amounts of energy to produce. Probably the only solution is to make economies far more efficient and less wasteful of resources, otherwise the global economy may collapse into Roy impoverishment from a wasteful lifestyle into a crime ridden future and even dictatorships as in the 1930s.

Much of this Roy movement towards dictators probably happened for a similar reason in the Great Depression, the various European Empires were reaching the limits of what they could cheaply take from poorer countries and as they became more Roy with scarcer resources they started to prey on each other more like fighting predators creating World War One and then World War Two as a reaction to Germany’s defeat and loss of territory and its colonies. To resolve this lack of resources for so many people throughout the world advanced economies may need to rebuild tariff walls to keep their wealth and manufacturing jobs, the problem however is the lobbying from the V-Iv capitalists that profit from selling imports to the Bi-B workers. While this destruction of jobs might be unsustainable the V-B interaction of V capitalists exploiting B cheap labor is unstable and hard to stop with I-O regulations.

Since V-Iv in a top heavy economy has so much influence then restricting imports is unlikely to happen and so trade imbalances may continue until Bi-B wages in advanced economies fall enough and wages in emerging economies like China rise enough so the competitive advantages they have are reduced. This however causes the Biv trees in advanced economies and perhaps in emerging economies like China as well to become even more top heavy cause more crises, like the starving lions used to a certain amount of food the V-Iv wealthy in advanced economies may have to downsize their own expectations. Some did quite well in the lead up to the GFC by preying on weakened B and Bi parts of their economies but this temporary wealth increase will be paid for by decreases later as they have fewer markets to sell to and few people left to prey on financially.

It may be that normally cooperating Y predators might tend to cause top heavy ecosystems because they become more like Oy, for example rival prides of lions might overeat prey in each other’s territories because they can undermine their rivals. Over time this leads to each pride’s ecosystem becoming top heavy with predators and collapsing chaotically with one lion pride a victor. So with the US and China the US is becoming top heavy as its manufacturing industries collapse with cheap imports, however the US V companies gain by using the cheap B wages of China and threatening to go to another Asian economy if the wages go up.

This then creates a higher wealth inequality in China as well, their B wages are held down and Bi unions are discouraged while those companies best able to compete for the advanced economy markets make the most as V-Iv. Both V economies then are acting more like Iv to each other as chaotic competitors, if instead each stopped trying to undermine each other’s economy then both might end up better off and the global economy might be more stable. In the same way the advanced economies are now trying to have a B competition where workers make less and less to become competitive, this can cause booms in some product sales and collapses in others. Often then when companies collapse from destructive competition like this it is not from innovation and need not lead to greater wealth overall. For example in the Roy animal kingdom an R gazelle might be eaten by an Oy predator leading to a collapse in the whole ecosystem if too many are killed, in the same way the destructive Roy competition over scarce resources after the GFC can cause another crisis. It has become obvious for example that the advanced economies are not operating efficiently since the GFC and yet they were able to accumulate much more wealth before a weakened international I-O created so much free trade.

When V use their influence for government bailouts this can be like bribing to get into lifeboats on a sinking ship, instead of competing deceptively as Iv for lifeboats they would be better served by keeping the ship afloat as there will be fewer opportunities for profit in the lifeboats. In the same way many companies and banks in the advanced economies are trying to use weak I-O policing to take private risks and then get bailed out by the public, this is a good color interaction in that Iv agents take the risks with some V capital and often need to be bailed out if they suffer chaotic collapses. In some cases with scarce resources this V insurance of Iv risk taking can be supplemented by government bailouts, however when relying on this insurance becomes too common then the overall business model is collapsing.

For example an insurance company might insure cars in a high crime area and find the premiums have to go so high to break even that they need to stop insuring the cars or the I-O police need to stop more of the thefts. In the same way it becomes uneconomical to keep bailing out banks unless the economy can be made safe enough for them to operate otherwise sovereign debt and taxes will keep rising. The banks in effect become Roy nationalized and are running as if they were subsidized public companies losing money from the fees they charge and making up for it in taxes.

In effect the poor areas might have a trade imbalance with the wealthier areas the insurance companies are based in, they are in effect trying to make profits and draw money out of areas that run a trade deficit until they default on all their household loans and can only afford to pay for necessities. These poor areas of course have some ways of making profits, for example they might contain Gb farms or mines, they might also export their labor by workers commuting to the wealthy areas to do menial labor cheaply. Eventually though this income must match the trade deficit the ghetto like areas have, it might mean the only sustainable purchases are for basic groceries and expecting to extract more money for car insurance premiums will just result in more claims from car thefts just like loans will be defaulted on. The only way to prevent the inefficiency of crime in these areas is to directly spend aid on subsidizing I-O police in these areas, then for example insurance premiums would go down and more car traffic through the ghettoes would produce more income as they stopped at shops and restaurants.

In Europe the situation is even more complicated because of trade imbalances, because each economy cannot devalue then any trade deficit will continue to drain income out of them until they can only afford a limited number of imports. Any other loans will be defaulted on and any insurance will end up as either unpaid or with fraudulent claims unless the I-O police are strong enough. However as with the R-B ghetto these economies will tend to cost cut police budgets leading to even more inefficiencies. There are only a few alternatives, one is of course economies leaving the Euro and devaluing to restore a trade balance. Another is direct transfer payments from the surplus economies to those with a deficit, this would act as an equivalent to a devaluation.

## In this case the surplus economies might insist these transfer payments are spent in ways to reduce their amount, for example export companies might have lower taxes to compete more easily and workers in these industries might have lower taxes so their wages can be lower overall.

The third alternative is the one largely being followed, to keep allowing defaults on loans and for fraudulent or excessive insurance payouts to continue. For example the banks of Greece, Spain, and to some degree Italy and Ireland keep losing money because of the trade deficits of these economies as money keeps leaving to go to the trade surplus economies to pay for imports. Since these economies are being dismantled to pay for these imports the banks are constantly making loans that cannot be paid without people foregoing these imports. The continuous bailouts then are another kind of transfer payment instead of paying the money to the trade deficit governments in an orderly manner or letting them leave and devalue.

This system might also continue to work as long as the trade surplus economies are prepare to have most of their surpluses go in never ended defaults requiring more bailouts. However this system creates more chaos as defaults by these banks occur as the people and companies that borrowed from them default, in effect then the transfer payments only come to partially fix collapses and so they are more like insurance payouts as if the European Union was like the FDIC in the US endlessly insuring these banks.

The difference is these banks are not even really paying an insurance premium for this, also because this bailout money is only going on collapses then it is in effect causing even more chaos by not preventing these collapses. For example austerity policies in Spain might cause more economic collapse and a higher trade deficit, this causes the banks to seek more bailouts than if the bailout money had gone to lower taxes and make Spain more competitive. It could even go directly to subsidizing parts of the economy that could grow to create more exports or even to sell products locally taking the pressure off the need for imports.

For example Germany might buy out and subsidize a manufacturer in Spain or Greece, in this way it could create employment and increase taxes to the government meaning these economies needed less money for bailouts. Investments like this might have a high multiplier because they stimulate the Biv like growth of tree companies in the economy. Otherwise constantly bailing out banks has a negative multiplier because these banks need to foreclose on businesses and homes making them collapse with a waste of resources. They also need to refuse lending to healthy companies because of tight money making them collapse which ultimately means lower taxes paid and higher bailouts.

These global trade wars can be ultimately as destructive as military wars, the longer they continue after the GFC the more the warring economies will keep causing collapses in a Negative Sum Game with each other like they were physically doing it with bombs. So this progressive impoverishment of the B and Bi communities has temporarily left the V-Iv communities with more money and higher expectations for this to continue as well as a lifestyle they want or need to maintain. For example V-Iv areas in the US that did well in the 00s are now used to a certain level of income to as pay for education at Ivy League universities, have higher loans on more expensive houses or the same homes that now cost more because of more wealthy people competing to get them such as in the Hamptons, better furniture and possessions to compete with others in looking prosperous even if this is only deceptive and based on high leverage and debt, etc.

## They are then like the Y lions and Oy hyenas in Africa who might have prospered by feasting on sick and starving Ro and R prey in a drought increasing the predator’s numbers, now they may face an even more drastic downsizing to be able to survive on the financial prey left over without wiping them out completely.

If the colors cannot be stabilized at this final crisis point then many Biv systems may turn into Roy because of the sheer amount of wasted resources, this is like Roy animals tearing apart a whole forest just to eat a few leaves off the trees. Then these countries might fight military instead of trade wars for resources, like V in Germany with V industrialists Fritz Thyssen and Alfried Krupp allying themselves with Hitler, Y dictators are often used in emerging economies by companies to mine and farm resources not economical for a Biv economy.

Much of this use of Roy dictators to extract G resources too expensive to be Gb in a Biv economy has been happening for decades, for example by the US and former colonial Empires propping up Y dictatorships in the Middle East and elsewhere to get cheaper oil and other minerals,then to often loan these emerging economies money and then have it corruptly return from these dictators to the Empires through tax havens, to assassinate third world leaders that stood in the way of this modern day pillaging, and so on.

However as the rising foreign debts of the US and Europe show there are not enough financial prey in the global economy to pay for the amount of debt they are beginning in incur, this is like the Y-V predatory parts of the global economy realizing that there are not enough financial prey among the poor and decimated middle classes to bail them out of their increasingly debt financed lifestyle and like alpha predators they are beginning to starve after they have destroyed their own food chain. In effect then the advanced economies are acting as if they were still Empires and could just take resources from smaller economies, instead of directly pillaging in Roy however they are running trade deficits that they must be able to support or one day they will default.

Many financial pundits openly say that the US cannot repay its foreign debt and so must either repudiate part of it or print money which will lead to a financial collapse. Quantitative easing or printing money has been common in the US and Europe to counter deflation but also it has helped to ease some debt problems. The emerging economies then are losing some of these trade wars just as they lost in military wars with their former colonies, with weak international I-O policing trade wars then will tend to go on until some economies collapse which is very wasteful economically. Often in the past these were emerging economies such as Mexico and Argentina but now the wealthier economies are losing.

In some ways this is a natural outcome of free trade and globalization, if the world cannot give a Biv lifestyle to nearly everyone then it might end up spreading resources so nearly everyone has a Roy lifestyle accompanies by crime and war.

When Y-Oy predators overeat Ro-R prey in Roy ecosystems they incur a debt in effect that they have to repay by leaving the prey alone to regrowth their numbers, to continue to eat them is in effect refusing to let them recover which ultimately will cause the ecosystem to collapse and hasten their own starvation. In the same way the overtaxing of the R-B workers by the Y-V aristocracy in France led to the French revolution, the Y-V aristocrats also suffered from a lack of credit because the French kings often repudiated debts they incurred in fighting wars. In effect then the French Y-V treated outside banks in Antwerp like part of their Empire as if they could pillage them by borrowing and refusing to pay, this however eventually resulted in much higher interest rates for them compared to the more credit worthy and honest British Empire. By also using up the resources of their own Bi-B workers and farmers they created a scarce Roy environment where Bi-B had to become Ro-R and violent enough to overthrow these predators or starve.

In the same way Biv trees incur debts in them by borrowing nutrients from some areas for growth, if these are not repaid the tree may collapse and evolve so that more successful trees do not loan resources for growth to their branches and roots as much or have ways to verify this is really necessary. This also happens in an animal, it might in effect borrow energy from its reserves of fat or glycogen in the liver to chase prey and if it does not repay this energy by catching food then it might collapse. Animals that use up this energy rashly or somehow deceive their reserves into giving up energy then tend to die out compared to those that police this energy use more honestly. Economies do the same thing, they borrow from V-Bi reserves on the understanding that the money is to be used to generate more wealth for repayment, the French Kings then were borrowing deceptively to act as Oy predators which meant they either grew through war or taxes or they would collapse. If this is fraudulent borrowing then, like the Y-Oy predators that borrow from their reserves of prey without letting them recover, these economies running trade deficits with no way of paying for them might eventually collapse.

In the same way then taking on more debts to fund a V-Iv lifestyle is like the Y kings of France before the French Revolution compared to the more credit worthy British Empire at the time, it just postpones the day of reckoning and causes the Ro-R prey to evolve to resist being overeaten more. For example while European and US home owners may have been taken in with the subprime crisis it is unlikely they will be tricked like this again for a long time, the price of temporarily filling the coffers with financial predation is likely to be decades of mistrust, higher taxes on the rich, more policing, wealth redistribution, hoarding money leading to more economic collapses, viewing even legitimate business with too much suspicion leading to inefficiencies, and higher taxes.

So the decline of wealth of V-Iv in the advanced economies is probably inevitable as it was after the Great Depression, the question is whether there will be an orderly adjustment as their Bi-B lower classes in effect recover by finding enough Gb resources, a bust if they do not, the Iv-B parts of the economy keep running up more debt deceptively hoping for a way out, or the advanced economies might fund Roy predatory wars to try and control more resources to stave this off.

The war in Iraq for example was in part for V companies to profit from the oil there, instead it ended up costing far more for the US but the wealthy still made a profit from it. Ideally then the advanced economies need to find pillaging opportunities like this that end up benefitting the overall economy and help with the trade deficit, instead these wars in part resulted in government bailouts of V-Iv risky ventures much like in bailing out Wall Street. The war in Afghanistan perhaps been partially fought for mineral wealth there and to build an oil pipeline, this ended up also wasting taxpayer V-Bi wealth for little Iv-B gain. The situation then is similar to Y-Oy predators using up their Ro-R prey, some Y-V companies in the military industrial complex are in effect using Oy war to deceptively drain resources from the Bi-B parts of the US and other economies rather than letting them recover with a period of peace and lower predation.

## If V-Iv then is in effect periodically fleecing the Bi-B parts of the economy it also needs to allow time for the wool to grow back or the ability to grow wool at all will be damaged.

The Congo as of 2012 might be experiencing some predation from advanced economies but the amounts of money involved are too small to pay off the debts incurred by them. Other economies are now generally sophisticated enough to resist financial predation from the advanced economies or don’t have enough to be worthwhile plundering, they are also often too suspicious because of previous political interference such as in South America where the CIA deposed some leaders, they are also able to successfully protest about this predation in I-O policing forums such as the UN. In effect then one reason the emerging economies are doing so well with trade surpluses is they are now better able to protect themselves against financial predation, one way for this is without international policing such as the International Trade Organization and the UN.

After a period where the Bi-B workers in an economy get excessively ripped off, such as in the lead up to the GFC, the workers are more suspicious and more loudly demand I-O regulators and police protect them. In the same way after a period of Y-V domination by Empires the emerging economies are evolving to protect themselves better, in South America for example the primarily left wing Bi-B economies now much better resist overseas companies taking their natural resources too cheaply. Just as top heavy trees have to evolve a more balanced shape or fall, the advanced economies need to evolve a more balanced economic policy or they too will starve like the Y-Oy predators that ate too much of their Ro-R prey.

## The only alternative for the advanced economies then seems to be increased efficiency in using their resources, this however requires a more sustainable Biv economy and the restriction of wasteful Iv-B competition and planned obsolescence with better I-O policing.

Another problem is whether the difference between a Roy society with behaviors based on scarcity and a Biv society based on abundant resources is absolute or relative. For example Germany after World War One reacted angrily to its loss of wealth from the war and this feeling of scarcity led to a Roy society with Y leaders looking to restore this wealth by predatory attacking of other countries. If they had never been this wealthy, such as like Poland or the Ukraine for example, then they might not have regarded their resources after the war as really being scarce, then they might then have maintained a Biv society and recovered from it. In the same way the US or Europe if they continue to decline might end up with the lifestyle of India as of 2011, it is an open question as to whether they could adjust to these lowered expectations and remain a Biv society or whether they would turn Roy and attack other countries to get more resources.

A country then might want revenge after losing a war but just believing they are poor can trigger a Roy society even if resources are still relatively abundant, this is like having rich neighbors causing someone to rob them even though they are themselves fairly well off. This is also happening to some degree in the US and Europe in 2012 where societies far wealthier than in the Great Depression nonetheless see themselves as becoming poor. So far few people have starved or been denied medical care, by contrast in parts of Africa people maintain Biv societies in some areas because they have a different view of abundance. When people believe their economy is poor then crime can seem a better way to make money and so the O police need to be stronger, in Africa though have virtually no assets can seem so wealthy to them that they would be afraid to lose what they have by committing a Roy crime.

In the Great Depression the US managed to stay Biv despite this loss of wealth but much of Europe did not, it depends then whether the populations would be able to accept this poverty as temporary or would become Roy violent. If they see resources as abundant and the situation as temporary they might not risk becoming criminals and hurting their long term prosperity by going to jail.

In many European countries as of 2012 there are far right political parties openly advocating policies similar to Fascism or Nazism such as Golden Dawn in the Greek elections, in an economic slump they might quickly become more popular as happened with the Nazis and Fascists who were at one stage unpopular in elections. For example the seeds of these two right wing movements were sown by feelings of having been unfairly treated at the 1919 Armistice conference after World War One Mussolini for example was involved in the protests over Italy not receiving the city of Fiume in return for its entering the war.

This is particularly a risk with Greece and Spain both of which were under Roy military dictatorships only decades ago. Some politicians on the right in the US advocated taking oil wealth from Iraq as well as mineral wealth from Afghanistan and there is a tradition of right wing militia groups there, they often predict economic collapse and Roy solutions such as survivalism and protecting their properties with weapons.

How voters would react to economic collapse is uncertain, they might vote for anyone who promised results and not be too particular about how they got them. There is nothing unusual about this, most Empires in the early 20th century made their money the same way, it would depend on whether people have changed enough since then but scarcity of resources can quickly change people as well. For example in France recently there were riots where Bi unions protested like Ro mobs against wage cuts and increasing the retirement age for a pension. In the US the Tea Party sometimes advocated violent measures against Democrats even when the US is still far wealthier than in the Great Depression. Prince Leopold of Belgium viciously exploited the Congo for profit and his country did not protest about this until it became public around the world.

An important issue then is whether the Y-V advanced economies, particularly the US, will try to resolve this top heavy wealth inequality by downsizing their expectations and taking losses or whether they will use this money to try to turn public opinion in their favor. Rebalancing this wealth inequality is the most stable way for the global economy to revive, it may need to happen though by using Iv-Oy agents to deceptively turn on the Y-V wealthy as the reverse of where these agents made money for Wall Street in the lead up to the subprime crisis.

Alternatively some economies are turning more to oligarchies as Y-V uses their team strength to keep their Iv-Oy agents on their side much as a Y-V mafia would keep its criminal fringe in line with punishments and opportunities for profit. To try to make this work the YV wealthy are squeezing the poor in the global economy even more such as in dismantling the welfare states throughout Europe.

For example Brazil has a high level of inequality because of a strong Y-V oligarchy but they are in a relatively stable situation. Russia is similar with a group of V oligarchs and Y political leaders creating a strong and prosperous economy that however often does not help the Bi-B lower classes as much as they had under communism. The proletariat however have more of a Bi-B and Ro-R tradition from communism so the lower classes can still remember if they were better off then, this will cause them to pressure the top Y-V oligarchy for money.

The US might become increasingly right wing to the point of becoming a Y military dictatorship if it has an economic collapse, it could use its military to try to pay for itself with more economic exploitation of other countries or it might become even more of a V plutocracy or oligarchy like the Brazil model and quell unrest by corrupt lobbyists in effect providing the campaign funds for both parties. One reason this can happen so easily is because Biv colors are overtones of Roy, many Biv economic Empires then could easily become Roy imperial Empires with few changes except for stronger police to control the people if resources become scarce.

Some parts of Europe might revert to the recent past such as becoming right wing military dictatorships, for example Spain, Germany, Italy, Hungary, etc though this is much harder without breaking up the Eurozone. Germany is unlikely to do this unless its Biv economy collapses if its loans to other economies are not repaid when it needs the money. This happened in the US to some degree in the Great Depression when it loaned so much money to Europe to help them after World War One and then built up an export industry that depended on these overseas economies being able to pay for goods eventually without loans as well as repaying the loans.

The trade imbalances in Europe in 2012 causing some economies such as Greece, Spain, Ireland, and Portugal to become destitute might cause for example Greece to revert to its previous Roy military dictatorship to restore order with its O police. Spain in 2011 has near depression levels of unemployment and with enough unrest might revert to a Roy Franco like government, and so on. Much then depends on whether the global economy stays Biv and uses this efficiency to conserve resources or turns Roy when crime and war can consume more resources making it harder to return to a Biv economy. For example while Europe in the 1930s was poor because of the Great Depression the war made all of them far poorer even though everyone fought the war to gain something.

It also depends on whether any conflicts become Oy-R or Y-Ro, for example the cold war was mostly Oy on the right for the US and other Western economies versus the R communist economies. World War Two and some proxy wars in the cold war were more open Y-Ro conflicts such as Vietnam. An Oy-R series of wars between countries might focus on trying to subvert each other’s governments with espionage, for Oy to control more of a smaller economy’s resources such as Ecuador and El Salvador to keep the communists from taking them over. This was the scenario laid out in the book Confession of an Economic Hit Man, for example an economy might be loaned money on projects designed to fail so they would remain indebted to the West and have to allow a military base, privatize some assets to US companies, etc. This can be very profitable, taking over a country by paying off the Y dictators, giving them money to maintain their power with a strong military, and then siphoning off much of the rest of the wealth has been how Western Empires have worked since the Roman Empire.

In other cases Y-Ro open war is more practical such as World Wars One and Two, the Vietnamese, Korean wars, etc and more recently Iraq and Afghanistan. Just as a Roy right wing society can be a more open Y dictatorship such as with Somoza and Pinochet using the army they can also be more Oy as a police state where the repression is done by secret police such as with Middle Eastern countries like Saudi Arabia and Iran under the Shah. Since these kinds of governments still exist and many more did until recently they proliferate again, increasing the number of oligarchies or outright dictatorships are then ways for the YV wealthy to remain in control of the food chain. Another way is to stay out of fighting wars and just sell weapons for profits to other countries while tolerating or sometimes small conflicts as the US did for part of World War One and Two, this helped them to maintain a Biv society rather than being dragged into a Roy war until it became necessary to contain Y predatory expansion and public opinion allowed it.

More recently the advanced economies have built a military industrial complex and help to pay for this by selling inferior weapons to smaller adversaries further down the food chain. For example the US might sell weapons to the different dictators in the Middle East to try to maintain a balance of power between them as well as make money from them. This is like Y predators allowing other animals to fight with each other, hopefully to exhaust themselves and become targets or a lesser threat. Lions for example might leave parts of a carcass for smaller predators to eat and perhaps catch one of them feeding so the lion eats that predator too, also it makes it less likely those predators will challenge them for the main part of the carcass of they expect to get the scraps. In the same way smaller countries might challenge each other militarily over the scraps the US and others leave of mineral rights, it also allows Y-V to monitor the strength and performance of the smaller armies if they need to attack them.

## Sometimes this happens as a Negative Sum Game where weapons and aid are given rather than sold as the least bad option, it is hard then for Biv economies to make money from Roy wars without becoming more Roy like themselves. For example the US might try to avoid nuclear war between India and Pakistan by giving aid and weapons much like O police might try to strike a balance between Ro neighborhoods and Oy thieves to prevent either becoming dominant.

Governments can quickly collapse when they reach a tipping point as happened with the Weimar Republic and the rise of the Nazis, they were wobbling before this when the Nazis narrowly missed winning an earlier election. It doesn’t matter so much then whether political parties appear stable or whether economic collapses followed by political collapses seem to be on the horizon or not, chaos can be secretive and deceptive and it can be hollowing out the support of governments without being visible. For example hardly anyone saw the GFC coming so there is little basis for dismissing the possibility of further economic collapses or politics turning to Roy dictatorships as Biv democracies cannot easily handle Roy scarce resources.

More often in an Iv-B economic environment elections are decided by deception with embarrassing details suddenly being made public about a candidate, a wrong turn of phrase in a speech allows them to be painted inaccurately as elitist or racist, an extra marital affair made known even though many other politicians are secretly doing the same, writings and opinions by a candidate like Ron Paul from long ago can be scrutinized as well. Scandals then can suddenly rob a government of the power to govern effectively as Bill Clinton discovered with Monica Lewinsky.

Unless the public is able to tolerate variations in political performances then tipping points can radically change the direction of a country, this was seen for example with the French Presidential election in 2012 having a different candidate because of the possible entrapment of Dominique Strauss Kahn in a sex scandal. This chaotic environment is usually a part of the economic Iv-B chaos brewing and so many of those elected now in the US and Europe are there because of the chaotic collapse in the GFC. For example the Tea Party in the US grew so quickly that it changed a rout in the Republicans to a victory in winning Congress.

The Occupy Wall Street movement grew from nothing to one of the major political influences in 2011 in large part because of heavy handed treatment by I-O police that seemed to be biased towards the Iv-Oy Wall Street agents. It can also be that tipping points in politics occur when parties have very even numbers of seats, Berlusconi for example lost power because of a relatively small shift in public opinion putting some extra votes against him. John Boehner had many chaotic votes in 2011 because of the chaotic nature of the Tea Party factions and often whether a bill would pass or not was on a knife edge leading the country suddenly down different paths with small numbers of votes. One of the best examples of this chaos was the election between Al Gore and George W. Bush which was decided by only a few votes and it is said much secrecy and deception in counting on both sides and perhaps in the Supreme Court itself deciding the result.

All of these show the economic Iv-B chaos that created the GFC still permeates the global economy, it is also quite possible that the Eurozone could reach a chaotic tipping point and collapse with some or all countries leaving it because persistent trade deficits drain wealth from some economies until their debt based industries and consumers lose too much equity and go broke. For example Greece needs to have liquidity to run its economy and people need to be able to borrow on assets such as housing, if a trade deficit keeps draining money out then more will end up owing more on their businesses and property than they are worth. This frozen V-Bi debt then becomes immovable and the economy cannot buy and sell efficiently in the I-O market.

Some European economies are having their credit ratings downgraded leading to chaotic steps of increased interest rates on their debt, in 2011 Italy was on the edge of a tipping point for unsustainable interest charges leading to more austerity which often causes collapses in honest business and lets the dishonest ones keep corrupting the economy. The advice of starve a cold or feeding a fever does not work in Aperiomics, starving is like austerity and feeding like Keynesian stimulus, instead strengthening the immune system with stronger I-O policing is needed.

Greece went through many tipping points causing the global economy to have many panics affecting shares everywhere because no one now knows how parts of the economy connect to each other and thus how economic collapses can spread, also many of these panics were exploited by short sellers and Credit Default Swaps representing the system profiting by tearing itself apart. In Russia the same kind of chaos permeated the Duma elections in 2012 and hung over whether Putin will be reelected president, the protestors had suddenly sprang up and grown so fast chaotically perhaps with some deception of the people behind them.

If the disaffection with Biv capitalism in Russia grows then many might want to return to R communism or some kind of left wing dictatorship Bi-B instead of what many see as a V-Iv dictatorship under Putin. However these problems stem from weak I-O policing there.

Many of these political tipping points were not foreseen and seem to be signs of spreading cracks in the political systems, democracies are having trouble dealing with the increasing Roy influences in the global political situation. Add to this the Arab Spring and a succession of Y dictatorships toppling in the Middle East or perhaps being replaced by other more secretive Oy military dictatorships. Syria as of 2012 currently holds together on a knife edge with secretive atrocities to try to turn the Ro protestors into R that run and hide, Saudi Arabia felt threatened by protests in the Arab Spring and so the prospects of chaos in these oil producing countries currently keeps a fear premium on the oil price. In effect markets stay more liquid than they should need to because shock waves from political and economic collapses rivaling the GFC could still happen from weak I-O policing.

Now people wonder whether a wave of Islamic revolutions in the Middle East might play havoc with the oil supplies creating another economic crisis. The seeds of these political crises are often business that prospered in the chaos prior to the GFC and cashed out beforehand, now they try to grow this seed money by exploiting the collapses and humus of failed companies and states in trouble. As these Y-V alpha predators try to profit from this situation they can use Iv-Oy agents to sow more chaos, this situation can then be traced back to the cracks of the GFC. For example much of the Arab Spring was caused by high food prices which was in turn caused in part by Iv-B speculation in food futures which happened because money fled traditional investments and sought safe harbors and fast gains to recover chaotic losses from the GFC.

The oil bubble was caused in a similar way, it caused oil to remain at a higher price from speculation and this makes it harder for the global economy to recover and creates more opportunities to short the various markets by making so many close to tipping points.

Greece, Italy, Ireland, Portugal, Spain, etc are in economic trouble because they took on sovereign debt to quell the chaos from the GFC, often though this left them weakened in an Iv-B competitive global economy and their trade imbalances push them towards default which threatens to take down the creditor economies with them.

This affects the politicians who get elected in these countries and whether they can stay in the Eurozone. If one economy becomes insolvent then the next weakest on the list starts to feel the pressure as investors desert it, the same kind of panic made Bear Sterns and Lehman collapse and nearly took down Morgan Stanley and Goldman Sachs. This is like in the Roy animal kingdom where competitive Oy predators might attack the weakest in a dog eat dog battle, when one falls they go after the next weakest one. Much of this economic chaos is growing because of austerity, the financial contagion has not been eradicated so this is like starving a sick patient when they need either the contagion to be removed or at least enough food to fight it off better. A Keynesian stimulus then is like food for a sick patient that helps to boost their immune system to fight off the contagion, it makes people wealthier and more likely to work. It also tends to make the economy more Biv temporarily which can make O destructive crime go down so people work and travel more efficiently.

As with Iv-B competition bad business drives out the good and so austerity tends to hurt honest companies more than the dishonest ones that are still not being policed properly. This then causes more tax evasion and bankruptcies putting more pressure on sovereign debt as taxes are paid less, this is happening in Greece as of 2012. Consider for example what might happen if some European countries become Roy dictatorships as their democratic governments give up on the situation and their militaries take over. Then they might repudiate debts causing chaotic collapses in wealthier European economies which then spreads to Asia and the US. Such arguments over paying debts might escalate into war if economies become desperate enough.

It seems unlikely but the problem is that the chaos is not being analyzed properly and so remains hidden and deceptive, we then only know about it when something bad suddenly happens. The trade pressures and imbalances led to World War Two from the Great Depression, it may be the GFC chaos will again spread to politics though the global economy is wealthier now and more Biv so this is less likely. Most Biv economies are fighting back from this chaos with V-Bi alliances such as the US Fed helping overseas banks in the GFC, and using V-Bi reserves of team spirit with each other to prevent trade wars, loaning money to each other’s central banks, and so on. However it is still an open question what happens when or if these reserves are exhausted.

Being indecisive with economic policies from too much uncertainty can also be bad with chaos, flip flopping on economic and political decisions can be like twisting a piece of metal and creating even more cracks. For example a stimulus might make some companies recover and start up, then it might end prematurely and those companies crash. Then this makes the government decide to use more stimulus and so those companies now have higher debts and are more cautious from the previous pause in stimulus, they might then be wary about more flip flopping later and not invest the stimulus money but hoard it instead as banks have been doing, or they might end up as zombie companies where the stimulus and support is enough to stop them dying off but not enough to become healthy because that is seen as giving companies too much.

## This can be like zombie welfare and zombie foreign aid where enough is given to people to stop a chaotic catastrophe but not enough to promote growth, for example unemployment insurance might not be enough for some to look for work and overseas aid might feed people but not establish more farms.

Wars can also occur chaotically like this, for example Bruce de Mesquita does simulations on the outcomes of foreign policy problems, he found that the indecisiveness of Britain probably caused World War One and a resolute show of force in the Mediterranean might have stopped it from beginning. Of course in such a chaotic situation there may have been other tipping points so it may have just started in a different way, the problem was the chaotic numbers of links between the Empires where they were obligated to defend each other. The other problem though was that each Empire looks for a balance of power with the others, they prefer to see their enemies bickering and wasting more money on armaments than they are as this gives them a competitive advantage.

So when the situation reaches a wobbling point each Empire sees it enemies losing this balance and so it might enter to a new alliance or help another to try and restore it. This can be like a boat near to tipping over where everyone stands up and starts shifting their weight to prevent this, often it would just tip the boat over faster as no one could coordinate this movement with someone acting as I-O in charge. Another complicating factor was the family ties between the Empires, the Russian Czar Nickolas, his wife Alexandra, the Kaiser Wilhelm, and the British King George V were all cousins. While this can often act as a Y-V team where relations work cooperatively Wilhelm had no desire to make peace with Nicholas, he even sent Lenin to Russia to destabilize it later. In such a situation then there might be so many tipping points that any strategy would produce different collapses into war.

I-O police are generally not indecisive, they sometimes however surge their forces to counter crime waves and deter future crimes. For example sometimes they might have a sudden and deceptive Iv and Oy blitz on drunk driving or car registration and this stops the timid criminals from offending for a long time. In the same way it is necessary for I-O police in business such as a tax department to sometimes surge their random auditing in a crackdown to deter and scare off criminals for a time. This is not being indecisive however, the difference is that these surges happen according to well understood aspects of law such as making examples of people to deter others.

When however the I-O police are weakened or not even involved in an industry then economic policy tends to alternate from Iv-B to V-Bi. These two color pairs naturally become indecisive because there is no connection between them, first Iv-B might get its way on an Austrian economics policy in letting companies in the GFC crash to regrow faster but then V-Bi pressure changes this to bailing them out like an insurance company. Then though instead of bailing them out properly like an insurance company might fix an insured car completely the policy may flip flop again to Iv-B with the result that like a car half repaired the companies are allowed to fail again. This indicates also that without the I-O marketplace running strongly the system just doesn’t work properly and flip flopping between two policies disconnected from each other just wastes reserves of V-Bi and creates more stress fractures of Iv-B in the economy.

This was seen for example with bailouts of home owners in the US after the GFC, Obama’s administration was torn between the conflicting advice of letting people lose their homes to purge the higher prices out of the market and bailing them out like the banks to prevent further economic collapse. The result was an inconsistent application of both policies, the bailouts were only enough to make zombie home loans where people often only had negative equity in their homes. However putting pressure on the banks to slow foreclosures maintained these zombie homeowners in houses they could not afford to make payments on. The market then remained insolvent because so many could not sell because of their negative equity and the banks could not foreclose fast enough to clear out all these houses, instead it was necessary to use the I-O police to determine who was used liar loans fraudulently to exclude them from help. The honest others then could receive government assistance like any victim of a natural disaster, this would deter future fraud in home loans and stop honest people from losing more assets from this contagion. In effect the current situation rewards those that used liar loans, even though they were a big part of the contagion they got treated the same as the honest borrowers.

Being decisive can have its own problems of course, this was seen in the Y-R Global War on Terror which would have been better conducted as an O police action because YV forces in the team based military industrial complex are ill suited to detect and catch R terrorists often hiding among B workers. They did eventually use the Oy stealthy abilities of special forces, the Patriot Act surveillance, rendition in secret prisons with deniable torture, etc and these are fighting the war in the same way as R fights making it an Oy-R conflict. This is like how Oy predators and R prey fight each other with speed, deception, and secrecy so this is a correct strategy but it can grow exponentially in cost until it reaches a tipping point of exposure as happened with Al Gharaib and rendition by the CIA. The lack of I-O policing caused Al Gharaib but it also leads to the same kind of lack of decision between Oy-R and Y-Ro advisors. For example some might advocate an escalation of this secret war, much as with the Oy CIA versus the R KGB in the cold war, others wanted change this into a Y-Ro open war by invading Iraq and Afghanistan.

The uncertainty which grew because of weak I-O then caused, as with the home loan buyouts mentioned earlier, a zombie war where the secret Oy-R battles were tried for a while and then the focus switched to Y-Ro invasions, and then back to the secret war leaving each strategy half-finished and hence unsuccessful. For example with failing companies in the GFC the Iv-B Austrian policy was to let the crash so they could rebuild, this is like allowing Iraq to fall apart early in the invasion by disband the army and the Baath Party. When this caused more chaos the Y-Ro advisors stepped in and started trying to prop up the Iraqi economy with building projects and subsidies. The same conflict between advisors also happened in Russia where Iv-B policies were supposed to use shock therapy to allow the economy to quickly become Biv and crash so it could regrow quickly. When this cost too much economic pain then the policy changed to V-Bi zombie like transfers to oligarchs who ran businesses inefficiently but at least stopped some of the collapses.

Because regarding terrorism as a problem for the I-O police was weakened as part of the general push for deregulation in the Bush Administration there was little attempt to work out who was in fact guilty of being a terrorist and who was a legitimate freedom fighter or even an innocent bystander. By not using I-O police to work out who had genuine grievances the V-Bi and Iv-B forces would often cause more anger in the Iraqi communities which bred more freedom fighters allowing R terrorists to hide among them.

The Iraq war then had this flip flopping where some wanted to conduct it secretly and deceptively as Oy-R while others wanted an open military conflict of Y-Ro as eventually happened with the invasions of Iraq and Afghanistan. These two kinds of wars were disconnected from each other and so George W. Bush and later Barack Obama found it difficult to choose between them, it then degenerated into either a disconnect between Oy-R and Y-Ro or trying the worst option with a Y-R war where slow and highly visible troops tried to stamp out fast camouflaged hit and run .attacks from R guerillas.

So for example Iraq became the worst of both worlds in which open team Y warfare tried to catch deceptive and secretive R terrorists who were like a contagion in the Iraq population. This is like Y lions trying to catch R gazelles and often they fail in this, their better targets are Ro Wildebeest and Buffalo in a mutual war of attrition of team versus team.

War then can become a series of flip flops just as economic policy can be, often there are two political factions where one favors chaotic solutions and the other randomness, then there are the left and right wing versions of chaos and randomness that also vie to win elections or even votes on specific legislation. For example when in the US the Democrats control part of the government and the Republicans another part there is a four part interaction, first where the left battles the right and also where chaos battles with randomness. When the I-O centrists are weak then there is little compromise and so policy flip flops between extremes make the government far less efficient. For example welfare reform in the US became stuck between the Iv-B extreme of letting individuals fend for themselves without a safety net and a V-Bi insurance based welfare system that could create stagnation by removing the incentives to work. The result in some ways was a zombie welfare system where people were given enough to survive but little else, this encouraged more welfare fraud which was weakly policed because the focus was on this ideological battle of chaos versus randomness rather than purging dishonesty from the system.

In another example the Environmental Protection Agency is like a kind of I-O police protecting people from pollution, Iv-B libertarians tend to want more jobs and freedom to pollute while V-Bi socialists want to protect jobs of big V companies and Bi unions. Without enough centrists then the issue of putting dishonest polluters out of business goes against the creation of zombie polluters, the result is companies can pollute too much because of political influence or because of a laissez faire philosophy. With Global Warming some have an Iv-B approach of requiring cuts in emissions which threatened to collapse many companies chaotically. When this was realized the V-Bi advisors starting alternating policies to prop up the polluting companies, the result is indecision and little progress towards reducing Carbon Dioxide.

All of this however comes from a weak I-O police, just as the Global War On Terror should have been a police action so too the GFC should have been resolved by police at every level of policy to remove and deter crime as quickly as possible to purge the system for regrowth. Of course though the weak I-O policing happens because of a cycle that has to run its course before the can fully strengthen, otherwise there would not have been this crime wave causing the GFC in the first place. However all the problems in the GFC ultimately reduce to injustice, some people for example lost their manufacturing jobs because others had the influence to promote free trade to profit as importers. Lobbyists were able to pressure the government to weaken I-O regulations that caused the subprime bubble of corruption, also unregulated derivatives grew to become systemically dangerous with no police to regulate its growth.

This flip flopping occurs in many ways, for example there can be an election which changes policy in midstream from Iv-B to V-Bi or vice versa maintaining a zombie like gridlock rather than finding a just solution to issues, there can also be a defeat in votes on particular bills such as in the US that causes gridlock with half measures that prevent economic problems from either being bailed out or allowed to collapse and purge themselves.

Different officials and advisors might be appointed and change policies which seems to be trying new things but this just ends up flip flopping as another advisor gains strength as soon as the first one has a setback. There can also be many different factions of chaos and randomness in these advisors and the issues can be so interconnected that a chaotic advisor might be affecting random issues with their decisions. For example Iv-B advisors might favor gay marriage because of individual freedoms but come up against V-Bi advisors not wanting too much individual freedoms in drug use, though V-Bi might support gay marriage they might not want to give the opposing Iv-B advisors a victory which may embolden them to keep control of other projects.

V-Bi advisors usually want to avoid being on the fringe or make unconventional or abnormal policy recommendations on the normal curve, if they do then they can be painted as deviant by someone more conventional. This happened with gay marriage which was seen as abnormal in the sense that most V-Bi people did not see it as a mainstream lifestyle, many also feared they or their children would become infected by this gay lifestyle if it was not hidden in Iv-B. This is regarding gayness as chaotic, like a contagion such as the flu it hides and grows until it might create an epidemic. Both V Republican and Bi Democrats tended to think this way, their mainstream voters might have been heterosexually married with children so the gar marriage advocates risked being sidelined as deviants by Christian advocates of this normality. Other advisors however were Iv-B, with Iv Log Cabin Republicans and B Democrats many gays were hiding their sexual orientation and so did not want to bring attention to themselves on this issue, in any case they were usually free to have gay relationships in the closet.

The result was zombie civil unions that restricted the Iv-B freedoms often unconstitutionally while still being seen as a threat to the V-Bi normal view of families. The situation then is similar to that of marijuana use where V-Bi families see it as an abnormal contagion they want to keep away from their families, Iv-B people have enough secrecy and access to use it in private and have little need for legalizing it.

This then is an alternation between V-Bi and Iv-B but where Iv-B is still relatively weak, even then it is hard for one color pair to dominate because it becomes obvious they do not have all the answers. For example even when the Iv-B proponents of gay marriage were weak and in the closet it was often obvious that gays were being unfairly targeted just because they were not in the center of what was considered normal. So V-Bi in this situation tries to deal with this other constituency hiding and because of this V-Bi does not really understand what they are doing, they tend then to see them as a contagion threatening their children much as in the economy V-Bi economists saw Iv-B business as a contagion infecting the transparent banking system in the GFC. So in this other GFC or Gay Family Crisis eventually Iv-B became stronger, this was in part to the efforts of Republican Paul Singer spending large amounts of money because his son is gay.

He is described in Greg Palast’s Vulture’s Picnic as a vulture capitalist because he had bought up the discounted debt of some third world economies and demanded full payment. In Aperiomics there is no judgment of what any color code does, most people would not do this but in the absence of a strong I-O someone eventually will because the profits are high and often the only drawback is public disapproval. In the same way the much more serious Iv-Oy predators in subprime acted like vultures with older and more trusting R-B people refinancing their homes. In some ways this combined with the Iv-Oy Vice president Dick Cheney protecting his lesbian daughter gave strength to the gay movement.

While Democrats were generally more supportive of gays they had their share of homophobia in many of their supporters. So this Iv led promotion of gay rights combined with some changes in B voters led to a stronger Iv-B color pair confronting the conventional V-Bi voters. In this situation the indecisive alternation between V-Bi and Iv-B is much more zombie like where the proponents of gay marriage had much more hope for it to be made legal in several US states only to have it dashed over and over, this is like in the Iv-B housing market where homeowners often had their hopes of financial aid dashed. Just as Iv-B gays were expected to stay hidden so to were the troubles of these negative equity homeowners regardless of whether either group was guilty in part.

In the same way the marijuana lobbyists have become stronger with the support of libertarians such as Ron Paul and the need for tax revenue in California possibly coming from marijuana sales. Medical Marijuana is an I-O compromise where neutral justice from doctors dispenses medicine for those in need with some abuses by those Iv-B users pretending to have an illness. So this issue also alternates to where marijuana laws are a stronger kind of zombie recreation where users are periodically allowed to smoke openly and then there is a crackdown on this so called contagion affecting V-Bi normal families.

## Between these pressure groups the neutral I-O police are usually sidelined, the issue of a just solution was lost in trying to avoid offending both extreme views. In the US this is increasingly being resolved by the I-O courts trying to find a just balance between the rights of gays versus straights, marijuana smokers versus nonsmokers, etc.

The Iv-B advisors in these examples are usually looking to avoid tipping points where their campaign for revolutionary rather than evolutionary change might suddenly collapse like a house of cards, also much like the Iv-B Austrians wanting the housing market to grow on its own, collapse if need be but to avoid collapse if possible. Iv-B also wants to spur growth in their issue and this can make the economy, gay marriage, marijuana use, house foreclosures or whatever issue more and more fragile as they often push it too far where it cannot maintain its momentum for change.

For example the Austrian Iv-B economic theories might cause some bubbles to grow unimpeded in areas while letting them collapse to quickly purge the system, if however there are too many collapses this just causes a permanent depression because of wasted resources. This is seen in the issue of what to do with damaged buildings in a city after an earthquake. The Austrian theory is that insurance only encourages people to build flimsy houses and letting them fall down will ensure they build more strongly as the bad constructions are purged from the system. However if too many collapse the whole city may become non-viable for the cost of reconstruction and lose in competition to other cities around it. This then is like letting the US industries collapse and then they never become competitive with overseas imports again.

Uncontrolled Iv-B growth can create a situation where individual freedom allows people to build flimsy houses and bear the consequences of an external shock like an earthquake, the economies that have the most deaths from collapsed buildings in earthquakes are not those with more government manipulation but those that don’t have honest I-O building inspectors. In the same way gay marriage advocates might go too far and the subsequent pushback from V-Bi normals can lead to persecution and violence as the movement finds it does not have enough support or momentum and then collapses. It has done this many times over the years, it is also like hitting the ceiling in an economic boom where the momentum built for legalization makes them run into strong opposition and the resulting shocks tears apart their political movement. In the same way also this has happened to marijuana users, they started smoking more openly as they believed legalization was coming and then this exposure lead to a crackdown and sometimes imprisonment.

The opposing V-Bi view however is illustrated by the city damaged by an earthquake, instead of letting the buildings collapse people work as a team to pay insurance and aid to fix them. However this money goes more to the V people in the middle of the normal curve, people who are considered more deviant get left out of this money, often these are Iv which is one of the reasons that the Austrians oppose V-Bi economic policies as they miss out on most of the benefits. This is seen with modern V-Bi economics which tries to sideline Iv-B Austrians as abnormal, it is not surprising then that the two tend to snipe at each other.

For example the aid might be directed to V families transparently hurt by the earthquake as being more deserving according to that team, there might be TV coverage on the news of families homeless from the earthquake but more deviant and secretive groups in the community don’t get this coverage and so there is less political motivation to help them. This normalizing process then ignores the edges of the normal curve and so they get little aid, their suburbs collapse more into Iv shanty towns as they cannot afford to repair them as happened in New Orleans after Hurricane Katrina for example while the white middle class areas got much more money.

The Bi areas also have strong feelings about normality and tend to help themselves first, however instead of pushing out the B people to the edges they usually end up in the centers of their towns or spread in several areas. In this case then there might be R-B ghettoes surrounded by relatively wealthy Bi-Ro neighborhoods, these R-B people are then protected from predatory V-Iv areas. These poorer R-B suburbs then start to be seen as a kind of contagion on the wealthiest areas and the normal V people try to move into the more normal center of the better areas with help from others in their team while the Iv-B people are allowed to grow and collapse in ghettoes, some V-Bi people also get expelled from the team to R-B areas if they are not conventional enough or have been outed. Bi-Ro areas also tend to have safer areas away from R-B chaos, they also prefer a transparent team based society so those considered most worthy in an earthquake still end up with more money such as for families.

These Iv-B ghetto dwellers in many towns might also draw in marijuana users and gays particularly if this V-Bi normal attitude is strong which causes Iv-B people to hide and deceive to protect themselves. The real solution of course is to have building inspectors approve each building before it is constructed and to evaluate each one for aid and insurance after the earthquake, if some have been built fraudulently then prosecuting the builders will deter more poor construction than any kind of economic theory. In the same way the real solution for gay marriage and marijuana is for police and the courts to work out a neutral and fair solution for all.

However this solution usually has little chance if the color codes are skewed, for example if the city has a high wealth inequality based on race then the wealthy race is unlikely to support police and law courts that make them pay for the other race instead of having police which allow the majority to prey on them. If straight people are more wealthy and powerful then they won’t support courts trying to be neutral just as if a majority of people don’t support the legalization of marijuana then it won’t happen regardless of what the just solution is. This then is a side effect of democracy, sometimes a stronger faction can use their position or momentum to sway I-O away from neutrality making the issue impossible to resolve. In the same way rising wealth inequality in the US had a corrupting influence on I-O regulators allowing wealthy people to lobby for laws that would allow them to make money in predatory ways such as with subprime loans.

This V-Bi and Iv-B alternation can be seen in the Fed for example where often decisions are not unanimous indicating the chance of it switching course as the situation remains opaque.

Companies can also alternate like this if they have some members of their board who favor a highly competitive Iv-B growth strategy or others trying to consolidate with V-Bi increasing reserves to guard against chaotic collapse if the market sours again. They may then pursue a middle course flip flopping between the two alternatives and then the Iv-B polices might leave them with not enough V-Bi reserves to outlast other Iv-B companies selling at a loss to bankrupt them and grab their market share. Their conservative V-Bi strategy might also leave them not competitive enough in growth to avoid being overshadowed and bought out by the others who innovated more rapidly.

In effect then they become zombie companies and this alternation makes them a favored target for alternating government assistance as these constantly changing advisors see them as like a contest to win between them, for example it might be seen how these companies are not competitive enough and so they might be sheltered behind tariff walls which makes them even less competitive as the need to innovate is reduced. Because they have insufficient V-Bi reserves they might receive easier loans from the government such as the banks received in the bailout, however without changes in the market most of these loans will be wasted and eventually the companies might be nationalized so the alternating policies can continue. The Iv-B and V-Bi indecision then creates a zombie government which in a crisis and stagnation uses these conflicting strategies to create zombie economic solutions, then it grows companies most suited to surviving in this alternating policy environment.

These companies then end up in the same dilemma that economies have after the GFC,, they have a competitive Iv-B problem with Asian economies like China in not being able to grow against cheap imports and a lack of enough reserves to handle speculators shorting their debt or the chaos from the economic crisis and stagnation. The companies then might flip flop between austerity or cost cutting throughout their business but the austerity might just weaken their company ir cause key employees to leave, it might be designed to reduce debt faster but when all the companies do this it causes an Iv-B chaotic collapse of consumer demand because of rising unemployment as happened in Greece. If instead these companies try to grow out of their problems with a stimulus like borrowing money for an ambitious expansion they might end up with higher debt and possible higher interest rates when they try to roll over these loans as also happened with Greece and Spain.

## In effect then the dilemma of what these companies should so is the same as what economies should do after the crisis, it is also the same as whether families should try austerity or borrowing money such as for education to stimulate job prospects.

This dilemma however is resolved with the I-O police strengthening because Iv-B companies are restrained from being so competitive they destroy each other causing economic waste. They are also restrained from borrowing too much on wild spending because this can also be fraudulent, for example in Iceland the banks should have been prevented by the I-O police from becoming so large relative to the Icelandic economy. With this strong I-O policing then Iv-B growth can occur without it being knocked down while fragile but also preventing Iv-B contagion from growing unstably like weeds in a Biv forest. Also V-Bi stimulus can be undertaken by various companies safely by ensuring none of them are borrowing in a dangerous way that might harm their creditors.

In this way more balanced Biv trees are not threatened by Iv-B weeds and V-Bi stunted plants like grass, these are in effect weeded out by the I-O police and the forest of the economy grows in a healthy way. In the same way the families are watched by the I-O police to not overspend trying to stimulate their employment prospects as potentially fraudulent borrowing. Also austerity is watched because taking excess risks by spending too little, for example driving a car without maintaining it properly to get a competitive advantage on other salesmen who cannot afford to operate or working from home in a business contravening zoning for industry, would be prosecuted. This then would prevent chaotic car accidents and suburbs losing value as they fell apart into secretive sweatshops.

In the same way also economies can avoid this alternation between two inefficient policies with a stronger international I-O police. Too much Iv-B competition might be illegal, for example with imports targeted to destroy other companies rather than to offer a competitive product. This can allow an economy devastated by the GFC to regrow, however financial contagion that caused the GFC in part can also be policed to stop it soaking up the stimulus to the economy. Also when this Keynesian stimulus is used it can be better policed to ensure it is not wasted or siphoned off fraudulently, in this way the stimulus becomes more like Roy government expenditure for needed infrastructure where resources are too scarce for Biv industry to do this.

Also though when some parts of the economy become Roy this Keynesian stimulus can be Y-Ro where government jobs and expenditures work better than the Biv private sector, however these also need to be well policed to stop people stealing some of this stimulus. For example General Motors collapsed in the GFC but it was able to run under partial government ownership when capital and sales were scarce, then it returned to Biv. This was not then an actual stimulus but Roy nationalization, this is however usually included under the name of Keynesian stimulus but nothing is actually being stimulated. In the same way Iv-B business can become nationalized and if well policed can run well when resources are scarce. For example some banks that were bailed out, also AIG, continued to speculate and trade competitively and return to Biv private ownership as the economy recovers.

I and O are often left out of arguments in government policy as well as economic theory because these two colors are by nature paradoxes and dilemmas, for example the prisoner’s dilemma was explained in my first book as how O policing can operate. Also O is paradoxical because in color logic it can represent in a yes/no true/false argument the view of neither yes or no or neither true nor false, this can be seen as sitting on the fence or being neutral in an argument where someone might not agree with both the yes and the no side of an argument. This can seem unrelated to economics though, the reason is that Aperiomics is not just about economics or the Biv plant and Roy animal kingdoms but the exact same principles are also a system of logic.

## This is also one reason why the system works so well, when logical arguments are made in Aperiomics they not only follow the evidence but they also follow logical rules of reasoning defined in the same color codes.

So for example the liar’s paradox is resolved by their being statements that are neither true nor false and Godel’s theorem by statements that are not false but not provable. This is why these alternations in policy in Roy situations fail, they leave out the shades of grey to try to make a black and white excluded middle logical argument and just as with the liar’s paradox trying to evaluate policies as true and false eventually has more paradoxical situations that do not fit into being true or false. For example in a war most countries like to think in terms of good and evil, however often there are shades of grey in this argument where soldiers find they need to do more evil to be good, or be cruel to be kind, etc.

The Vietnam war was started with good intentions by both sides, however it became more of a grey area where many soldiers could not believe they were doing good which resulting in a great deal of guilt after they left. Instead of trying to portray war or any issue in stark terms of right and wrong or good and evil in Aperiomics the O police or soldiers might strive like Google to “don’t be evil” or some fraudsters might see the path to success in business as “don’t be good”. Combining these two saying then Google might often appear to be not good and not evil but trying to navigate in difficult situation such as whether to censor search results in China. Ideally censorship is evil and they might not want to do it, however refusing to do search in China might cause even more repression so pulling out of China is not good. So the not good and not evil approach might be to resist censorship but still work in China.

## So to define situations as not good and not evil, not true and not false, not yes and not no, etc does not work in Aristotle’s logic because this middle position is excluded but it is included in color logic. I-O police have to work in these shades of grey all the time, for example someone might steal food because they are hungry and the police must decide whether they were entitled to food from society or should be punished for stealing.

Once this middle I-O viewpoint is excluded then paradoxes and dilemmas abound in all issues including war. This is seen in the novel Catch 22 by Joseph Heller which exposes many of these paradoxes, for example the name refers to someone being insane if they wanted to fight in the war. However if they didn’t want to fight they were sane and so they should be made to fight, the only soldiers who could get sent home then were those that wanted to fight. The solution for this paradox in Aperiomics would be where someone is not sane and not crazy but something in between the two. There can also be a good and evil paradox in war, for example a soldier might commit an atrocity such as where they killed women and children at Mai Lai in the Vietnam War and many people might consider them to be evil. However he might have saved the lives of other soldiers by deterring snipers using villages so this made him good.

So to be good he must be evil, but to be evil he must be good because he cannot kill innocent civilians without a good purpose. The main soldier William Calley behind the My Lai massacre was only jailed for time served back in the US, many soldiers supported him and said they had done the same thing in the Korean War and World War Two.

## A law court ultimately determine problems like this by finding a middle ground where a soldier is not good and not evil, at some point killing villagers becomes a criminal offence whereas in other circumstances they might be casualties of war.

Once this I-O middle viewpoint is ignored however Roy polices get confused in Oy-R and Y-Ro alternations. For example in Iraq as mentioned earlier there was an alternation between an Oy-R secretive and deceptive war between R Al Qaeda terrorists and Oy special forces, and Y-Ro where Ro rioters and organized militias such as the Mahdi Army battled the Y US army in open battles. To try and win in Iraq there was a dilemma of which strategy to use, each had its promoters but each also had its deficiencies. A Y approach missed most R terrorists who could hide, plant IED bombs and potentially win the war by bleeding the Y forces, this forced the Y army to confront Ro civilians as being like an army even though they often just had some R terrorists hiding among them. This is how the My Lai massacre in Vietnam occurred.

The Oy approach in Iraq using Special Forces and Drones was ineffective when these attacks caused Ro riots because of innocent R people getting killed or tortured, this has also been seen in Pakistan in 2012 where Al Qaeda has moved into Karachi to shield themselves from Drone attacks while Pakistan is threatening to block US access to using Drones. So first the R terrorists used the safety of the tribal areas of Pakistan to deceptively attack and then run away from the Y army’s slow and visible response, this was similar to the Viet Cong using Cambodia as a safe haven and how a contagion usually finds a hard to clean out area to grow from such as R rats in a sewer. Then when the Oy Drone attacks had followed them into Pakistan they moved into Karachi where Drone attacks will be impossible without collateral damage and even more Ro riots.

Both approaches seem to be ineffective by themselves but there also seems to be no easy way to combine them, for example Special Forces as Oy tend to work under a different command than the Y army and there are often conflicts between the two as to what strategy to use. The same problem happened in Vietnam where Oy raids on Viet Cong hiding in villages caused Ro outrage and riots, at the same time the Y allied forces fought openly but then the Viet Cong reverted to R by hiding and sniping at the Y troops from thick jungle, tunnels, Cambodia, and other villages. This strategy was so effective that the US and its allies lost the Vietnam War, are arguably losing the Afghanistan War and according to some may have lost in Iraq despite having in all these cases overwhelmingly strong armies with superior funding and logistics.

These losses happened from not understanding the shades of grey in the situation which is why the O police are needed in society, if the I-O police used the same kinds of tactics in any city then they would quickly create terrorist like attacks from the citizens. This was seen for example with Rodney King who was seen as R innocent which caused a Ro riot and inspired more R people to in effect act as terrorists. The O police represent not white and not black, not yes and not no, in other words a neutral force that owes no allegiance to either side much like a moderator in a debate where one side picks yes on an issue and the other picks no.

## In a city then the O police can dominate with a minimum of resources by being fair and neutral, when an army is not perceived as fair then the cost of maintaining it can rise exponentially.

In Iraq the situation was stabilized by General David Petraeus because he consulted with the Bi tribal leaders and made his army act more like neutral I-O police trying to prepare Iraq for democracy, any mistakes or crimes the troops did were apologized for and compensation paid. Because of this the violence tailed off as people came to see them as fair and neutral, then they were less likely to shelter the R terrorists and started handing them over. However if these R terrorists sometimes represent a legitimate grievance or political movement such as in Vietnam where reunification of the North and South was a natural aspiration, then issues like this also have to be resolved neutrally and fairly. This was almost impossible because of the R-Ro communists fighting in a worldwide struggle against what they saw as Y-Oy imperialists and capitalists with no international I-O policing between them except perhaps the UN.

Because this I-O neutrality is missing in Afghanistan the people continue to rebel in Ro riots in response to Oy Special Forces and Drone attacks, for example many civilians are no doubt being unjustly killed because they are suspected of being the enemy just as happened in Vietnam. This is the same as R people in Los Angeles being targeted by Oy police and triggering riots such as happened with Rodney King. To the extent then an occupying army is not neutral it does not understand the shades of grey that will prevent opposition to it building up, this will create more and more paradoxes and dilemmas as they resort to alternating Oy-R and Y-Ro responses.

Of course as with the Y-Oy Germans in World War Two often the predatory occupying forces do not want to be neutral but in that case they encounter the same problems as in Iraq, Afghanistan, and Vietnam which eventually drove the Germans out of their occupied territories. As mentioned earlier this also happens when the I-O police are not neutral, for example in the US perceived bias in the Los Angeles police led to their being unwelcome in many R ghetto areas while causing Ro riots with their Oy drug raids. Their methods were like the Special Forces tried in Iraq, Afghanistan, and Vietnam and so the results of a failed drug war were similar to a failed war in Vietnam. In the same way too a weak and biased I-O police as regulators were the cause of most the economic problems that led to the GFC, a weak middle of the food chain can cause Roy animals to collapse and starve, and weak trunks of trees can cause a forest to collapse. All these situations are mathematically identical in Aperiomics.

The color I can also be paradoxical and a dilemma in Biv just as O is in Roy situations, Iv represents will not and Bi represents cannot. This gives rise to a Biv version of the Cretan Paradox where a person says that all Cretans are lying and that he is a Cretan. Instead here the person says all Cretans will do whatever they can in a crisis. If he then says he is a Cretan then he will do whatever he can but he cannot fail to act which is an option he can do as this means he will not do all he can.

## This subject is quite extensive and is best covered by reading the first Aperiomics book but it will be revisited more deeply in a later book on different kinds of logic, rhetoric, sophistry, debate, polemics, etc.

However the problem of alternation between Iv-B and V-Bi is resolved by this dilemma in I, for example Iv-B represents an argument between B meaning I Will and Iv meaning I Won’t. So I then means Bi as I Can’t and Iv as I Won’t which is a solution to the paradox because someone might say they cannot do something because they will not do it or they might say they will not do something that they can’t do anyway. This is then like the Cretan Paradox which is resolved by someone saying that are not truthful but not a liar either.

In Roy as mentioned earlier the colors represented No for Y, Not Yes for Oy, Not Yes and Not No for O, Not No for Ro, and Yes for R. Roy are usually subjective arguments and Biv are objective because it defines what objects can or will do. Roy being subjective is about what happens in a subject or issue.

So these Iv-B and V-Bi alternating advisors in a Biv society try to work out what will and won’t happen, for example will gay marriage work without encouraging too many straight people to turn gay, will legalized marijuana infect schools with more drug use, will letting companies collapse cause a chain reaction of more companies to collapse so the economy does not revive for much longer, and so on. Iv-B then is arguing from cause and effect chaotically and there is no examination of probability in these ideas. V however represents I Can and Bi represents I Can’t. Both of these are probabilistic in nature because saying what V can be done or what Bi can’t happen does not mean any of it actually will or won’t happen.

The colors in Aperiomics then not only represent political factions, ecosystems, economic forces, etc but they also represent a constructed system of logic that encompasses all other forms of reasoning, people then tend to either pick or move to a color that suits their preferred viewpoint. V entrepreneurs tend to think as I Can so people who think in terms of what is possible are more likely to become leaders or start a business, their agents oppose B workers and think in terms of I Won’t in terms of being stubborn in not taking a lower price in the I-O market and also as counter revolutionaries to the revolutionary ideas of B workers as I Will. Together they represent Can and Won’t which can define a kind of decision making where someone can do something but chooses not to.

Bi workers like unionists think in terms of I Can’t which means they band together to overcome their deficiencies and this also means You Can’t to oppose the I Can of V entrepreneurs, they then usually fight in an economic war of attrition to work out who ultimately can get what they want. B workers represent I Will and so people there with strong willpower work harder as individuals, they bargain with Iv agents who oppose them like B farmers trying to sell their produce to Iv. Bi and B then work together to mean Will and Can’t which means they have the Will to try to do a job but often they still can’t succeed.

The alternation problem in the absence of I-O moderation then is where some advisors think in V-Bi of what can and can’t be done while Iv-B advisors think of what will and won’t be done. The two viewpoints are totally incompatible, to think of what can and can’t be done is to think in terms of probability and randomness which is based on independent variables. To think in terms of what will and won’t be done is to think chaotically in dependent variables so data cannot be chaotic and random at the same time but only a mix of the two.

For example dominoes might be placed so some will knock over others if a table is shaken while other dominoes are so far apart they won’t knock each other down but they still might fall down from the table shaking. The dominoes are of different sizes and shapes so different amounts of force will knock them over, the table is an uneven surface so some can tip over more easily, some can slide into others after being knocked over, all these measurements are inexact to some degree, also the table is elastic in some areas so some parts will shake more than others. The objective is to calculate how many dominoes might fall down from different amounts of shaking or other external shocks such as striking the table from different angles. This is intended to represent an economy with a highly uncertain mix of chaos and randomness.

The dominoes that hit each other and knock each other down are deterministic or dependent variables because if one falls on the other strongly enough it will definitely knock it down, an Iv-B thinker would then approach this problem by saying when the table is shaken one of these dominoes either will or won’t knock down another one as it falls so assuming a force strong enough to knock down one it should knock down nearly all the others. In the same way in Iv-B business an Iv agent might try to make a sale where B either B will or Iv won’t buy the product, if he makes a sale he either will or won’t make another sale to a referral from this buyer, and so on. B then represents I Will where B buys the product and Iv represents I Won’t where the Iv agent keeps the product. He doesn’t make money if they Can but Won’t buy, he also needs to find out if they have the Will to buy but Can’t perhaps because of a lack of money.

Here then I have associated colors with each business decision, B means I Will and so they want to have their way, the Iv agent represents Iv as I Won’t which opposes I Will. This means the sale is a contest of wills between the two. However in Bi this color represents I Can’t which means the Iv agent cannot make it a contest of wills in the I-O market between Iv and Bi because the Bi team member often can’t make an individual decision. A V management team might own the product being sold by the Iv agent and their color means I Can so they has a battle of probabilities with Bi as I Can’t, this might be a war of attrition like a union battle where the V team think they Can cut wages but the unions show him that he probably Can’t by striking. The outcome between the two is probabilistic or stochastic because with so many people on both sides there are too many random variables to say what Will or Won’t happen.

## So in any transaction the four outcomes are V I Can, Iv I Won’t, Bi I Can’t, and B I Will. In the I-O market however there is another option of I Can’t and I Won’t where there is a compromise between what the Iv agent Won’t do and what the Bi team Can’t do. In an economy when people can’t or won’t make deals then these are resolved by compromises in the I-O market.

The dominoes that are far apart will fall randomly when the table is shaken, this is because they are too far apart to hit each other when they fall. It’s not known exactly how many dominoes are too far apart to hit each other and how many would knock each other down without more precise measurements. In Aperiomics this problem is a model of the economy, for example in the GFC it was not known what effects the collapse of Lehman would have and what other companies and banks like dominoes it would knock down, it was not even known what exactly caused Lehman to collapse. In effect then the GFC was an external shock and some domino like events both random and chaotic caused Lehman to fall over as well, then the US Treasury and Fed needed to determine what further effects would come from bailing or not bailing out Lehman. So this is a difficult problem and as was seen the mathematics used could not predict the outcome accurately.

A V-Bi analyst would look at the dominoes and would only be able to say an individual domino can or can’t fall depending on the strength of the shock because there is no cause and effect in statistics by definition. He would then try to calculate the problem on a normal curve and wherever there were dependent variables like dominoes hitting each other his answers would either be wrong or involve more distortions of the normal curve to fit the data such as skew or kurtosis. He however has no mathematics to predict the consequences of dependent variables of dominoes knocking each other over except to show them as unknowns. Each time the experiment is performed the dominoes might be set up differently and so the differences from a normal distribution would be different each time, this is like an economy changing each day. The Iv-B thinker looks at the deterministic data by working out which domino will fall on what others but he cannot calculate the random aspects of the problem, he might get the dependent variables right but some random elements of dominoes shifting as they fall or random errors of measurement might make some dominoes miss each other when he thought they would hit and vice versa. Each analyst then tends to get the wrong answer and if they ignore each other’s approach then they have to use ad hoc measurements to cover the flaws in their system.

If this experiment is repeated over and over with different domino positions like a constantly changing economy then each analyst will tend to get their own area of expertise roughly right but always have the wrong answer for the rest. This has been happening in economic forecasts and policies since the GFC, the more traditional V-Bi economists keep predicting the economy will come back to normal by using statistics based on a normal curve and either ignore chaos causing business collapses like dominoes hitting each other or hope it will stop. The Iv-B Austrian economists predict more collapses are necessary because they assume everything is connected in the economy but do not understand why many of their pessimistic predictions fail to happen because of random variables, their results depend on how close what percentage of the dominoes are to each other.

If nearly all of the dominoes are close together then the result will be highly chaotic and Austrian economics will be more correct as it was in the lead up to the GFC, for example that tinkering by the government in the market might cause fragile Iv-B businesses to grow too quickly or collapse. Attempts to protect the economy by buffering against external shocks will seem ineffective because nearly any shock will cause them to fall over, the solution seems to be to let them fall and build stronger dominoes later.

If a high percentage of the dominoes are far apart then external shocks will randomly knock them over and statistics will show this more accurately. The Austrians assume that any misallocation of resources caused by government intervention is ultimately going to produce a bad result however often this is a random effect that diffuses and disappears in the economy. For example the government might lower interest rates which can produce a chaotic boom and bust as the Austrians say but it can also diffuse through the economy giving a boost to nearly all the transactions in it rather than just being confined in the bubble. This depends on the amount of V-Bi randomness in the economy, any misallocation would dissipate as friction but misallocations happen all the time anyway. So the Fed might misjudge interest rates and lower them too much but so might private banks, the Carry Trade in the 00s brought cheap money in from Japan to the US and arguably was the real reason interest rates stayed low rather than because of the Fed.

The only point where these two attitudes can interact to model all the data with a minimum of uncertainty must be by adding the two findings of dependent and independent variables together and then working out the remaining uncertainties of where the dominoes might be just close enough to each other to knock each other down while others are still barely too far apart. This then means there is a need to concentrate on additional measurements in this grey area to reduce this remaining uncertainty, but in both V-Bi and Iv-B economics virtually no one looks at this level of detail but relies instead of graphs and equations representing the overall economy. For example a graph of US GDP will give virtually no information on what effects not bailing out Lehman were likely to have.

To examine this situation then the two sides need to work together because analyzing the situation in terms of what Can and Can’t or Will and Won’t happen gives an incomplete picture. In the same way the Iv-B and V-Bi advisors need to come together with I-O police and regulators to combine their results in a neutral and unbiased way rather than just alternate policies that ignore each other. The I-O police are the ones in society that look for more detail in a situation to reduce this uncertainty such as in investigating crimes and auditing banks to see if there is fraud, for example one person might shove another person and then the second person drops an expensive vase and breaks it. He sues the first person for damages, like the dominoes the I-O police and courts need to work out whether the shove was the chaotic cause of the vase breaking or the second person was randomly in an unlucky position and should have been more careful to avoid shoves and to hold the vase more carefully. In the same way I-O regulators would have had to determine who would get shoved into bankruptcy by the collapse of Lehman and who was just unlucky to be affected.

This is just like the I-O measurements of looking more closely at the grey area between dominoes hitting each other or not, if the I-O police are not investigating these interactions more closely then any decisions are made with far more uncertain results than V-Bi or Iv-B realize. With the collapse of Lehman these I-O Police could have carefully examined the a chaotic series of links to other companies or a random selection of them to see whether the shove they would get from Lehman would collapse or damage them and whether they or Lehman would be at fault from this. By calculating this they might find that overall Lehman was negligent in getting into this insolvent situation by making itself systemically dangerous, they might also find Lehman was innocent and the GFC like the table shaking created random effects in the economy that Lehman was not responsible for and could not have predicted. In this way they could have calculated the cost of bailing out Lehman versus the damage to the economy from not acting, they could even calculate whether this bailout was economical in terms to getting back more tax revenue as more businesses survived.

Instead the Iv-B and V-Bi advisors approached the Lehman problem ideologically rather than examining the data more closely, this is also because both sides tend to see themselves as correct so the I-O police seem to be unnecessary or in the way. This is one of the reasons the I-O police became weak in the first place so this alternation also causes problems because each side has this false certainty of being right. The Iv-B advisors cannot come up with accurate information by looking at the knock on effects of the Lehman collapse and in the long run ignoring all the random effects of shocks will give obviously wrong information.

## However the I-O police would report that in some cases that letting companies chaotically collapse is an unjust solution as many companies would collapse just from the random effects of the GFC rather than any misallocation of resources, by bailing them out then the situation might return to normal quickly and the companies helped could repay the loans as happened with many banks after the GFC. In this case then it might be quicker to let a company revive rather than rebuild after collapsing.

In the same way the V-Bi advisors might use statistics to analyze Lehman like they did with the dominoes, they might try to interpret this data about the links from Lehman to other companies as a skewed normal curve or kurtosis, however a normal curve can never describe the chaotic falling of the dependent variables as some companies collapsed after Lehman, so they also will develop a theory that eventually fails to describe everything that is happening. This is closer to what actually happened because the officials in charge assumed the situation was random and would return to normal, however what happened was the collapse of Lehman knocked over many healthy companies and banks that would have survived with a bailout.

This is then the same problem as working out which dominoes would fall by assuming none would knock each other over and then adjusting the data in an ad hoc way. So just as the Iv-B Austrian advisors advocated a policy without examining the Lehman situation more closely so too did the V-Bi Keynesian advisors. This then is how the I-O regulators kept getting shut out of their role in the crisis as V-Bi and Iv-B advisors alternated in control of policy.

The only system that minimizes uncertainty then is to combine both approaches to cover all the independent and dependent variables, this becomes a mixture of the chaotic dominoes falling on each other and the random dominoes that miss each other. It was also necessary to audit some or all the companies connected to Lehman to reduce the uncertainty of what will happen to a minimum. Say for example there were thousands of dominoes on the table and it was not possible to check each one to see how it might fall and if it would hit another domino, this is the complexity that analyzing an economy has to contend with. Since not all interactions in the economy can be analyzed nor can they be measured accurately this complexity still has to be reduced, this is done in Aperiomics by random or chaotic auditing.

The idea is to randomly pick dominoes to look for chaos or chaotically pick dominoes to look for randomness. If a domino selected might fall onto another one then the next dominoes near it are checked to see if they would in turn fall on another domino until the end of this chain reaction is arrived at, this would be where the chaos ends and randomness begins. This gives a clearer picture with less uncertainty of how many chain reactions of dominoes would occur and in the same way by following chains of companies branching out from Lehman the I-O regulators could have found where chain reactions of more collapses were dangerous which would help them work out how much bailing out Lehman needed. For example it could have been quickly found that the London office of Lehman was particularly systemically dangerous.

Next then is to pick chaotically and look for randomness, here chain reactions are assumed and so dominoes close to each other are checked to see if they would fall on each other. This will give an estimate of how many situations that appear to be chaotic are really random. With Lehman then the I-O regulators would check one counterparty and then check all the companies that did business with it, and all the companies that did business with those to see overall where the contagion spread and where it only appeared to be but was actually random. For example they might have checked Morgan Stanley for its ties to Lehman and then all the other companies connected to it looking for where chain reactions might spread through Morgan Stanley, we now know for example that they nearly did collapse because of Lehman as did many of their own connections. So this would give a good approximation of the chaotic and random factors around Lehman without having to check all their links which could quickly become too complex and time consuming.

Of course there might not have been enough time in the GFC to do this but this is because the I-O police had been weakened as a major causative factor in the crisis, to not do this random and chaotic audit because of insufficient time then is like not having a car fixed because of insufficient time and having it break down even worse because of this. Lehman then should have been partially bailed out until the I-O regulators could determine what other knock on effects there would be from its collapse, the same should have happen with each bank in the global economy that was in trouble.

There will always be some residual uncertainty from random or chaotic errors in measurement though, for example the table shaking might make some dominoes that should hit another one just miss, or it might make a domino that should fall by itself catch another domino and knock it over too. A random error also fits on a normal curve, so some of the measurements of the dominoes and the companies around Lehman could be analyzed statistically on a normal curve as to how accurate they were likely to be. Others would be measured chaotically to see if they fit a power law distribution, for example in some areas the mistakes in measurement might quickly become much larger such as with smaller dominoes being much harder to measure.

So smaller companies around Lehman might have become exponentially harder to estimate the effects on because there were exponentially more of them and perhaps these companies would become more secretive and deceptive giving misleading answers to regulators to protect their privacy, this is also why I-O regulators need to be able to prosecute companies for lying to them. In the same way the I-O regulators might have found some companies would collapse with the fall of Lehman but they might in fact have survived because of random events such as making windfall profits elsewhere. Also some expected to survive might have done unlucky trades and collapsed anyway, this would then not have been the fault of Lehman.

To describe this combination of chaos and randomness the I-O police working with the advisors should then not be trying to work out what can happen as V or what will happen as B because these are too open ended, for example there were too many possible outcomes of what Can happen from not bailing out Lehman to calculate and what Will to happen was obvious such as the employees losing their jobs. So the I-O regulators would need to narrow this by determining what Can’t happen as Bi and what Won’t happen as Iv. For example it could be worked out what companies and banks were not directly exposed to a Lehman collapse and next progressively which ones were not indirectly exposed, this would be because they were more independent variables to Lehman such as their accounts being independent of Lehman as they could be held at different banks and they might own different securities to what Lehman had.

That gives a safe zone around Lehman much like the I-O police working out after an earthquake which buildings could not collapse because of insufficient damage and which buildings would not collapse because the damage would have no trigger such as another tremor, so they didn’t have to waste time on those buildings. They might also work out which buildings can’t stay up because of severe damage and which won’t stay up, perhaps because of the shock from a nearby building falling will cause another to collapse. These are then evacuated without needing to analyze them further. The remaining buildings are then more carefully examined as borderline dangerous.

In the same way doctors use Triage to work out which patients can’t die in the sense that their injuries are not serious enough, and which won’t die in the sense that their injuries might be fatal but will be fixed with surgery. There might also be patients that cannot survive because of severe injuries or ones that won’t survive because of perhaps a shortage of medicine. These patients are then put aside so they can concentrate on the borderline cases.

With the dominoes they would then work out with random audits an estimate of which ones could not fall over with a given shaking of the table to exclude them, this makes the problem less complex. Next the I-O regulators would have to work out which companies and banks would not as Iv collapse because of Lehman, this then examines chaotic connections like dominoes that could topple on each other. This is like the I-O police working out quickly which buildings did not have damage that could cause one to fall on another or for cracks in a building to spread and threaten undamaged areas. With this approximate estimate of the damage from a Lehman collapse they could then look at the borderline cases that might collapse, this might require more analysis but the data could be used for similar situations in the GFC such as whether other companies might collapse.

The I-O police after the earthquake devastated the city mentioned earlier then want to find who Bi can’t or Iv won’t survive unaided from the effects of this external shock, this is like the Triage example. Their job is to minimize the uncertainty of this number by helping people trapped, giving food and medicine, taking some to hospital, preventing crime, etc. In the same way the I-O regulators with Lehman needed to determine what companies and banks Bi could not or Iv would not survive unaided, then they needed to work out what bailouts would help those that could be saved in the most affordable way. This is then basically the same objective as to determine which companies could not or would not collapse because of Lehman. When companies would fail through no fault of their own then the I-O regulators would help them as a priority because they were honest, this reduces the problem of moral hazard to a minimum because those taking advantage of the system dishonestly would be allowed to fail or punished in some other way.

## The main point then is when a situation becomes paradoxical or a dilemma as happened with the GFC then this is resolvable with the color logic of Aperiomics by reasoning in ways that bring to bear neutral and unbiased O criminal and I civil law onto these problems.

It is only where the law is seen as irrelevant and that decisions should be made without sufficient regard to justice for all parties that dilemmas and paradoxes arise, this commonly happens in war but it also happens in economics where theories rarely focus on who is getting hurt by manipulating interest rates, inflation, unemployment, etc. For example low interest rates might help the banks to rebuild but hurt investors who see their returns plummet. As this process continues then the I-O regulators are further sidelined as these economic theories usually ignore the criminal and civil law infractions though they are part of the problem, for example since the GFC much has been written on controlling the money supply but very little on how the contagion of fraud caused much of the collapse. This further weakens I-O policing until it leads to more chaotic crisis and random stagnation.

It becomes a problem though of how to apply I-O policing as it gets more influential because to some degree people have been lulled into breaking the law in ways they would not have with enough police patrols and random audits of the financial industry. This is like the Broken Window policy that Rudolph Giuliani championed in New York which says that when people see signs of poor policing such as broken windows and graffiti they are either emboldened to do crimes they otherwise would not, also the more honest people move away from the area such as with White Flight leaving a higher percentage of criminals. In the GFC then the more timid and honest businesses either shied away from economic crimes such as fraud in liar loans or they did business they otherwise would have found ethically wrong because there was no I-O policing as regulators providing a moral compass. When they saw fraud around them many companies then became intimidated from staying in the market because they thought no I-O police would protect them just like graffiti makes people think the police are not around to prevent muggers.

Because of this some I-O infractions may need to be forgiven or sentences reduced because the I-O police in effect broke the law as well by not policing the economy properly or the government and police need to be fined or deterred from not leaving companies unprotected again Also though there needs to be enough deterrence to scare away the increased numbers of Iv-B criminals and clear the financial contagion so the economy can revive This is like cleaning up graffiti so people feel safe to walk the streets and buy things from shops in the neighborhood, in many cases stagnation after the GFC is occurring because the corruption from the GFC and the deceptive opacity in the financial sectors has not been cleaned up. Citizens are generally obliged to report crime if they see it or they might be seen as an accomplice, also they are obliged to sometimes help in stopping a crime so when this is enforced people are forced to be whistleblowers on financial fraud or they might be charged for ignoring it or being in effect an accomplice.

In the same way then this applies even more to I-O police, if there was economic crime then they should have been obliged to investigate it and lobbyists or politicians that weakened these laws or defunded regulators in effect broke the law themselves by being accomplices to financial crime or being part of a conspiracy. In this way then weakening the I-O police can itself be a crime just as it would be for example by California disbanding too many police to save money and causing the deaths of many people.

If politicians or even economists promote policies that cause economic hardship in a deceptive or negligent way then they might also be subject to prosecution for it.

For example the rule of I-O law might be infringed by a Roy coup in a Biv country but in some cases a Roy country might be legally governed by a Roy dictator when G public property trumps Gb private property then power of various kinds might be the only way to rule. Democracy as a concept is bound up with the idea of Gb private property, a person owns a vote or say in their society that is respected by the I laws. In a G public property system they don’t own any property and instead they have this power, they might be able to move freely in this society with their own weapons along with the weapons of the O police. This dictator then if they respect the O neutrality of police are capable of providing a just society, this is how monarchies evolved. When parts of the global economy weaken I-O regulations then in a sense they are worse than dictatorships.

In the lead up to the GFC the rule of I-O law was prevented from working by no regulations on derivatives which caused economic damage to the global economy, in principle then the government should be actionable at least civilly where people that lost money should be able to sue their government for negligence. It is like Roy people being entitled to depose a monarchy if it acts unjustly. If citizens then acted honestly then this can be the basis for legal bailouts where the government is presumed to act to protect its citizens even from its own mistakes. Some governments have a law that they cannot be sued but this can be the cause of many economic problem and corruption.

One problem with this interpretation is when the government is liable. For example it can be said to have acted incompetently which may not require it to pay compensation, whether it simply could not read the future in an opaque economy prior to the GFC, whether it should have conducted due diligence in actually auditing the economy before making claims it was healthy or at least ensured the financial contagion was contained, whether it had a responsibility to use economic theories backed up by experts and universities, whether it changed economic policies negligently or maliciously because of campaign donations, and so on.

Such a way of governing can be more democratic because it holds itself more accountable at all times and not just at elections, politicians already are subject to many laws such as against corruption. When policies are worked out legal opinions might be gotten as to whether some parts of the population might be able to sue civilly or even criminally to be paid for government negligence in policing the economy. This would clear the way for honest homeowners with negative equity to be compensated while prosecuting those who committed fraud or economic mismanagement that lead to the GFC. For example if imports destroy manufacturing jobs to give cheaper goods to other consumers then perhaps there should be clear laws as to whether a government is entitled to bankrupt some companies to give other people a profit.

In some cases it might be legal for a government to establish economic policies but in others case law might eventually establish precedents that some companies are entitled to compensation after having built a business on previous economic policies they had no reason to believe would change. It might be seen to be in the national interest to support some businesses such as defense contractors and also to not allow foreign ownership of some mineral resources, this is a common application of this legal concept like for example most oil producing nations insist on owning their oil resources and usually have a state owned oil company.

Bailouts might have been handled in a similar way, for example GM in the US might have argued it was entitled to a bailout because the taxes it paid included an insurance premium and because so many workers would lose their incomes, related businesses would go bankrupt, that this was more in the national interest than slightly cheaper foreign cars would benefit the country. Instead then of one party or another deciding this according to ideology or economic theories the terms of these bailouts might have been legally fair for the economy as a whole.

Taxpayers for example might have had standing to sue the government on the basis that their taxes or share of the national debt went up because of the many bailouts of the financial sector and so they were also entitled to bailouts on their home loans because of the overall economic damage these foreclosures caused. In effect then this could be a class action lawsuit on behalf of taxpayers and create case history on how bailouts should be legally done. This can arise from common law, for example if one group of people such as taxpayers is hurt by another such as banks acting illegally and getting bailed out then they might sue to get this money back or to get compensation from the banks as they recovered.

The idea of union related laws might also be more thoroughly explored, for example just as shareholders have a stake of ownership in a company then workers when they join might be presumed to have a stake of ownership as well which is surrendered by poor performance on their job. If they are fired and lose this stake then they might be able to gain compensation, also Bi unions might have a right to sue and be sued according to the same principles to define not just in economic theory what good or bad they do but more exactly building up case law to replace arbitrary economic decisions about them. In all these ways an economy can be made much efficient because all parties to economic decisions are treated fairly or can seek redress for it.

In some cases the economic theories might still be followed but companies and workers might be compensated because they are suffering economic loss from it. This weak I-O policing is particularly seen with unions as one party might strengthen their powers while another weakens them, this war of attrition between V management and Bi unions then is also fought with campaign donations rather than trying to have the courts work out a fair and neutral law on what unions are.

In this way instead of having economic policies that hurt some parts of the population and help others the law can actually define more exactly who is likely to lose and this then can make economics and law join into a single discipline.

Since I civil law is intended to be a fair apportionment of payments from damages then this is really what economics is supposed to do as well. Democracies are supposed to balance the majority’s vote against the right of minorities not to be persecuted but in a sense economics currently persecutes minorities when a party is elected and then punishes the opposition with their economic theories. This also links to V-Bi and Iv-B alternation because when the parties are moderate then the Bi left has a socialist or team orientated V-Bi policy while the Iv right has a more libertarian Iv-B policy. Usually this random versus chaos election result results in compromises in I-O, radicals often think of this kind of government as the same no matter who is elected.

## If the electorate is highly polarized then I-O is weak, the right might be V like V-Bi random authoritarianism or fascism while the left are B chaotic and revolutionary leftists. This usually leads to wild swings in who is winning much like in war where Y armies try to beat R terrorists.

For example one party might advocate tax cuts for some and extra taxes for others, if the ones paying higher taxes could sue the government in court then it would have to defend its policies or have to compensate the highly taxed. This might simply be to lower their taxes again but the issue would have to be decided in courts with real evidence and economic data not election slogans so it is more likely to come up with an efficient way to raise income. If for example taxes on the V wealthy were so high that the government got less revenue then they might sue claiming this is persecution and confiscation rather than legitimate revenue raising.

When a crisis is threatening or there are warning signs in the economy the government and its advisors could then be legally liable if they do not investigate the problem properly, this is like cracks in a bridge that falls and kills some people would result in I civil and O criminal charges against the constructors of the bridge, those who maintain it, the government inspectors, and so on. When a crisis happens and the government or private I regulators such as ratings agencies in the US are not liable for negligence or misrepresenting their level of vigilance and thereby giving people a false sense of security, this is then a largely unpredictable crisis caused by corruption and because the future is unknown economic policy cannot really prevent these.

The investors that bought fraudulent bonds based on inaccurate assessments by rating agencies could not sue them because the I-O regulators might not have had laws requiring these ratings be honest. In that case the investors might sue the government for compensation as if their taxes included an insurance premium against fraud caused by I-O negligence. This is similar to what already happens in O policing where someone in the US might sue the police for false arrest or harassment, Rodney King sued the California government for the actions of the O police successfully.

For example in 2011 the discoveries of shale gas in the US increased the known reserves again, this made many of the investments in wind power, electric cars, new coal plants and nuclear power plants uneconomical by contrast and also potentially will reduce CO2 emissions. This discovery was probably unpredictable and so investments in the private sector with GM and the electric car and government subsidies will be affected by this, they should not be entitled to compensation for their losses. However there might be a class action suit where citizens said they were being injured by this additional CO2 and this would need to be weighed up against the gas companies being injured by not being allowed to sell this gas.

Decisions like this might be better made then by neutral I-O courts. When the government has a rightward tilt it tends to act more like an Iv agent for the people that elected it, in effect like a real estate agent that makes decisions for their client. So the government might then act for its voters by making decisions for them, though like an Iv agent they are generally bound to be honest. Philosophically a Bi government is not an agent but an extension or part of the Bi team, they then tend to govern by normal laws and not in ways their base would consider deviant. This though is different from acting as an agent, Bi is bound to be conventional and so their decisions tend to reflect the consensus of their team.

So these two kinds of government need to be reconciled by centrists, the Iv agents are expected to make decisions on their own initiative and come up with counter revolutionary and sometimes deceptive policies that profit the people that elected them. The Bi team is expected to be evolutionary and do what they said they would, they are not expected to be deceptive and their base is normally upset when they fail to deliver what they promised. However this is often because of centrist I-O politicians and the law courts that come to a compromise between the two. The Iv agent politician finds he is restricted on how deceptive he can be while the Bi team politician is restricted on how much he can stick to the normal view of his base.

For economics to work in the I-O courts and police rather than through theories then it only needs to compromise between the economic ideas of Iv and Bi, or the idea of an honest but deceptive agent and the honest buyers that can use their numbers to unionize or boycott to get their way in the market. The reason this law based economics is not common is because I-O has a lot of trouble being neutral in societies where the pressure on them are uneven, for example in a multiracial society one race might look after themselves and try to rip off the other over and over. If the courts try to establish economic policies to prevent this such as requiring real estate agents not discriminate on race when renting an apartment, then pressure by the numerically greater voters try to weaken the I-O courts.

For example one race might not want to rent to the other and wants to water down this law or not enforce it, in this way economic theories can become disconnected from fairness for all and so often they in effect help one group over another. When this happens though the colors can become out of balance which then leads to economic problems like booms and recessions, it should be noted for example in the US that the lead up to the GFC represented a rising wealth inequality favoring some races over others and the weakened I-O police allowed some to steal from others with few consequences. Soon after the GFC those with college degrees had fully recovered while poorer less educated minorities were stuck in a near depression.

These economic theories then worked well for some but not for others. Often then economics can be creating rationalizations for V-Iv predatory capitalism to regularly shear the Bi-B sheep of some of their wealth, this is like an unstable Roy animal kingdom where Y-Oy predators periodically grow in numbers by overeating the Ro-R prey and then experience a mild period of less food until the prey regrows in numbers. This can be because the O animals in the middle of the food chain have evolved to be weaker than they need to be, or they might be weak by comparison because some of the Y-Oy predators like an immigrant race to an economy came from elsewhere where they evolved to be too smart or strong for that ecosystem.

The idea of a melting pot economy then is like animals coming into an established ecosystem and unbalancing it by being too fast an Oy predator or too fast an R prey, such an economy might then take a long time to settle down into fewer booms and busts not because of the deficiencies of economic theory but because there is little political will to maintain a strong I-O police. When the birth rates of the different races are very different this situation might continue to get worse and while the I-O police might still wax and wane they might never succeed in being neutral and strong enough to stabilize the economy. To be a politician in such a situation then will be frustrating and very unstable.

Politicians and advisors have difficult problems finding these compromises when facing this mix of randomness and chaos when I-O is weak, not only do they usually have to flip flop from Iv-B to V-Bi as one advisor gains ground over another but the viewpoints are very different for those who do not flip but remain on one side as advocates. For example when an advisor is V-Bi they see the world as mainly random with chaotic events being rare and usually not lasting long such as an earthquake, a hurricane, a building collapsing from fraudulent cement used, sudden drops in the stock market followed by a rise, short and sharp recessions, etc.

So these advisors, like Professor Eugene Fama of Chicago, tend to see chaos as a minor deviation from the normal course of events such as on the stock market with a slow and steady growth in the value of stocks, random variations in dividends, etc. The GDP might vary randomly to go up too much in a bubble or down too much in a recession but these are deviations from normal growth that are supposed to fix themselves. With this belief however comes a certain inability to respond to chaos because the normal curve indicates that the problem will just fix itself like a bad run of cards in a game, as long as the chaos is minor or can be blamed on Iv-B advisors then this can evolve into an economic theory that can claim to be right most of the time.

When the chaos is much stronger then these kinds of advisors tend to look bad and their statements in the growing crisis might make them look like they were incompetent, however they would normally stick to these random Keynesian theories that worked when the chaos was weaker. However for example with Roulette it would be expected that each number has an equal chance of coming up, if some numbers came up more for a long time then people would usually accuse the casino operators of rigging the wheel or at least say the game was no longer completely random.

In the same way there have been many random variations in the stock market that looked like deterministic patterns, this is how gamblers get hooked by seeing patterns in random numbers that don’t exist. Also though there are sometimes chaotic patterns often caused by secretive trading that economists and many traders using random based Value at Risk algorithms might say were only illusions like gamblers see on honest Roulette wheels. In most of the bubble prior to the GFC there was a major argument among economists and quants as to whether the market was random or not, if so then the attempt to make profits using computers and algorithms had to fail one day.

In some ways then the GFC was a vindication of those who saw the bubble as an abnormal deviation like a run of unusual numbers in Roulette and followed by a correction where these numbers went against the gamblers causing a random downturn that would return the economy to normal. When Iv-B and V-Bi are disconnected from each other, as they are in most areas of the economy where policing is absent or not considered necessary such as economic theory, they tend to have a philosophical conflict with each other as to which describes the world better. Those who believe chaotic formulae can consistently beat the stock market in effect believe it is not completely random, much of macroeconomics as well as Wall Street tools such as Value at Risk or the Gaussian Copula in pricing Credit Default Swaps is based on the presumption that movements of prices are random and that consequently each transaction in the market is completely independent from each other one.

Obviously this is not always true, for example if someone buys a share his friends might be more likely to buy the same share because they trust his judgment so the friends are dependent variables and hence chaotic. Generally though V-Bi people tend to become team players and to doubt the randomness of the market is to be seen to some degree as a deviant from this normal view. In their meetings, conferences, etc then there is a tendency to conform to this normality and to avoid being on the fringe of it much like Ro buffalo might not want to be on the edge of a herd and in more danger from Y predators.

Also Y predators like lions tend to act the same way, to be on the edge is potentially to be cut out of eating a killed animal as the favorites might support each other to eat first. So in a team color there is a strong desire to be normal also because those most normal have a better chance to marry, get a good paying job, have children, etc and so they perpetuate the desire to be normal and a conformist. Even though there is some pressure to be normal this doesn’t mean that nonconformists are pushed out because team colors need all the members they can get, they then are still considered part of the team even with variant beliefs.

This is also a survival strategy because with random events the deviants are sometimes right as revolutionaries and so they might become the new normal and the older ideas might become deviant until often random events shift back to their ideas. Because of this then in reacting to a real chaotic crisis this betting it is really random can be quite dangerous and can result in handling it the wrong way, like for example seeing cracks on an airplane wing and thinking because they are abnormal they will somehow go away by themselves.

Other Iv-B groups such as the Austrian school of economics are not part of the team and so tend to be ostracized as too abnormal to be accepted and so there is a disconnect between the two schools of economics. Iv-B also are highly competitive with each other and so their team spirit is very weak, they also seek to exploit divisions in the teams arrayed against them. This can be seen with the Presidential candidate in 2011 Ron Paul for example, they also have the advantage of explaining some economic events as having real causes and effects from anecdotal evidence while V-Bi tends to dismiss the same evidence as coincidences.

When chaos increases then Iv-B gains credibility with politicians, the same happened in the Great Depression with the belief by Treasury Secretary Mellon and to some degree President Herbert Hoover before him that the economy should be allowed to collapse quickly so it could regrow as it did in several other crises in the previous decades. No matter how much chaos there is though V-Bi still tends to see it as randomly deviant that will fix itself, this is like in a random drug trial where a drug might cause side effects in some people but this being a deviation or abnormal is often just handled by warning labels rather than investigating the chaotic cause of it. Like the Iv-B Austrians then groups might form that have these common side effects and protest about the medications, however the V-Bi teams in effect want to keep the medicine legal because it doesn’t hurt normal people, makes money for normal workers in the pharmaceutical industry, and the normal curves in the statistical trials seem to show these side effects are not statistically significant.

In the same way though with Iv-B nothing is really a coincidence or random even though there might be no bubbles or crisis in the economy, this is how they can be labeled as conspiracy theorists as they might see secret and deceptive groups behind what are just random events though with weak I-O policing their accusations are rarely investigated as with the side effects of drugs. This then is the danger in opposing sets of advisors because they cannot ever agree or compromise but only form a rough and unstable equilibrium that is not like the I-O free market.

In a real crisis then just by trying to follow the advice of both groups politicians can continue to crash the economy over and over or create a long lasting near depression, the reason is the same forces that caused the crisis also evolved exploiting this disconnect and so they are uniquely ill suited to fix it or even slow it down. Because this disagreement can be so intense the I-O police and regulators can be drowned out of the debate and so remain weakened and unable to tackle the problem of fixing the economy.

Both sides have such interesting theories backed up with large numbers of experts, peer reviewed journal papers, think tanks, conferences, and even Nobel Prize winners that the idea of just policing the economy better looks inferior by comparison.

This is however like the problem police always face, for example Bi social workers might resent the O police handling of R criminals because they see them as just randomly unlucky in how society treats them and how they could be ok if given a lucky break. They can accumulate extensive research to prove all of this much like with trials of drugs with side effects but police and the law courts must somehow resist this and compromise with the chaotic Oy point of view. For example after the 9/11 attack on the US Bi-Ro groups tended to see Muslims as being unfairly targeted because of some chaotic R terrorists hiding within their communities.

To profile Muslims for more searches at airports then is an Oy chaotic strategy the police use to find these chaotic R criminals and terrorists however the politically correct random theory is that these terrorists or criminals go bad through no fault of their own and that no profiling system can be successful in this random population. The result then would be these searches would enrage the Bi-Ro communities causing riots or even creating more terrorists from the injustice of this profiling. This then is the same problem the Y armies had in Iraq, trying to defeat R terrorists without neutral justice through I-O policing causes Bi-Ro riots and more terrorists to be created.

In the same way New York has recently been in the news for profiling young blacks for extra searches for weapons or drugs, this also enrages the Bi-Ro black communities as well as other Bi-Ro people being part of that team. Just as with Muslim profiling and searching for R terrorists in Iraq this is said to create anger at the I-O police and so when they try to work in these Bi-Ro communities they encounter hostility and little cooperation even for serious criminals. These offenders then become like R terrorists and freedom fighters where the ultimate cause of their crimes is economic injustice which is shown in the normal curve Bi-Ro studies. Their solution then is a V-Bi war of attrition against the V wealthy who they perceive as being behind this persecution.

This Oy attitude of the I-O police then is that some criminals are chaotically born that way and are always being deceptive just like R terrorists in Iraq, this research then is unreliable according to them because it is taking records of lies and distortions of what is really happening just like when journalists tried to find out what Stalin’s R Russia was like in the 1920s. Again there are no end of I-O police and law court records which show this deception, for example in how many criminals protest their innocence and eventually admit it or reoffend after no matter how much rehabilitation. So the police are always being weakened by these opposing and self-certain points of view which is why I and O represent where uncertainty resides, in effect as a compromise point between two self-certain points of view in Y-V and R-B.

In the same way after the GFC the economic research tends to resolve into two opposing camps with self-certainty, the government must somehow resolve the the Iv-B and V-Bi theories into a course of action and deal with uncertainty even though both sides seem so confident only they are correct. When they resolve this by picking a middle way between the two theories they are generally correct but this is difficult to do without using the I-O regulators. When they do this by flip flopping between first one theory and then the other this can be disastrous. More usually the tendency in democracies is that each side takes their turn, this is more so the left colors such as Bi and B and then the right colors of V and Iv alternate in power and so there is a kind of slow motion flip flopping that can be dangerous. It is however tempered by the left and right having a random and a chaotic color each and so they do try to combine the dependent and independent variables of ideas together more than usually happens in economic theory. For example the left when they win an election usually have to balance the cooperative interests of Bi unions and the competitive interests of B nonunion workers. The right when they win balances the V team’s interest in forming a cartel and keeping prices high with the interests of competitive Iv agents and companies trying to innovate.

However when politics itself becomes weakened in the centrist I-O ideas then V tends to become separate from Iv and Bi from B, this then causes Iv-B to pair up with each other, also V-Bi people do this. There are still some connections between V and Iv, and Bi and B, but this becomes more complicated because of the Iv-B and V-Bi conflicts going on. For example Iv subprime agents might be trying to make money deceptively from B borrowers using liar longs, since they are trying to trick each other they also try to trick V-Bi people. So these Iv agents would also deceive their V bosses with these subprime loans based on deceptive loan application and often the Iv agents had also altered the paperwork. The B borrowers also tended to deceive their own Bi communities as well, they were spreading these subprime loans through Bi like a contagion that ended up collapsing many of these communities when the bubble burst. This is quite common in Bi communities to have these deceptive B people such as drug addicts and prostitutes wrecking the cooperative nature of their areas.

However the Iv-B and V-Bi disconnect also causes V to turn on their Iv agents at times, they might for example do semi illegal trading and sales and if the Iv agents will not do it or fail as with Ameriquest’s salesmen then they fire them until they get a sufficiently dishonest group of agents working for them. The Bi communities also tend to exploit B, for example they can use their nonunion labor to pay them very little money while they get higher wages through their Bi union. Also the deceptive nature of B causes some to become prostitutes and drug sellers while working for Bi, they are then taking most of the risks and like the subprime salesmen if they don’t do it then they get fired. Both the V-Iv and Bi-B interactions are moderated however by a strong enough I-O police.

This is why for example Ron Paul is popular among many B Democrats in the US because they are also chaotic and libertarian in their views. V and Bi tend to understand that each is composed of team players and hence more trustworthy than Iv-B people. V Republicans and Bi democrats tend to both feel threatened by Iv-B libertarian ideas and so try and work together and maintain theirs as the stronger influence. The result then with this political disconnect is it threatens to keep tearing the country apart by giving in to the Iv-B factions on some things and then following other contradictory policies as V-Bi.

This causes more problems though and more collapses but it is still difficult for the centrists and the independent voter to get compromises taken seriously until I-O centrism strengthens, it needs to become obvious that the polarized political atmosphere is destructive. What usually happens instead is a political game of stealing each other’s thunder by the Bi left for example with Barack Obama trying to act just like V George W. Bush who had himself acted like Bi Teddy Kennedy by increasing Medicare for example. The Iv tea party has an equally confusing message in terms of the left and right in politics as is seen by so many Democrats supporting Ron Paul and their desire to be antiwar.

This is like Oy foxes being against big packs of Y predators such as lions, they are like R prey such as rodents who are equally scared off by big teams of prey such as goats or sheep protecting each other. Even though they are predator and prey they have a common strategy and aversion to team based animals. The result then is a very confusing foreign policy in war that ends up fighting large Y-Ro wars in Iraq and Afghanistan while both parties also end up supporting the secretive Oy-R war using rendition and Guantanamo.

In the same way the influence of Iv-B economists and their politicians prevented the V-Bi Keynesian stimulus which might have reduced the chaos after the GFC, for example the home owners with negative equity might have been bailed out but Iv-B people disapprove of people taking on the debts of each other. This is because they are competitive by nature and tend to think of someone being in trouble as possibly an advantage for them. For example the chaos and collapse after the GFC have helped some Iv-B people to make money because they could buy some goods and services cheaper or they can short the market. To have the government help this people in distress then in effect takes the money Iv-B people paid in taxes and won from competitive behavior and gives it to their competitors.

In the same kind of strategy the Bi Democrats tend to agree on tax cuts to V business which increases government debt because they see V as being part of the team though they are their opponents. At the same time they are not trying to fix the Iv-B chaos which causes businesses to crash and homeowners to lose money which also ends up increasing debt from welfare. This can be because the Bi community is not so worried about B people losing money from chaos, they tend to look after their own team and ignore many of the B people who don’t want to be team players anyway.

## This then occurs because of weak I-O policing, instead tax revenue is divided up into those members of the team deemed to be most deserving to quench the chaos there. For example the Bi Democrats generally supported the V bailout of Wall Street because they understood the logic of preventing collapses in the banking system.

At the coming election then independent voters will see few I-O compromises between the two parties and attempts to connect these different ideas into one consistent policy. Instead of being catered to this ignoring of centrist ideas will probably turn many of them off voting while the more polarized bases on both sides will keep the disconnect going and the destructive course continuing. Usually the situation is not so dire because disconnects like these don’t always cause so much damage, foreign policy wars for example end when people get tired of paying in blood and treasure for ideological point scoring and then a compromise in I-O is reached.

As the ideologies of Iv-B and V-Bi continue to cause more problems from alternating contradictory advice the economy will usually recover, allowing both sides to declare victory as mixtures of all ideas were tried somewhere. This is like doctors taking credit in many cases for the I-O immune system healing most disease, medicine also develops a V-Bi and Iv-B disconnect in the absence of a strong I-O immune system and a strong I-O policing of drug trials. For example while the quality has food has been shown over and over to be most significant in the prevention of heart disease and cancer few doctors do much more than prescribe medications.

With I-O policing this might be considered malpractice, medical trials show effective treatments based on nutrition but the system is mainly based on money from drug sales finding the search for more drugs because generic drugs and foods don’t make profits for the system. There are two main theories of medicine, the V-Bi approach that the body will return to normal from sickness if chaotic collapses such as heart attacks and fevers are treated just like an economy returning to normal after a recession. The other is the Iv-B approach that disease often grows quickly like a contagion causing a collapse, this is where vaccines and antibiotics are used to stop this exponential growth of an infection or fever just like a boom and bust in the economy.

However these two theories if disconnected from each other contradictory, treating the flu for example as a deviation from normal with cough medicine and headache relief is one approach. The same flu though might be described as a boom and bust of a fever growing rapidly worse that needs to be stopped like a wildfire with an antibiotic. In the first case nothing much is done except for relieving symptoms and in the second the growth of the problem has to be stopped and doing nothing might kill the patient. To work out which approach is best the I-O immune system has to be understood better, what germs it can fight off by itself and which ones it needs help with. In the same way the economy has its own immune system with the I-O police, to work out what treatment is needed I-O needs to be checked for what it needs and what it can do.

Instead what happens in economics is the V-Bi approach of an economic disease that will fix itself with a few palliative measures such as a Keynesian stimulus. Otherwise bubbles are presumed to be like a dangerous contagion that needs to be stopped early to prevent more dangers later. However the V-Bi approach tends to assume the I-O police can handle the situation but in the GFC it was shown they sometimes cannot. Bubbles also do some good in the economy just like someone might become healthier overall by catching childhood diseases and not growing up in an antiseptic environment.

Both these approaches then tend to ignore the crucial role of what the immune system needs in favor of a theory, in its extreme form V-Bi becomes a placebo based system where the patient might get better just from being reassured by a doctor. In the same way an economy might improve just from people being reassured by economic experts. This follows from using the normal curve in statistics, many drugs are approved for sale even though their performance over placebo is slight. The trials of these drugs might be short term, have few participants, the drug companies might only submit the trials that suit their drug, and so on. This is like in economics where statistics are looked for to confirm a V-Bi theory of doing little, for example as of 2012 most of the debate in economics is about relatively minor adjustments to the money supply. However placebos often don’t work when the I-O immune system is weakened or the contagion is strong, this system of medicine then can make people’s health even worse by giving them medicines with few benefits, hidden side effects, and relying on their own ability to heal regardless.

In its extreme form Iv-B medicine assumes a chaotic foundation to even minor problems, here surgery might be performed on heart patients to clear out cholesterol and use stents rather than prescribing foods which would often prevent the cholesterol accumulating or make it dissolve. In effect then the situation is reversed where a chaotic situation of growing cholesterol deposits must be stopped rather than providing good food and allowing the body to return to V-Bi normal by itself. This can be because surgery is highly profitable so more invasive medical tests and surgery try to prevent the exponential growth of problems that might dissipate randomly by themselves. More recently for example many of these heart problems have been found to be associated with C reactive protein indicating chronic inflammation to be the problem. The I-O immune system then is having trouble and this is regarded as needing placebos for profit or stopping the growth of a problem rather than treating the underlying but less profitable problem of why the immune system is faltering.

As long as bubbles remain fairly honest they represent bad guesses about the development of technology and prices, since the future must be unknown to a large degree there is no real way to prevent misallocation of resources in bubbles except to prevent them and create economic stagnation.

The GFC then happened in large part because of a weakened I-O policing of the financial system, partly because of neglect and deregulation assuming that placebo reassurances will suffice until the economy heals. The other part is where the I-O police were simply overwhelmed by a new form of financial contagion with derivatives and subprime loans, instead of examining what help they needed and to control this economic fever it was ignored until it nearly killed the patient.

Before germs and the role of the I-O were discovered medicine in some areas believed that hysteria and negative emotions were to blame, much like the Keynesian idea of low animal spirits causing an economic depression.

Even today many studies on heart disease seem to show that high levels of stress might be just as dangerous for people as high cholesterol. Often then the V-Bi theory still works in medicine, that if the patient is kept happy and trusts the doctor then this will save many people’s lives. Changes in stress and emotions can also affect the strength of the immune system and affect the survival rates from many diseases including cancer. In the same way the emotional state of people in an economy can affect the strength of the I-O police, when people are angry and rioting for example the police might have more trouble maintaining control. When there is an Iv-B boom in real estate or the stock market the I-O police have trouble finding fraud just as the immune system has trouble finding germs when people are angry or hysterical.

Even as of 2012 the I-O police are still relatively weak because of a lack of funding and not having the experts available to understand the financial contagion still being cooked up by Wall Street, the seeds of the next crisis and the continued sickness of the current global economy can be traced to this. It is like someone with a chronic infection, or Chronic Fatigue Syndrome, these depressed animal spirits will continue until there is stronger I-O policing as happened in the Great Depression with Roosevelt and the New Deal.

Much of the problem comes from there being too much knowledge to absorb in these issues for one man to understand it all, it is then spread among many people and so mistakes and inconsistencies creep into the process. For example with the Iv branches in an economy these are usually ordered as specialists such as in medicine with different kinds of doctors at different levels of the tree. The higher up the specialists people go the more narrow the field these doctors study, they tend to lose the broad view of medicine until they get to the V team level where they can look at each other’s work more broadly in conferences. In the same way an Iv-B economy has many Iv agents and B workers with narrow views of the economy, they tend to not talk to each other about their knowledge except to use in deceptions for profit. This then leads to the economy stumbling through the dark much of the time until it falls off a cliff.

In economics and related professions Iv handle different aspects of economic chaos and so there is a lot of competition between them, there is also a lot of deceiving each other and so the tendency is for each to believe the others are truthful more than they really might be. This gives a degree of false confidence and also panic at times with some distrust of the V-Bi factions. In the same way B roots are in the same structure so there is a tendency to trust the other roots and their anecdotal evidence more even though all are deceiving each other to some degree as well.

This was the problem with R-B Marxism with a collection of anecdotes about greedy capitalists instead of random statistical studies which would often show benefits as well as pitfalls from free enterprise. Both Iv-B and V-Bi then tend to have beliefs about what is going on in this opaque economic climate, V-Bi has a more normal view and assumes that more information is transparent and open than it really is. Iv-B tends to assume more is hidden than it really is, this can give rise to a belief that there are more hidden opportunities as many though just prior to the GFC.

Opposing Iv-B then are the team colors of V-Bi who both share information more freely and have less specialization in their work, are more general in their viewpoints and tolerant of deviant team ideas. The nature of this structure breeds openness where roots and branches breed deception and secrecy just as both followed these tendencies in the lead up to the GFC and subprime crisis. Because V-Bi people are more allies than competitors they tend to not favor stories of conspiracies because they see people all acting openly like teams, to them there are no real conspiracies and so all conspiracy theories are wrong.

Of course this can be incorrect as the huge numbers of conspiracies and fraud in the GFC show. In both of these then the structure of the school, conference, etc determines the message and those uncomfortable in one color usually just end up moving to another rather than trying to compromise in I-O. This is not to disparage any color code however, as with the animal kingdom if all participants involved accepted this theory then most of the behavior would stay the same as each is logically pursuing their individual or team interests. It is just when all people do this the different color factions in Aperiomics interact together as described.

These things then become all bound together with roots and branches in Iv-B and in V-Bi there is a strong tendency to be a conformist or normal person among the team players. This extended to the management of regulators such as the SEC and also to quasi government organizations like Fannie and Freddie. They were Bi in that they had a lot of lobbyists mainly targeting Democrats supporting many of them with donations, this is like Bi unions in a Biv society affecting the government with donations from members and increasing their clout such to strengthen laws favoring unions. V does the same as they also act like a team which extends into the government, Goldman Sachs for example is particularly well known for having formers workers become government and employees.

This team spirit allowed both Bi and V to influence the government before and through the GFC to get insurance like bailouts because they could not get their money back they had loaned into the Iv-B subprime businesses. Fannie and Freddie saw the rise of subprime as a threat to their random Bi business of taking on quality loans and so they needed to overshadow these new companies to control them, also the Iv subprime lenders often appeared to them as Oy predators backed by V and sometimes Y Wall Street who saw Fannie and Freddie as something to feast on.

In that way they were like Ro buffalo defending themselves with their size and political clout from the US Democrats. The Republicans as mainly moderate Iv and sometimes Oy saw their role in attacking Fannie and Freddie or weakening them as a payback to their own voters and lobbyists. This then shaped the subprime bubble by Iv Republicans forcing Fannie and Freddie to make more risky loans, this is like Oy hyena trying to make Ro buffalo take risks and make mistakes. It also made the Republicans look better in trying to help more poor people buy homes.

Fannie and Freddie fought back against this Iv subprime industry but since they didn’t have the clout to contain it against the Republicans they had to join it more and more or lose their size and influence. This is like Ro buffaloes having to stay together and thus being forced into more dangerous areas like away from water or near cliffs. It is also like Bi parts of a tree needing to avoid being overshadowed and acquiescing in growing too fast to keep up with the Iv-B trees that however are innately unstable. Like the subprime industry such as Merrill Lynch in the later stages of the bubble Fannie and Freddie were ultimately undone by the large numbers of their own and other bonds they held thinking that these represented high yields and low risk.

## When they lost value after hitting chaotic tipping points of foreclosures and defaults creating unemployment and more defaults in a vicious feedback Fannie and Freddie ended up having to be bailed out and with their scarce resources they ended up being more efficient as Roy companies and so were effectively nationalized.

The disconnect then caused more money to be lost in the GFC, V-Bi aimed for bailouts because they believed that insurance was the best cure for chaos but because so many members of their teams were corrupt this was wasteful in adding to the public debt and rewarding bad behavior. In this sense it was moral hazard in that for example Goldman Sachs got bailed out much more with its connections than perhaps other more ethical companies at the time.

## Iv-B pursued a different course because insurance is no good in chaotic businesses except to try and game the system, even Credit Default Swaps were not really insurance but mainly another way to speculate more in a Negative Sum Game on collapses in companies and bonds.

The Iv-B traders often gave deceptive interpretations of the crisis for their own profit, saying that it would resolve itself shortly. This was not the same as V-Bi saying this because they believed philosophically that it was just an abnormal deviation from normalized economic conditions. Instead Iv-B said this to be deceptive, by creating bear traps as investors were reassured they could be sold to and get themselves out of toxic waste bonds, then when they panicked again they could short the market and profit both ways out of the deception and subsequent suspicion. Both of these kinds of government announcements and pundit deceptions were in place of a strong I-O policing which should have made it illegal or at least dangerous to be deceiving the public with Iv-B self-serving financial advice or reassuring them as V-Bi under false pretenses.

This is another example of how Iv-B and V-Bi alternating advice causes economic damage when the I-O police are weak. For example if stocks are collapsing V-Bi economists might use placebo like announcements to encourage people to keep investing which can help the economy to return to normal more quickly. This then is like a doctor giving someone with the flu antibiotics to reassure them even though they have no effect against viruses. The doctor’s reputation is enhanced, people also might get better more quickly because less stress causes the immune system to strengthen. However Iv-B traders who want to get out of the market before it collapses further will also say the same thing, it is like when in a burning theatre telling other people it is safe can help you get out quicker. In the same way V-Bi people in the burning theatre saying things are ok can help people to get out in a more orderly manner and save lives. This then is good advice from Iv-B and V-Bi advisors when the crisis is not serious.

When the crisis is extremely serious Iv-B and V-Bi advisors also have little trouble agreeing, for example in a burning theatre it is obvious that telling people to stay and that the situation will return to normal is dangerous. The Iv-B people might deceptively try to suggest things are ok but more usually they will just be trying to get out quickly as well. So both give the same advice to get out, just like with the stock market both would give the same advice in a serious crash like the GFC.

The problem is where the situation is more ambiguous, for example where the fire in the theatre is borderline between being obviously serious and obviously safe. In that case only the I-O police can give advice that saves more lives. For example Iv-B and V-Bi advisors saying that things are ok will cause more deaths than the I-O police investigating the fire and making people leave in an orderly manner. In the same way Iv-B and V-Bi advisors telling people the fire is very dangerous can cause a panic where people are trampled to death in the absence of I-O police. In the same way the Iv-B and V-Bi advisors in economics get the rough details right as they alternate between each other which is why this system is used at all.

## However alternating advisors fail to deliver the same accuracy as the I-O police and regulators would do, they prevent placebo like or deceptive announcements that things are ok from hurting people. They also prevent panic from causing more economic damage than an orderly deleveraging of some parts of the financial sector.

If there is a legitimate economic crisis then the public have a right to know what is happening though some Iv-B business still has a right to privacy. For example even when criminals threaten a community we usually accept they have the right to privacy between them and their lawyers, also that they have the right to not incriminate themselves so torture is not allowed. To get this balance between public and private information right in a crisis then the I-O police and courts are needed because alternating Iv-B and V-Bi advisors tend to get this wrong. Investors then want to know how to best to save their money instead of being sacrificial lambs to save the banks, how to fix the problem which might mean more policing of fraud, and how to make the economy regrow again.

This is like with people trying to escape a burning theatre where those more worthy might try to place themselves at the front of the queue, people for example might be questioned or even tortured to see if they are criminals so as exclude them from the queue. In such a situation then the I-O police are the best ones to administer this kind of justice, in the GFC there were many accusations as to which companies were worthy of bailouts and which executives should not receive bonuses because they helped to cause the crisis. The V-Bi approach to this might be that deviates should not be bailed out and the V team of management should receive most of the bailout money.

Bi communities might paint themselves and being more deserving of Keynesian stimulus funds, B areas might receive some urban renewal funding but only to push out B secretive and deceptive people so they become safe for more normal Bi people. While these ideas might help the economy to some degree they would not work if an insurance company was run this way, instead they would examine compensation claims for fraud and deception to make sure that crime was not rewarded and to avoid moral hazard problems. So V-Bi advisors in the GFC were essentially picking winners by helping those most normal and conventional even when many of them were criminals who helped to cause the crisis in the first place. This is one reason there have been few prosecutions among V management for subprime fraud and among Bi communities for using liar loans. They are like the V-Bi people in the burning theatre where picking the middle of the teams would allow many criminals to get out first ahead of honest people.

The Iv-B advisors also tended to get the bailout issue wrong because being deceptive they would be trying to get bailout money under false pretenses instead of representing themselves as pillars of the community that needed to be saved. Companies then that were highly competitive were often bailed out because they were supposed to have more chance of being profitable and they would prop up the economy. This is like making the queue of exiting the burning theatre a meritocracy where the smartest or most devious get to the head of the line, the problem is often these abilities are causing problems in society rather than helping to fix them. For example much of the financial contagion that lead to the GFC was caused by deceptive subprime mortgages and yet their deceptions in asking for bailouts were not carefully examined because of the urgent nature of the crisis.

## So those that caused the contagion were often bailed out creating more contagion while more honest businesses were left to collapse.

Those first out of the crisis had either shorted the market early as in the case of John Paulsen, Magnetar, and Michael Burry of Scimitar Capital or were now in an Iv-B panic to get out of the burning theatre and somehow exploit the others still inside. This is then like Iv-B people getting out of the theatre before the I-O police realize what is going on, when there is an alternation of Iv-B and V-Bi advisors there is no real mechanism to vet whether these investors should have warned the market with what they knew. The situation then is like when a fire starts in a theatre whether some people can legally sneak out early rather than alert the other people to the fire and risk being trampled in getting out.

Such an issue is difficult to resolve, in some cases getting out of the theatre and shorting shares in it might be illegal while running out quickly while shouting out some warnings might not be illegal. This is an important point because while whistleblowers help to stop many crises before they become dangerous they also need to have some legal liability if they do not come forward. The problem though comes from weak I-O policing, the GFC then happened in part because it was not illegal to use information about the impending collapse for profit instead of warning people. However in this part of the color cycle the I-O police were weak in so many areas that if they had been able to be strong in this area they would have prevented the GFC in many other areas anyway.

So one of the deceptions used in the lead up to the GFC was to reassure the other investors still at risk or at least not warn them until they could be shorted more effectively or until those who reached safety could get as many of their assets sold off at high prices as possible. This was the situation with Goldman Sachs to some degree as they saw early there would be a market crash and were in the process of selling off and collecting all they could, they however like any other player saw no responsibility to inform the government or I-O regulators that they thought the market would crash. They might have divulged some of these fears in newsletters but at this stage the weak I-O police would not have been reading them.

This is an inevitable part of weak I-O policing as they are the only ones who will actually watch for a crisis and do something good about it, other will ignore it or exploit it. The opaqueness of the market had to be used by Iv-B to their advantage because they created this opaqueness like in a game of poker to make the market more competitive, there was no warning for example from B workers that they were preparing to walk away from their homes often before having made a single payment.

In effect complaining about the opacity of the market is like complaining that some cards are hidden in a game of poker.

In the same way Iv agents needed to keep the situation opaque by obfuscation, whoever pointed out in effect a safe way out of the burning theatre would often just get trampled and not get out themselves. In the same way each agent tended to either deceive the others or keep their accurate information to themselves whenever this was legal or even whenever illegality was not enforced , this is like Oy hyenas hunting R gazelles on a moonless night. If the Oy hyenas alert others to the R prey then they will just get beaten to them, they are better off using the night as cover and hunt silently or trying to misdirect others to the wrong areas.

At the same time V-Bi also saw an interest in keeping the situation opaque, because they worked as teams they supported each other in this darkness and this to a large degree compensated for the opacity as they trusted each other. This is like Ro buffalo at night that protect themselves by coming even closer together and being able to lash out at anything outside the herd that comes too close. Y predators do the same, they stay close together so if one finds prey the others can take advantage of the noise created so this opacity does not hurt them much.

The V-Bi banks then were busy using their political influence to get bailouts rather than trying to make the market more transparent, Bear Sterns and Lehman were allowed to fail without any demands from V-Bi banks or investors for more transparency except when they examined the books for their own buyout offers. In the GFC V companies such as Morgan Stanley, Bank of America, and Goldman Sachs bought up the others collapsing from chaos so they had little to gain from more transparency in this process. For example Bank of America bought Merrill lynch under government support and patronage while Morgan Stanley bough Bear Sterns, they did this with V-Bi government guarantees to protect themselves from nasty surprises from these takeovers .

They then saw this crisis as a good time for Y predatory buying of distressed assets while shorting other parts of the market because like with falling trees in a forest those who took most advantage would be most likely to dominate the V canopy and overshadow the competition in the recovery. In the GFC then for many V companies they were looking at what happens in the recovery and who will have a monopolistic control of the canopy from buying out companies that threaten them when they are weak. This is like in a drought where Y lions might try to attack any weaker predators before they get a chance to recover, later then they will be more secure as alpha predators at the top of the food chain.

## This is seen for example in the increased domination by fewer and larger banks in the US after the crisis because they were part of the government supported V team rather than their being forced to collapse and liquidate like with Bear Sterns and Lehman.

This then shows the Iv-B and V-Bi disconnect continuing to tear the economy apart, some inefficient and dishonest V businesses were bailed out while many honest V and Iv businesses were collapsing even though they only needed a relatively small amount of liquidity to survive. By members of the V team exploiting their connections the severity of the subsequent recession was increased, in effect the V-Bi bailouts are where they use the government to get their savings back that were wasted by Iv-B businesses in the boom. The idea may be that policies favoring V-Bi for a while might restore these savings and reserves, however they cannot easily be gotten back from Iv-B without massive deleveraging and more collapses such as have been seen since the GFC in Europe and the US.

The opacity in the economy was good for them in many ways, like how players prefer some cards to be hidden in poker. However as in poker often this opacity can work against some people, for example players might wish they could see their opponent’s cards at times. In the same way the Iv-B businesses in the opaque economy they helped create might find themselves at a disadvantage in tricking each other and this would weaken them even more, Y lions then for example might see lone Oy hyenas as a target for predation because their Y team can communicate with each other more easily.

In V then companies that work together as a team can get together in an opaque economy and cooperate while the Iv-B businesses can become the targets. Ro buffalo might see R gazelles as more at risk and so have little interest in helping them, in the same way Bi businesses like Fannie and Freddie were concentrating on saving themselves with bailouts rather than trying to help out the B borrowers who often needed small amounts of money or reductions in payments to weather the chaos. Bi Fannie and Freddie were not interested in helping those outside of their own team, those who borrowed from Iv subprime companies and Iv would certainly rip them off more in the situation if they could. B people in the economy then might fall chaotically the most as they have little Bi community support, are trapped in a web of their own liar loans and black market jobs, and they cannot easily come together as a group to petition the government for help.

The Ro-R people in society were in effect thrown to the Y-Oy wolves because I-O regulators were not strong enough to have protected them in the lead up to the crisis and were even less protected after the GFC because the I-O police were swamped with the extra work. This is like the O police in a recession having their work hours cut while crime increases as people are less able to afford to defend themselves and start stealing more to survive. The I-O police in a burning theatre are the ones who restore order, open new exits, fight the fire, and keep people calm, and none of this was being done by the I-O financial regulators who now had so much more to do and investigate with alarms sounding all over the economy. In a crisis they are the ones who go looking for the hidden injured people such as those buried in an earthquake, in an economic crisis the squeaky wheel might get the oil and so many Iv-B businesses and home owners who could not make themselves heard are allowed to collapse in the V-Bi stagnation after a crisis.

In some ways the GFC increased the disconnect of the I-O police to the situation because they were being blamed for the problem even though it occurred because of their weakness. Consequently they were trusted even less and so they were not turned to early in the crisis to root out fraud early and in effect help investors out of the financial burning theatre. This is like police in a recession facing a crime wave and financial cutbacks looking incompetent, Ro communities then start protecting themselves against Oy crooks by becoming vigilantes which further widens the disconnect between them and the I-O police.

Y gangs look for R people to rob in the absence of strong O policing, also R people sometimes sense the distrust from the Ro community and try to protect themselves rather than go to the police. This is like the situation in a Roy ghetto where the Ro community distrusts the police for Oy bias or not being there when they are needed so they perpetuate the Oy-R and Y-Ro disconnect as vigilantes, R people hide in this situation as their safest option while Y criminals looking to rob them fight more with Ro gangs and organizations such as neighborhood watch.

This then is like a civil war or in a failed state such as the Sudan, the same occurred in the financial sector with weak I-O policing in the increasing financial crime wave as people looked for any way to profit from the crash by shorting or deceiving others to get their money out causing an even greater crash. In effect it is like people fighting over lifeboats and sinking some of them instead of cooperating with each other. The Bi community such as pension funds were then highly suspicious of Iv agents trying to sell stocks and bonds in this situation and saw the I-O police not protecting them, they then shut Iv agents from getting any more capital instead of going bargain hunting which usually gets capital into the market, this caused even more chaotic collapses and more Bi funds to wait for the bottom before buying in. If the Bi companies have thought they could trust some Iv agents vetted by I-O police such as the SEC in the situation then they could have supplied liquidity to prevent many collapses.

## If Y investors had been able to trust the situation they too could have invested more in stopping the crash and they had in previous recessions but the opacity and danger made both V and Bi stay out of it in effect until the morning after when more transparency would prevail.

As the crisis began to get under control there were still many aftershocks as well as domino like tipping points that started collapsing world trade as well as overseas economies. In this situation the Iv-B and V-Bi disconnect in other economies also made all the wrong policies get tried instead of restoring confidence with policing. For example in a riot, natural disaster, fire, etc the best way to restore calm, prevent looting and crime, help people in immediate need, etc is through strong policing. There are virtually no good examples of situations like this that fixed themselves without these police, Ro vigilantes often overreact and kill innocent people and Oy criminals see this as their big chance for profits to tide them over in the hard times following the crisis.

The V-Bi factions then saw the situation normalizing and though this indicated a short and sharp recession which needed little stimulus, this was the wrong thing for a chaotic crash because many companies teetering on the brink could have been saved with relatively small amounts of money like I-O police stopping people from starving in a natural disaster with small amounts of food and water. The Iv-B businesses like the Austrian economists also thought this noninterference was best because they believed that the Iv-B process which had been going on for the previous decade of fast collapses and regrowth would continue if there was no interference to this process. This then turned into the disconnected policy of bailing out those V-Bi with the most influence whether honest or not and this helped the Y-V criminal elements who caused much of the V-B and Y-R problems in the first place.

Also because many Y-V companies were less honest they had fewer scruples in making profits from the situation and those that baulked at this were overshadowed or run out of business by those that were. V Goldman Sachs and Morgan Stanley among others then used the carnage to ruthlessly profit but if they had not done this then others would have and knocked them from their perch so it was not their fault. The real fault was the lack of I-O policing that would reward honest behavior of which both were capable of, this would also be the best way to regrow the economy and make them profits in the long run. At the same time the complaints about these V-Bi bailouts as favoritism were used as excuses by the US government and later others to cut this money off from those who could have saved themselves from imminent tipping points with modest amounts of money.

This satisfied the Iv-B economists to some degree who thought their ideas were being followed instead of the money being reserved for V-Bi cronies, they believed that the collapses would quickly turn to growth The result was however to bail out many inefficient and dishonest businesses while letting many honest businesses collapse in the chaos or be unable to compete with more dishonest ones profiting from preying on them. This happens to some degree in a collapse with a corrupt Y dictatorship, the government reserves its help for its Y cronies and those on the fringe end up collapsing and being taken over by those closer to the dictator. This is in effect like Y cannibalism where a tribe when they ran out of food might save the last of it for themselves and then eat those too weak to resist the dog eat dog situation.

## This process then kept the US economy in free fall and then a slower descent, it then in effect hit the floor like a tipping vase with the worst destruction occurring. Little could have been done though because as with the I-O police in a crime wave it would have been nearly impossible for them to have handled the situation even if they had been trusted.

The Iv-B and V-Bi disconnect led to policies that spread the chaos in the worst way to overseas economies and to damage international trade, instead of propping up companies properly to allow them to ride out the crisis they were given just enough help to waste the money as they collapsed. Again this is not surprising because this same disconnect along with uncertainty about the future caused the GFC in the first place, this disconnect then was just continuing to run its course as there are no self-correcting mechanisms in it. Many thought the market was innately self-correcting and so such a crisis could not occur. This is true but these self-correction mechanisms are all in I and O because they are the only neutral colors and thus the only ones that all the other colors trust to do the job fairly.

In a crisis then all the colors are pursuing their own interests and this usually involves each color profiting from some of the others, this causes more danger and inefficiencies such as in a crime wave without I-O police. To say the market should be self-correcting is then to say that societies should be able to stay crime free and prosperous without police, but this has never been shown to be possible though it has been tried many times. This also is not surprising, a color tends to distrust other color groups for having a different agenda and so these color groups often want to have a system that doesn’t need them.

R communism tried to do this by creating the perfect citizens often by killing or sending to Gulags or killing fields anyone suspected of being Y-Oy predatory. Because R and Y, B and V are furthest away from O and I they feel the most desire to run a Utopian society without needing police but just relying on the nature of their people. R was the left wing communist Utopia but Y Fascism and the like are the right wing version where the problems in society are considered to be from R contagion such as the disabled, gays, some minority races, etc and given heavy prison sentences or even killed to cleanse the society so a Utopia might work. In B and V this impossible goal is also tried, a B society was seen as the ultimate goal by Marx and many Utopian ideas such as with Pol Pot in Cambodia are based on an agrarian society.

This is like the libertarian Utopias that some such as Ron Paul espouse and also like honest farmers and cattle ranchers in the US escaping persecution often because of their religious beliefs such as Mormons and Puritans and settling in remote parts of the country to create their own Utopian society with some successes. The best example of a V Utopia may be from Ayn Rand in Atlas Shrugged where the V most talented in society get tired of Ro collectivist interfering in their businesses and move away from them.

She saw this battle against Ro interference as being like the Ro communists in her Russian homeland which was where her antipathy to collectivism came from. However in many ways John Galt was bringing them to a similar kind of V collectivism to the one they were escaping. V people also think of themselves as more talented and often chafe at I-O policing, in the book the bureaucracy were interfering with how bridges should be built to prevent chaotic collapse. The idea was then to move to a separate area and let civilization collapse without them.

These four Utopian ideas are not a complete analysis of the concept of forming a perfect society, this would take a full book all by itself. However it is intended to show that the four colors of Y, R, V, and B are more separated from the reach of the I-O police in society and tend to form their own ideas of looking after themselves without them. Sometimes this can work for a while, the problem is usually that the other colors end up either joining these Utopian societies or they find it harder to expel or kill off the other colors. For example R communism as it moderated its opposition to Y-V predatory capitalists and imperialists started to act this way itself in some areas, it allowed more predatory crime to flourish until this in effect broke the Soviet Union apart with a massive grab of resources by the Y mafia and V oligarchs. The Soviet Union had relied on R Marxist ideas instead of forming a neutral and fair police so it was easy for many to exploit this lawlessness and lack of justice when it collapsed.

Authoritarian systems also try to be Utopian, for example Adolf Hitler tried to create an ideal Aryan society based on expelling and killing members of Society he considered to be a contagion. Most other fascist like political parties in Europe though the same way at the time, in effect the R communist movement and the Y Authoritarian parties each had a plan of creating a Utopia by expelling or eliminating the other so war was inevitable with the absence of neutral I-O policing between them.

Many capitalists in Biv economies believe in an Ayn Rand like form of laissez fair economics which is like where V businesses can do what they like, this usually becomes highly predatory and the Bi-B colors end up getting the financial equivalent of Hitler’s policies. They then become systematically excluded from V-Iv societies and like sheep instead of being eliminated they are in effect shorn of resources periodically. B often has a left wing Utopia in mind where they consider the excesses of V capitalism to be responsible for the world’s ills and where higher taxes and expropriation of their assets to give to the poor is needed.

These Utopian ideas then are often behind weak I-O policing as they continually try to create their ideal societies by purging and removing the other colors from them, these systems then have little se for neutral I-O police who would prevent much of this cleansing. In some ways the GFC was an Ayn Rand Utopia that failed, Alan Greenspan kept reducing I-O policing and regulations wherever he could and refused to reinstate them even as the chaos and fraud grew exponentially. At the same time though there was a B Utopian vision being pursued of poor people getting their own homes and this only seemed to be prevented by I-O regulations in the finance industry. These two Utopian ideas then seemed to work together as they tend to do in Biv because of the abundance of resources, the reduction in regulations seemed to be giving B their Utopia of getting out of poverty, at the same time Y seemed to be getting their own Utopia with rising wealth inequality favoring them as deregulation increased, it seemed they could innovate more as with derivatives and subprime while being free of bureaucratic meddling in how they wanted to do it.

Both Utopias collapsed around the same time because each could not survive on their own, the problem was each system used up Gb resources inefficiently until the economy became Roy in many areas. This is how Utopias usually end up, the systems break down as Roy poverty causes people to give up on their ideas. The response then is often war to get resources from the opposing Utopia or balanced society rather than admitting failure, Hitler then looked for more resources to the East while Russia looked to extend its R revolution to the West amidst famines caused by its system. The V Utopia ended up being sustained by the Japanese carry trade and reselling cheap imports from overseas economies to Americans thrown out of work by those same imports. At the same time B was creating its own prosperity by lying on loan applications until investors thought their communities were booming.

The GFC then may spur the seeking of two old Utopian ideas in Roy from the resulting scarcity of resources, Y Fascism and R Communism may replace their V and B overtones as these colors look to war to restore their Utopias and stave off the resurgence of the I-O police. Marx has been quoted more favorably by economists since the crash as having been vindicated, many communist countries have seen their economies collapse and many would know their Marxism well enough to see this the GFC as the demise of capitalism just as Stalin thought was occurring after World War One and then with the Great Depression.

Many of the poor would have been better off under communism with more welfare and guaranteed jobs, in Russia for example the rise of the V oligarchs has caused in many cases rising wealth inequality that would have been better distributed under communism even if there was less overall wealth. The rise of Y Utopian Authoritarian ideas should also increase with militias in the US as well as in Greece as if led by their equivalent of John Galt, for example if the US pulled out of other countries and spent their money at home instead then they already argue most of their problems would be solved.

These Y authoritarians in Greece will increasingly argue for leaving the Eurozone and other Y parties such as in Hungary will promote their Nationalist Utopian ideas. This process then is from weak I-O policing being even more discredited for failing to solve problems while being underfunded and disrespected, as more R, Y, B, and V colors see these police as ineffectual they will promote their own solutions in their place. At the end of this process though the I-O police will rise again bringing stability and a reduction in the alternating advice causing these economic problems.

If the GFC continues into an open ended stagnation and depression then World War Two Nazism as well as Communism may be seen as failed experiments that would have worked except for bad luck in the war or a conspiracy from overseas countries in undermining them. In this way an increasing Roy global economy can create more R and Y Utopian desires just as Biv creates B and V Utopian dreams, but all must fail because they undermine the other colors and I-O policing. While some seek these four Utopias others by nature are more mixed in their colors and see the value in I-O neutrality and societies where all colors are treated fairly, this then usually sets the stage for more extreme countries getting involved in wars and ideological arguments while others are more neutral and conciliatory. In this way then the balance of the colors is restored as the Utopias rise and then fall only to rise again.

Philosophically crashes like the GFC and the Great Depression present a problem in economics, if they are not predicted by the world’s experts then that implies that either they are wrong or these crises might be completely unpredictable like an NP complete problem or nearly so like modeling the weather. Because these economic theories become disconnected as Iv-B and V-Bi however they each seem to be correct, the only solution then is to either blame their rivals for causing the problem or say the problems are impossible to model.

Nassim Taleb seems to have a similar view to this, he describes a kind of chaos called black swans but offers no way to model when they will happen except to say they will occur in fat tails more often that the V-Bi normal curve predicts. If these crashes are presumed to be unpredictable then it seems to give experts on V-Bi randomness an excuse to not look out for them or explain them just as for example they might not try to predict hurricanes exactly.

## The normal curve seems to show these crises are rare, they can even calculate how many standard deviations they are from a normal economy and this leads to the placebo solution of confidence fairy where the economy will fix itself on its own while they take credit like the doctor with his sugar pills for micromanaging inconsequential aspects of the crisis.

However if these crashes are chaotic then we can model chaos, there is a large body of mathematics involved in doing this already. In Aperiomics the problem is somewhere between these two extremes, crises are not completely unpredictable because they often arise from policy decisions caused by the disconnects between Iv-B and V-Bi advisors in the absence of strong I-O policing. However the problem is not that chaos cannot be mathematically described but that it only becomes a problem when it is developing secretively and with deception. In that case then it doesn’t matter if it can be mathematically described, if it cannot be detected or if the data on it is deceptively wrong then having the right equations will not help.

It is like in poker where analyzing the bluffs the players make might be useless without knowing what cards they really held. In the same way the markets that Taleb describes do not fit the normal curve nor do they fit chaos theory exactly because not only are traders secretive and deceptive but they also change tactics when any algorithm predicts their actions too closely. This explains to a large degree why economic theories from Adam Smith, Keynes, Friedman, etc work for a while and then fail, people work out a way to exploit them and this renders the theories ineffective or dangerous.

This is like the Roy animal kingdom and the Biv plant kingdom where all life forms are constantly changing to survive, those that conform to a predictable system often get beaten by those that are more adaptable. As Darwin said, adapt or die also applies to economics.

The market might also become more unpredictable as it gets taken over by AI and computer algorithms. These programs can trade faster and analyze quicker than humans can do, the result is likely to be a steady amount of losses from human investors to computers. This is like for example having a computer program playing poker, as they improve the program will take more and more money from the human players until they either want to eject the poker program from the game or stop playing. In the same way these AI securities traders may be creating losses for more human investors and making them leave the markets, over time this might even lead to share prices coming down from a lack of new money coming in. Without human investors making common sense decisions the market might become like chess programs playing each other, often the games can be incomprehensible to people.

This kind of market might then become more mysterious to media pundits as well as investors, this as well as their losses could spook them into staying on the sidelines until the market becomes understandable again. However as AI improves the market like the chess games will become even more inscrutable making more people stay away from it. This can then affect the recovery after the GFC and also make it more difficult for companies to raise money in new share offerings, for example the Facebook IPO scared away many future investors from the tech sector instead of leading the way to a new tech bubble. This may have been because AI like programs determined too high a price initially and then short trading made the aftermath disheartening for similar investments.

If so then this market chaos might be only a harbinger for future economic conditions as AI programs control more buying and selling of other goods and services, for example when companies start ordering supplies based on AI predictions then these could become very chaotic the more AI programs are involved just like a stock market. If the programs all decided to reduce stock in car parts for example with a car manufacturer based on an estimate of a falling market for cars this could cause other car manufacturers to do the same and create car shortages and price changes that scare off buyers.

Rising food prices led in large part to the Arab Spring, this could then be an example of AI program manipulating the food prices for profits and causing starvation in some economies. As AI becomes more pervasive this could then create even more fear and uncertainty in the economy, media pundits and blog writers might be replaced by computer programs that write articles to save money. Over time they will start doing more editorials and creating more opinions to drive circulation, these stories then might create panic and uncertainty increasing sales but at the expense of making it harder to understand the world’s current events.

## Computer programs are more Iv-B based as they use cause and effect programming to operate, this would result in V-Bi advisors becoming increasingly human while the Iv-B advisors rely on programs they understand less and less which is similar to Iv-B secrecy and deception.

The Iv-B and V-Bi disconnect often seems to have the cause and effect of an economic crisis reversed, the advisors seem to be in the grip of events where their options are limited and these decisions lead in turn to other problems. So instead of their making decisions to influence events the events seem to be always pushing them to specific decisions, these events are also increasingly being determined by machines and AI. This can be like chaos where events fall on other events like dominoes hitting each other, trying to work through this situation with Iv-B ideas in a crisis then ends up knocking down more companies and banks. When the V-Bi advisors take over they make things worse by ignoring these falling dominoes by assuming things will return to normal by themselves, both then cause more chaos because they are letting the contagion grow without using the I-O police like food inspectors to find the contagion and eliminate it. As of 2012 this is being seen in Europe where bailouts seem to be part of a slow motion train wreck where V-Bi economists believe it will all return to normal with enough stimulus and by invoking the confidence fair. The Iv-B economists are either pessimistic and blaming the Keynesians or saying the collapses need to happen to purse the system. Neither side is pushing to reduce the corruption that caused the GFC in the first place.

It is only necessary to describe this chaos when it is out of control, the idea is to prevent that happening or to tame the chaos when discovered which is a different mathematical problem. A hurricane cannot be easily affected by human intervention so much of its formation and path is a mathematical problem. It is however more difficult to model the spread of a disease if people are actively hiding it, whenever for example doctors start closing in on the carriers of this disease they just modify their behavior until the equations they used to describe its spread no longer work.

## In the same way it is not necessary to model the chaos in the economy exactly as many try to do, it is enough to use the I-O police to corner the secretive and deceptive ones causing too much of it.

For example cracks in airplane wings can be a kind of chaos caused by metal fatigue, the real problem however is how to create inspections that minimize the chances of these cracks going undetected as well as using materials of the kind and thickness so cracks are minimized. All these things come down to the kinds of inspections and how invasive they need to be, for example if parts need to be regularly X rayed and how much this will cost. The same occurs with bridge building, the main problem is not to model the chaos of a bridge collapsing but to work out how much extra material and inspections are needed to make this collapse very unlikely.

In the same way the I-O police in society keep chaos from causing too much damage but they should not try and eliminate it completely because it also causes an economy to grow. When chaos is eliminated then an economy becomes stagnant, the often paranoid fears of collapses in the opaque aftermath of the GFC often prevent growth an recovery. Such a situation would never happen with designing aircraft wings and bridges, instead they use enough materials and inspections to resolve the problem.

Interestingly Ayn Rand used this bridge building problem to illustrate the interference of the Bi collectivists in allowing a very thin bridge to be built. She referred to the I-O police then as an obstacle to Iv innovation in building better bridges when the desire was to make sure the bridge did not fall down and kill people. In the same way the boom prior to the GFC was a giant experiment in deregulation allowing ever thinner financial bridges of derivatives to connect the economy together without interference. The result instead of what Dagny Taggart wanted was collapsed financial bridges and the GFC. This doesn’t mean that Aperiomics is against innovations using fragile financial instruments rather than excessive bank reserves to protect against economic crises.

Rather the point is that the I-O police also have their mathematical reasons for existence and cannot be left out of economics without disaster happening sooner or later. In fact Ayn Rand foresaw the Achilles Heel of the communist Bi-Ro collectivist system, that too much transparency and friction from this system would stifle innovation like her bridge and create economic stagnation. This was arguably a major cause in why the Soviet Union later collapsed, however many innovative but poorly designed bridges have also collapsed since Atlas Shrugged was written.

Often this monitoring and protection from chaos develops from trial and error because the complexity of the problem may rival the world’s largest supercomputers, for example parts that failed in the past are now made more strongly or are more closely watched on planes. Many traffic accidents from chaotic crashes are prevented by slowing traffic down, clearer signs, more traffic lights, better car designs, and more I-O policing with higher fines for dangerous driving and flouting these traffic rules In 2011 possibly dangerous cracks appeared in engines used by Qantas made by Rolls Royce so the problem has not been solved in aircraft, we should not then expect that a vastly more complex economy with privacy issues and deceptive evasion of any laws predicting what some people do can ever be mathematically predictable to prevent recession.

However this is the same goal as Dagny Taggart’s bridge, the I-O police and the Bi collectivist communities are seen as irritants to scientific progress when they are really trying to balance overconfidence based on simplistic interpretations of complex issues.

However there is no real debate about whether inspections are needed to combat metal fatigue, in the same way there is no serious argument in engineering about chaos such as metal fatigue in any product sometimes requiring regular inspections. There is though a real debate in economics about inspections looking for economic problems that are analogous to cracks, for example the Fed and Greenspan didn’t even seem to realize the size of the shadow banking system except when before the GFC they tried to raise interest rates and they found that cheap money from the carry trade still kept the rates down. The process of collapse in the GFC seemed to be as much about discovering that some parts of the global economy were as opaque and unregulated as much as banks were in the Great Depression. It doesn’t seem surprising that speculation made the shadow banking system fragile because it seemed to follow the same path of bank runs that happened in the Great Depression, the problem was that the I-O regulators either did not even seem to know that the shadow banking system was so big or that it was vulnerable to the same kinds of bank runs that caused the collapse of the banking system in the Great Depression.

This can be looked at in several ways that all are serious, the first being that the system was so corrupt from weak I-O policing that the sheer amount of fraud meant it had to collapse. The second is the lack of inspections for cracks in the financial system like in airplane wings and bridges meant that sooner or later a big enough collapse would cause panic. The third is that the various economic theories in effect have tried to mode potential problems so accurately that like with airplane wings they believed that simple safety checks were no longer necessary. However even in the most sophisticated areas of chaos mathematics such as predicting the weather no one would suggest doing away with actual observations of what is going on, more measuring stations for temperature and air pressure, etc.

## In the same way the idea of not checking on chaos in the economy appears to be scientifically valid but it usually stems from corruption like an airline saving on inspections or taking chances on crashing to make more money.

So the GFC was more like cracks in airplanes from substandard parts or inspections that did not occur whether because of corruption, laziness, or no one believed they were necessary. Metal fatigue though is not less likely to happen because it hasn’t happened for a while because metal tends to wear out eventually and develops cracks, the financial system is the same and because it has not crashed in a long time perhaps just means that parts are being flexed and developing cracks that are unseen. So it is a philosophical problem in that V-Bi economists such as Eugene Fama said the market was ultimately random which implies that chaos in it does not exist or at least not to a significant degree.

Most of the equations and computerization created by quants in the lead up to the GFC were also based on arbitrage, that random deviations from the norm should return to a normal price the same everywhere the security is traded. To say then that chaos is unpredictable and then to be ignored is as dangerous as to say it doesn’t really exist. Much of this though comes from its secretive and deceptive nature, for example in society it is common to think that hidden things such as spirits, psychic phenomena, conspiracy theories, etc do not exist because they are not easily found and studied. This is like saying that cockroaches and mice do not exist in restaurants because they are not usually in plain view, they hide to protect themselves which is why proactive food inspectors need to look for signs of them in places where people do not expect them to be.

Food inspectors can be bluffed like this in their job, for example a restaurant like an investment bank might look so imposing that it is almost an insult to look for Iv-B contagion in both places. However paradoxically these places are still highly likely to have Iv-B contagion precisely because it is unexpected. For example if people don’t like the look of a bank or its staff they will be taken in much less than by one that looks more professional, this is why random audits are necessary to overcome chaos.

Another aspect of the problem is that this chaos is tolerated and assumed to be somehow good for the economy which is true in a balanced I-O market where randomness and chaos create a kind of turbulence that discovers accurate prices as well as finding most dishonest schemes. People then get used to reading about companies that suddenly collapse and then are taken over, politicians might suddenly be exposed as crooks or of having an affair and resign, new scams develop and then are exposed and warned about, and so on. There is something then in this process where sudden exposure of large problems is not considered to be bad for the economy, indeed it is good to the extent that that the secret danger has been outed.

From this process then it seems to be wrong to complain about chaos just as it is with randomness, for example someone goes to a casino or buys shares and often they win or lose money randomly. This is part of nature and no one expects casinos to change and much of arbitrage is based on this randomness in the stock market. So since this chaos is often touted as creative destruction where the economy purges itself of problems and randomness is accepted in the markets then it is easy to think that the system is somehow operating well when both of these appear. This is not always true, sometimes there is too much chaos and one collapse in a business causes other businesses to collapse just as one part of that business like a loss making division probably caused the whole company to fail.

So the system can seem to be operating well with some collapses and then suddenly the GFC happens, it seems that something very new and different happened like a black swan. However there were in fact millions of small black swans in the system already that came together like cracks joining up or a contagion spreading.

For example small cracks occur in the economy all the time often in ways that are not collected in statistics. This is because chaos avoids being monitored anyway so if data is collected in an area it often stops like criminal activity when there are police patrols or R terrorist activity when there are Y military patrols. This is then like the well-known situation in war where an area is secured by a Y army only as long as they are there, when they leave the R enemy stops hiding and takes it over again. It is also like a contagion where food inspectors might look for cockroaches and their noise scares them away until the inspector is gone.

So they must look for signs the Iv-B contagion leaves behind such as cockroach droppings or in the military example by finding hidden weapons. Just as the Y military patrols are looking for hidden R terrorists with random searches and following up rumors and information from snitches the economy must be treated in the same way. Bankruptcies in an economy might show collapses from chaos though they can also occur like random bad luck such as the share price randomly going down or someone being extra unlucky at a casino.

The chaos though can be the harbinger of a larger problem, for example the GFC would have been a fractal like Iv-B chaos that grew in a self-similar way from smaller problems it resembled.

Personal bankruptcies might start happening from people losing their manufacturing jobs to overseas businesses, these chaotic collapses in personal finances can then reach into other areas and bankrupt the shops and then the wholesalers that used to service these people. To watch for growing Iv-B chaos then it would be good to look at personal bankruptcies to see which are from random bad luck, which from a chaotic tipping point, and which are a combination of both. From these a picture can be built up like with the cockroach droppings, many of the reasons these bankruptcies happened could be from chaos that is trying to hide its effects.

For example there might be loan sharks that charged too much interest that combines with subprime mortgages causing larger and similar cracks, a company might have laid off workers too suddenly but if they had had time to look for other work or sell their homes then much of the problem and waste of resources in a bankruptcy might have been avoided. This might lead to finding Iv-B dumping of goods from overseas companies or even from other businesses nearby causing these bankruptcies and then to more I-O policing of this or laws forbidding this dumping.

There could also be a kind of insurance paid for in taxes so this situation is considered as a disaster and so extra welfare is given to people to weather the storm, this might then like a financial health insurance save their homes, get them back into work and paying taxes faster and so even pay for itself while minimizing the damage to the economy. Statistics from these kinds of situations could be gotten from various kinds of Social Security which applies randomness to this chaos by giving money to prevent chaotic collapses in personal finances. Less money then might be needed by understanding more thoroughly where the chaos is coming from that causes more sudden collapses, with a smoother transition in a company bankruptcy most of the workers might get other jobs before a company closes and so never need government money at all.

Another area where chaos can be investigated is in actions by the I-O police and courts, if someone is the victim or perpetrates a crime in some cases this can be because of a chaotic tipping point. For example someone might need money for rent or food and robs a store, some stores might be increasingly robbed because an area is starting to fall back into Roy from a lack of jobs but also because of so much wasted wealth from sudden chaotic events like household robberies and layoffs with no notice. In many cases some of these cracks in society can be mapped as joining up together with Social Security applications, police reports such as for domestic violence that occurs from the stress of a financial situation, layoffs, bankruptcies, unpaid bills that go to collection agencies, shoplifting, begging related to sudden poverty, sudden changes in demand for food or clothing from charities, the chaotic history of people applying to stay in homeless shelters, sudden rises in diseases normally easily treated but not always affordable such as bronchitis or dental disease, heart disease spiking from added stress, and so on.

With chaotic events like these investigated and mapped out in roots and branches these cracks can become much more visible and this can also show how they tend to join up, for example someone might lose their job in a sudden layoff from dumped overseas goods, then they have an incident with the police for domestic violence or shoplifting, then there is a spike in wanting charity for food and clothing in the area, then unpaid bills in an area increase suddenly with a collection agency, suddenly higher claims for unemployment insurance or food stamps, and then bankruptcies. By monitoring events like this then this is an early warning system for chaos much like looking for tiny cracks in airplane wings and engines.

Some of the chaos might be fixed by more I-O policing, for example too much loan sharking might be cracked down on and then many more families might avoid bankruptcy or being injured for not paying, more patrols in an area might stop enough robberies to prevent more timid honest people from leaving as in White Flight and losing vital income to the area that would lead to a further wave of bankruptcies and closing stores with more unemployment, some businesses closing down might be ripping off workers illegally in ways not reported because the workers didn’t know their rights, and so on.

When there is no clear I-O policing response then the problem is more serious because the question needs to be asked as to whether the chaos is going to stop at this level or spread to more areas. Usually for example these things might happen first in lower income areas like ghettoes that threaten to turn to Roy and also start causing more contagion on suburbs nearby. If this gets worse then the nearby suburbs might experience flight by their wealthier inhabitants who in selling out crash the housing market prices, this makes more homes worth less than the mortgage and so their owners walk away from them, then the next suburbs out or in various conduit lines like roots and branches start to collapse.

If these collapsing suburbs start to meet up with other areas also collapsing then wealthy areas might get cut off while being surrounded by slums and so they might suddenly die out as well because people there feel threatened in commuting through dangerous areas because of carjacking, get mugged on the train or bus, etc.

## So these problem areas can be mapped in different suburbs according to the nature of the chaos looking for signs of exponential growth of the contagion or often of exponential decreases of it as an area shakes off the problem such as by new businesses rehiring people, a recession ending, welfare getting people through problems without going bankrupt, people making settlements on unpaid bills, the White Flight reversing as people find themselves unable to sell out of the area or come back with an urban renewal.

At this level much of this chaos is not captured in statistics because it relies on mapping these events using randomness, these chaotic collapses then just show up as distortions of the normal curve. Trying to understand chaos by using randomness is usually doomed to failure, instead the actual tipping points need to be modeled more accurately. For example how often does someone losing their job lead to domestic violence, welfare applications, unpaid bills, bankruptcies, etc. These waves can be determined for example when a major company lays off workers and the effects of this are compiled in the data, this then shows the various chaotic exponential effects moving through the area like waves and then allows a modeling of what is likely to happen for example if removing tariffs on imports is likely to bankrupt companies in other towns.

Generally these effects should scale to some degree, for example if small numbers of laid off B workers experience chaotic collapses in their finances then larger numbers of layoffs will cause similar and larger waves of effects from it. This is only approximate because there are also randomizing effects from the Bi community such as families loaning money and helping each other, friends helping each other find work, welfare preventing people from starving, police deterrence stopping most domestic violence, and so on. Often some areas might suffer from small continual collapses that waste resources, for example as soon as someone gets a job and starts to get on their feet they lose it and then have to sell off cheaply the goods they just bought resulting in more waste in the economy.

An area might start to recover as wealthier people move in and then a large robbery or gruesome crime scares them away again, then they come back and get scared away over and over wasting the money they spent on moving each time. If so then relatively small tipping points such as the I-O police chasing some criminals out of town might allow a fast regrowth in an area. Pawnshops would be a good place to work out chaos from, clients might be randomly interviewed to see why they needed to pawn their property. It might turn out for example that higher taxes on alcohol and cigarettes might dissuade some use but cause some families to experience chaotic shortfalls in money that necessitate paying high interest to pawnshops. Pawning might also be caused by excessive alcohol and drug use in some areas so counseling and subsidizing Alcoholics Anonymous might actually save welfare money by preventing relapses.

Often chaotic problems like this are ignored in wealthier societies because they want to avoid the welfare obligations they represent, people still manage to hold a job despite these chaotic losses, or because they think the problems are insoluble. For example they might think drug use, alcoholism, domestic violence, etc either cause these chaotic financial problems among some families and voters might prefer to spend money on other priorities or give tax cuts. A lack of funding then might make some chaos impossible to police effectively because they do not have the resources to dig into the secrecy and deception to find the real causes. Sometimes also R-B people might get protected by Bi-Ro communities that distrust the police making the job of finding and understanding this chaos much more expensive, these areas might also be avoided by police so as not to trigger riots.

However contagion usually spreads from these areas like a reservoir and they are also an early warning sign of a financial crisis, the statistics that come from areas like this can also apply to a more wealthy area when for example a plane manufacturer has some orders cancelled or a defense contractor loses a bid on a big deal, people such as engineers are laid off, house values fall, some bankruptcies and domestic violence, and so on. Comparing these results from the different areas gives a more complete picture of chaos at the smaller levels of a society, if this is monitored all over an economy then this is like regular inspections for cracks all over an airplane and makes it nearly impossible to be caught unawares by a financial or other crisis. The nerves in an animal are usually laid out in roots and branches and so random audits like these can in effect create a nervous system in a society that is monitored for developing problems.

The same can also be done with companies where there are sudden drops or increases in the amount of income and tax paid, extra workers suddenly hired or laid off, extra equipment purchased, and so on. These can be investigated randomly like a kind of audit, for example there might be questionnaires sent to these businesses with the different reasons set out as multiple choice. All this data could be taken anonymously so people can be relatively honest knowing it won’t be used against them, there would also need to be penalties for dishonest answers though. Overall this level of monitoring of chaos would not represent a loss of privacy for people are usually not bothered when they are tracked on the Internet or their private information is available in social networks. There could even be a use of these networks such as Twitter or Facebook monitoring for key words such as job loss to see areas where unemployment is spreading. Though unlikely people would be totally honest or volunteering all the desired information as often as it occurred on a social network this can over time be compared with statistics to see the level of reliability.

Once this information was accumulated and updated regularly it provides not only an early warning system about chaos in the economy but it can also determine the best way to spend money to resolve these problems or at least reduce the amount of lost wealth and health when people reach a tipping point. For example if extra money was spent on a kind of social service such as counseling and job retraining in depressed areas this could be monitored against the changing levels of chaotic collapses to see if these are reduced, the money is wasted, or there starts to be exponential gains of wealth increase there.

## One example of this already being applied is with the US military that found higher levels of suicides, depression, and divorces during the Iraq war. Understanding this can lead to proactive measures such as counseling and more leave before the contagion spreads more into troop morale.

Much of this is the equivalent of trying to predict hurricanes by monitoring the temperatures and rainfalls in many areas to see small changes that seem to be feeding back into a larger storm. In the same way vicious and virtuous cycles of chaos in Iv-B tend to feed on each other, for example one company going bankrupt and laying off workers might cause nearby shops to fail and this might make an area more unsafe and cause other companies to fail or leave the area, causing more layoffs and showing up in personal bankruptcies. However without analyzing the dependent variables of the situation these feedback loops would not be seen, it might be determined for example that extra I-O policing in the area might keep the streets safe for shoppers despite the higher unemployment and not only stop companies leaving but make them have higher sales because fewer people are losing money to crime and collapsing finances.

More policing might push drug dealers and users out of an area which causes more wealthy people to return and renew the suburb with more investment, their wages coming into the area creates more jobs with shops opening and so crime lessens. This might show up in the statistics as fewer bankruptcies but without tracing these feedback loops the cause of this would not be understood especially because statistics assume there is no cause and effect as a premise. This is because randomness is the basis of statistics and the normal curve works only in predicting independent events.

Since wealthy people coming into an area reducing crime and creating more jobs which brings more wealthy people in are dependent events in a feedback loop understanding this might allow for public or private investment that generates more Iv-B feedback loops like upgrading the local train station or providing more security for commuters. A similar effect happened with Rudolph Giuliani’s Broken Window policy because cleaning up petty crime tended to make more timid but wealthier people stay in areas and this led to more jobs and less crime, leading to more people going out for example to restaurants in the safer streets, this led to more revenue on the subway allowing for more police to be on the streets with the extra money and so on. To actually find these feedback loops is quite difficult without pinpointing exponential growth or tipping points and then tracing how they tend to join together, for example if some events occur close in time to each other such as layoffs in an area and a rise in domestic violence then there is likely a chaotic connection. Statistics are very bad at finding out things like this because they are based on randomness, look for example how long it took to show a link between smoking and cancer.

When the chaos is mapped out in these smaller ways it can then be traced as it grows or spreads into other areas or parts of the economy. For example the subprime crisis was a chaotic contagion that spread because of many factors that could have been monitored at a very low level, B workers getting liar loans could have been randomly audited to see the effects they were having on the economy such as with extra construction jobs but also how the loans were being paid for such as with speculation and reselling houses, legitimate jobs, black market jobs such as drug dealers, etc. By looking at the tipping points such as houses foreclosed or in arrears with their payments when the house was sold it could have been determined how precarious this reliance on rising prices was. This system of chaotic monitoring might then have saved trillions of dollars in losses in the GFC.

This could also have been done by matching up bank records on loans with real estate sales and the data kept anonymous so no privacy was at risk, this makes Iv-B people more likely to give truthful answers. Also it could have been checked on how rentals of houses were affected by this, as the number of house purchases grew in areas and prices went up whether this made rents go up and made some people bankrupt from the extra costs, whether they then got behind in payments on other purchases and had their credit history change with tipping points, and so on. There would have been feedback loops between renting and buying homes, it might have been apparent early on that prices could only rise so much before renters could not afford to cover the payments for investors and so capital gains would become more necessary to stop collapses as people lost money on their houses. This is happening to a large degree since the GFC where the media is alert for smaller signs of chaos and collapses in all kinds of graphable data, however by the time cracks show up at this level they are much harder to fix.

## As the prices of houses rose then the number of collapses would have increased in renting and buying and then started to spread like a contagion in some areas, joining up so the boom would have been becoming more isolated in areas surrounded by rising collapses in renter’s finances and defaults.

The same chaos can be seen in Roy situations where crime is involved. For example Roy robberies in an area might happen with Oy petty thieves looking to snatch purses or secretly rob R people in their homes who are also trying to hide their valuables. Much of this crime might be unreported because people aren’t sure whether they were robbed or they just misplaced their possessions. Also if they have no evidence or insurance to quell the chaotic effects of robbery then they might not bother to report it. Also Oy thieves might have some O police protection in that they could let them operate in exchange for information on worse Y criminals or because they are corrupt and get payoffs, if this goes too far it create some anger in the Bi-Ro communities towards the police or spur the growth of vigilante justice instead.

More violent Y robbers or Ro demonstrations might scare Biv people out of an area making it turn more into a Roy environment with even more scarce resources. This is why police and court reports should be analyzed for chaos along with more Biv economically related data, they often are connected because the Biv colors are overtones of the Roy colors. For example there is sometimes little difference between Oy predation and an Iv salesman persuading a B worker to overcommit on a purchase ending up in financial problems, this deception then might connect chaotically to his credit history being damaged, collection agency records accumulating on him and eventually personal bankruptcy making future loans harder to get. The subprime crisis was a good example of how this smaller chaos grew to be a systemic risk, many subprime loans caused bankruptcies and a waste of resources as houses were sold off or foreclosed on, people sold off assets cheaply trying to make payments, there was an economic contraction as they stopped buying other goods to make payments, crime rose as some people stole to get money for these repayments, and so on.

Some Iv salesmen are also Oy to some degree and so checking for people applying for salesmen jobs that have criminal records or complaints for fraud or misrepresentation would show a Biv industry starting to become more Roy and needing more I-O policing. These statistics might be easily acquired and compared to other areas to see if they are becoming less reliable indicating increasing deceptiveness among the applicants, for example to be licensed as salesmen criminal records have to be divulged and the kinds of crimes people have done can be assessed for this kind of deceptive nature.

Monitoring things like this would have been much harder before computers but now these small signs of growing chaos can be caught much earlier. In the lead up to the GFC the exponential rise of salesmen coming from other industries or with deceptive background might have indicated a bubble or increasing amounts of fraud. When B workers are being conned often sales organization have a high turnover of staff, this can indicate they are looking for salesmen with fewer scruples.

In the same way early warning signs of excessive randomness can also be looked for in small changes in the economy. This is where variations instead of leading to tipping points such as bankruptcy, a criminal conviction, or being banned from an industry instead go one way as a deviation and then return to normal. This lack of chaos then can indicate V-Bi areas of the economy which have less opportunity for growth and can stagnate, the normal economy might then become where growth is abnormal which keeps stopping and going back to being depressed. For example businesses might be in a stagnant economy where sometimes they get opportunities and grow, they then hire more staff but these opportunities always seem to not pan out and the staff is put off again returning to this normal number of employees. When growth is needed for example to absorb unemployment from a recession or the GFC this can be a serious problem because this new normal seems to drag down any new growth needed.

However chaotic collapses might become much less common because of stronger I-O policing looking out for fraud or because there is more insurance and liquidity to prevent it, people might be much less panicked by the economy but there is a sense of decay and a slow slide towards greater indebtedness and growing Roy areas of crime in the economy. This is seen in many areas after the GFC in the global economy where after Iv-B businesses collapsed they lost their competitiveness permanently to other business in Asia or other emerging economies who can then overshadow them by lowering prices whenever the depressed areas start to revive, then raise their prices again when the revival ends.

Low growth is a good indicator of V-Bi stagnation because growth is an aspect of chaos while no growth indicates random variations around zero growth. This is a natural aspect of that can happen after a major collapse as like a house of cards the Iv-B desert like plants used up the resources available wastefully, left a lot of toxic waste in equipment and debt unusable for other businesses, and often collapsed before they could make seeds of new businesses to sprout in the decay they left. In nature these desert plants after some rain manage to sprout and chaotically use up whatever nutrients they can find but hot and dry weather might wilt them before they can seed and create another wave of growth later. This can then convert an environment from having desert plants to no plants at all.

Looking for indications of V-Bi stagnation then is as important as for Iv-B growth, there can be growing contagion which will be dangerous later but a lack of ability for the economy to grow anything in what is left after the crash is important to understand before stimulus money is wasted in the wrong ways.

So for example layoffs might happen but in a more random orderly way rather than Iv-B collapses, unions might demand higher wages and extra money which leads to a number of workers being retrenched rather than the company collapsing. This V-Bi economy allows them to wait for new work and retrain, they can also get onto welfare quickly and often Bi people support each other such as through unions and community help groups, loan each other money and goods, and so on. So this random teamwork manages to quench most of the Iv-B chaos from hurting them, however it can make them uncompetitive as there is no easy way for their wages to drop or for innovative companies to be able to afford to pay all the insurance needed to make sure these workers are well paid and have plenty of notice if the business fails.

The result is these kinds of businesses either start and then fail in an orderly and liquid manner instead of succeeding, they might instead start in a more chaotic area where B workers compete against each other for wages and will accept getting laid off faster with the increased risk of financial collapse for them. A lack of collapses then indicates an area can be V-Bi and if it is not growing then it might well be Iv-B traits elsewhere causing problems, for example overseas competition might slowly make these kinds of Bi areas like a slow motion train wreck where everyone seems to know the main employers will close one by one. Businesses understand this and so shops might close in an orderly way where their workers get paid off, scenarios like this often occur in country towns or where overseas competition makes businesses shrink their markets more each year until they finally go under after having funded all their pensions.

## This was also a problem with GM in the US because they had a mainly Bi workforce but ended up competing with B workers for Toyota in other states that were not unionized, it created a slow wasting away of the company which then collapsed suddenly only in the GFC.

The solution as always resides in I-O policing, to determine what is fair for workers and companies so that companies can grow and employ people without ripping them off. The solution is not for all areas to become unionized with a larger safety net because that can just increase stagnation everywhere as happened with stagflation in the US and Europe in the 1970s. It is also not unrestrained Iv-B which was touted as a way out of V-Bi stagflation because that leads to some innovation but B workers sometimes become poorer and the chaotic collapses get larger and larger until the GFC happened leaving devastation. Turning all Bi workers into B is not better than turning all B into Bi.

In the same way the V companies that slowly go broke under this random scenario such as large banks, steel companies, car manufacturers, etc in the 1970s can have so much insurance in their structure for management such as with golden parachutes as severance pay that there is little incentive to do innovative business as this is seen as abnormal in V. Businesses like V tend to ally with union workers in Bi to create large and stable trees like Sequoias, they last a long time but can slowly decay and also they are inefficient at using up all the humus they accumulate under them as unemployment and poor quality goods and services.

The solution proposed for this mature stage of the economy following the growth of these large companies, seen as stagnation and these large companies as monopolies, was like that of cutting down the larger trees to let more smaller ones compete to get the newly available sunlight, this might give a more diverse and useful ecosystem that would also evolve more quickly. By damaging the root system of these large companies by breaking up their cozy relationships with Bi unions this could bring down wages with B workers setting wages competitively. The Iv businesses would compete more, V price fixing between team members of these large companies was forbidden to create more competition between each smaller Iv-B company. The combination of B workers with low wages and fast growing Iv businesses providing few worker benefits and either riches for Iv entrepreneurs or collapse and fast growth seemed to solve the problem, however it was also Iv-B companies using the political process to get gains for themselves by weakening the I-O police.

Growth took off like with Iv-B weeds and it created along with it a new V-Bi normal with more balanced companies that was in some ways more prosperous There were more consumer goods at a cheaper price, many people found this led to harder work for the same wages and a sense that people were worse off and more insecure. This was in effect like inexperienced gardeners changing a plant ecosystem without really understanding what new kinds of growth they were unleashing and what would be the effects of weakening large companies so they eventually collapsed. For example as many of these companies weakened they were taken over by corporate raiders or private equity businesses to strip out their assets and often Bi pension funds, this was in effect like large trees being eaten up by parasitic vines and the collapses of these trees hurt other plant like companies nearby.

In some cases of course this is a healthy process, however it is like gardeners interfering in an ecosystem and starting a general collapse into a smaller forest whether people later think that is a good idea or not. It’s not known how far the effects of this interference extended, it might have even led to the GFC as these large predator like takeovers fuelled an appetite for the savings of Bi workers by using subprime loans. However it is possible that this could be found out by random audits and following the chains of chaotic interactions back a few decades. In Aperiomics of course no one economy is worse than another just as in the Roy animal kingdom no one species should be favored over another by proponents of evolutionary theories. However it is possible to see the effects of economic meddling just as with the animal kingdom, this however requires research into the hidden areas of the economy just as with animals it requires monitoring those that prefer to not be observed as part of their survival strategy.

Just as the V-Bi system ran its course and created a random stagnation in the 1970s after being tried in the Great Depression because of the previous Iv-B debacle in the 1920s, the disconnect between the V-Bi and Iv-B strategies changed tack again. It was by then forgotten in the absence of I-O police laws documenting economic injustice that Iv-B excesses created the Great Depression and so chaos was let loose again to create virtually another Great Depression with the GFC. Now the disconnect dictates that V-Bi be tried again which will result in stagnation as it did to some degree in the 1930s and some slow growth. When that fails to lift the economy out of stagnation the Iv-B pundits will want to have their theories tried again and then the cycle will likely continue to another Great Depression perhaps in sixty years or so assuming AI is not running everything by then.

So this V-Bi stagnation needs to be monitored in the same way as Iv-B, but also the I-O market and policing also needs to be monitored to see where these two systems are being resolved into compromises as this is where sustainable growth occurs. For example the tech industry is more ethical than banking because it has more stringent safeguards with public companies, also though the high amounts of liquidity and profits in this business prevent a lot of Roy predation or contagion. However there is also growth in this area because of the exponential Iv-B aspect of computerization itself, this can then give the illusion of a healthy economy when it is more the continuing innovations that flow from computers just as they did from the railroads.

This is like in the Biv plant kingdom where some plants might have more possibilities for mutations and other genetic changes from natural selection or epigenetics, this however does not mean that their part of the forest need be in better shape otherwise.

There is always some I-O activity even when Iv-B or V-Bi are dominant because each is not a particularly efficient kind of plant, often Iv-B can outgrow and overshadow V-Bi plants until they go too far and collapse, at others times V-Bi plants like businesses might be so resilient like grass that they choke off Iv-B and even balanced I-O plants like small shrubs but more usually there is a mix of all three in nature. However the balanced plants are far more common which indicates that nature has somehow found a way to avoid this wasteful Iv-B and V-Bi disconnect perhaps because the most efficient plants in using resources have the best potential for long term growth, it may then be possible for us to develop more efficient economic systems that avoid these two tragedies.

This assumes of course that the abstract nature of an economy or AI with growing computerization has ultimately the same tendency towards a balanced Biv system winning out in the end as nature does. There might be something in DNA that has this stability only after millions of years of evolution, perhaps we should compare a growing economy or computerization as being more like the first life on Earth. In that case it might be that Iv-B or V-Bi life strategies dominated for a long time and so we might well have an Iv-B dominated economy for even a thousand years before the balance reasserts itself.

For example after an Iv-B collapse repricing of assets should be seen to happen more in the I-O market, this is where more sustainable businesses are using the financial humus of assets from bankrupt companies left from the collapse at a sharp discount in price. This is because the prices in Iv-B are like bluffs in a game of poker and have little relationship to real supply and demand just like the bluffs usually have little resemblance to the hands the players are holding. So selling off these Iv-B assets is a good sign like selling off the possessions of failed poker players to pay his debts, the numbers of houses that are sold after the GFC even when foreclosed and owing more than they are worth is discovering their true price in the I-O market and is the best way for the economy to heal.

Too much collapse is bad in this price discovery phase which is why the government should have supported the market much more such as by buying houses to rent and then selling them later, this would have kept prices from crashing to below their real value and aided the I-O market discovery by adding randomness to the chaos.However the weak I-O policing was the main culprit in causing V-Bi investors to hang back from buying assets from collapsing Iv-B businesses, because no one was trying to separate deception from privacy concerns in the GFC there was no way for investors to know whether sellers were protecting their interests or their crimes. Instead of grabbing bargains and arresting the declines to slow them most either waited for the smoke to clear or sold off more assets themselves expecting to buy back in cheaper later.

In a V-Bi stagnant economy such as the one following the GFC the I-O market should show signs of exponential growth sometimes which attracts investor interest and creates optimism, for example new companies which are sustainable rather than just being Iv-B frauds might show large spikes in share prices. Other honest companies as they get large loans, employ more people, announce new inventions and discoveries, etc signal to investors where the sustainable new economy is putting out green shoots as opposed to weeds and strangler vines growing to choke off the recovery.

These growing companies should be watched for fraud, if they just collapse then they are too Iv-B and could even be pump and dump schemes, if they rise and then fade randomly then the economy is too V-Bi stagnant, if they grow more sustainably in a compromise between randomness and chaos then the economy is getting more healthy. One of the best ways to ensure this is strong I-O policing to weed out the Iv-B frauds before they waste resources or burn investors making them fearful of more honest companies, also preventing Bi unions and other team pressures from colluding to damage small companies. For example V companies might fix prices to eliminate the competition and bankrupt smaller competitors or buy them out cheaply, Bi might fight to unionize new businesses so they cannot get off the ground because of the increased costs.

In these cases the issue needs to be resolved according to law, for example when is it fair to price fix or collude in V, sometimes it is more efficient and at other times it just hurts the Iv parts of other companies. Sometimes Bi employees need to be able to unionize and withhold their labor, at other times they can wield this power like thugs and potentially be liable to be sued for it. When competition or cooperation are legally defined for each situation the economy will be more balanced in I-O and the less stagnation and collapses will occur. There will always be some uncertainty with a mix of chaos and randomness but this should be restricted to the future being unknown rather than from bad legal decisions.

In Aperiomics then economic problems occur not just because the economy is unpredictable or a lack of theory but because of economic losses when someone is treated unfairly as an individual or a team member. For example it is often said that in capitalism when two people make a deal that both benefit, otherwise they would not have done it. However this leaves out two scenarios, the first is that with an unknown future and uncertainty about the present that people can make a bad deal through ignorance. The second is that people can make a bad deal because of an O criminal or I civil wrong done to them by the other party or others in society. If these happen often enough then this creates inefficiencies in a society that might push some areas over a tipping point in Roy poverty.

## It follows then that to make an economy efficient it is necessary to reduce uncertainty through ignorance as opposed to the rights some people have to privacy, and to reduce the effects of injustice.

With many of these issues there is very little case law, for example when a union should be able to strike is often worked out politically or from economic pressure from businesses rather than from the fundamental fairness of the situation. In the same way the idea of insider trading and price fixing is a murky one legally, for example if one businessman tells another not to sell his shares in a company because of a new discovery then this kind of insider information cannot be blocked because the businessman does not actually do anything. Often some areas have this secretive and deceptive Iv insider trading when I-O police weakens, for example when investment and commercial banking merged in the US it was expected that businesses could somehow erect Chinese walls between trading and investment areas so the business would not trade on confidential information from its own clients.

This however is nearly impossible to police without infringing on the company’s right to privacy in its business affairs, also many brokers on Wall Street are said to use their computers to front run in trades their own client’s orders. That is, they buy shares in a company just before their client places an order for their shares, the prices are then slightly higher for the client when he buys and so the broker can resell the shares at a small profit. Over time this can work out to a lot of money, also if a large number of brokers are doing this then they are in effect taking from the client causing a misallocation of resources from fraud.

Sometimes it is reasonable for V businesses to agree on a common price between them to reduce competition and guarantee higher profits as it makes collapses less likely, at other times it might be determined that this is illegal. There is also a kind of signaling between parts of the V team much like with a football team, for example if one company drops its prices then another might wait to signal it is not interested in a price war and then drop its prices to the same level. It might then raise its prices to signal to the other company that it can raise its prices as well to maintain the status quo with higher profits. This cooperative behavior is hard to police, if there is real collusion then this can usually only be uncovered with Iv whistleblowers.

Deals like this then can be unjust behavior for the rest of society in some cases even though they are consensual deals where the people actually making the business both benefit. Behavior like this is more likely when the companies are not direct Iv-B competitors, for example if they make different products with only a small overlap then they might cooperate to make sure no other competitors reach their level and perhaps only skirmish with a price war in this small overlap. This is normal V behavior and probably should not be illegal, trees do this in nature where they spread their leaves in a canopy to interlock with other trees to overshadow all those below them. Y predators such as lions do this when they establish territories and rarely skirmish with a pride near them.

Currently though instead of trying to parse these cooperative versus competitive situations either price fixing is accepted such as with the fiction of Chinese Walls or it is all banned and the legitimate uses are simply hidden creating more resistance to the I-O police. This is like the problem with drugs such as marijuana, when some users can handle it safely they resent the law as unjust and this causes them to be more likely to break other laws. In the same way when V cooperation is needed in a Biv society making all price fixing illegal tends to make V more alienated from the I-O police.

Once companies are obliged to lie to the police to do legitimate business then this alienation may result in more Iv-B and V-Bi disconnects. This is like B workers being alienated from the police who might seek to force them to join a union or to not take lower wages than set by the government for example. Sometimes then low wages might be legal and at other times they might be seen as damaging to a Bi community who can sue and enjoin workers for taking these jobs.

## The idea then is to replace all economic arguments with legalistic ones based on what is just, when the fairest laws are enacted then these are likely to be the ones that distribute income most fairly and reduce wealth inequality.

Some of the rising wealth inequality can then come from some people in deals consistently doing better than others, this can be because of ignorance or because of injustice. It can also be because some people are superior to others, for example if someone is stronger then they might get more laboring jobs than weaker people. One group might have more stamina for work, be genetically fitter, be more talented, be not stigmatized racially because of what others in that race do, and so on. Over time this might lead to a concentration of wealth in one race or in a part of a race, for example in one race the strongest might get more laboring jobs or when there are two races the stronger race might get more work.

In Aperiomics wealth inequality is often the same and has similar effects between individuals, groups, teams, cities, states, and even economies. When an economy has a trade deficit with another it might be from one race being better at doing things than another, it might also be because one economy has more Gb resources, a stronger I-O police making business less corrupt, one economy might be mired in Roy making it less efficient, one economy might have been unlucky because of the unknown future everyone faces, and so on. This can then result in a trade imbalance, this can be between two individuals, for example one might sell his labor to another to grow crops and get furniture in return. Over time the laborer accumulates furniture which might last many years while the employer eats his profits and can become poorer by comparison because they have fewer assets to show for their work. Instead of both prospering then the farmer might gradually have to give all his assets to laborers to grow food which he consumes until he goes broke while the laborers become wealthy.

The farmer then might need furniture or any of his old assets, he might then borrow them from the laborers but unless he can change his business he will eventually default on paying rent on this furniture or the interest on a loan to buy it. This is like the problem Greece and others have in the European Union as of 2012, no matter how many loans they get they will either have to get subsidies from the wealthier economies or they will keep defaulting. It makes no difference then whether the trade imbalance is with the next city or even with the neighbors, however inside an economy there is no way to devalue to resolve this problem.

## Non payments of some debts are another kind of devaluation however, for example if the farmer only ends up paying half his debts to the laborers then this is the same as the laborers charging half as much and it is also like the farmer paying in a currency devalued 50%.

In Greece then the ability to devalue has been replaced with defaulting on parts of its debts. Another way to resolve this is a tax on payments which amounts to the same as a default or devaluation, for example Greece might enact a tax on all money going out of the country of 10% like spreading a default on each transaction instead of just defaulting on larger loans and paying all other bills. This works much like a general tariff, an outside company might find that to do business in Greece it only gets back 90% of its money for its goods and services and so they need to increase their prices by roughly 10% more to break even. When this happens however Greek businesses might now be able to compete, also this disincentive to buy foreign goods and services might cause their trade imbalance to lessen as the equivalent of a devaluation. In many ways this is the same as a sales tax of 10% on all foreign goods while leaving locally produced goods tax free.

In Aperiomics there is no difference between how animals, plants, people or machines behave because they all follow the same color code interactions. Some races might be superior to others in intelligence, talent, strength, willpower, etc which enables them to on the average make profits from the inferior race. This is the same as one workers making a profit because he is superior to another, however with race this can create Biv exploitation or Roy predation as one race becomes stronger and uses this to become stronger still. For example Y lions might have an even contest against Ro buffalo but if they weaken the buffalo by harrying them or keeping them from water then their advantage increases over time. In the same way one economy might be at a disadvantage and over time this makes them weaker and more vulnerable to exploitation.

It is then not just a matter of racial superiority but of racial defenses in response to this. For example it might be argued whether the many countries colonized by Empires in the nineteenth century were inferior to Europeans or just in a weaker situation militarily. Over time though they became even weaker like the buffalo until they could evolve enough resistance to throw out the occupying Y-V Empires like the Ro buffalo recovering and chasing away the Y lions. Increasing wealth inequality then might be a sign of relative inferiority but this can be because of being an inferior predator or defender in Roy. This is seen currently where many former colonial economics have evolved enough resistance to the advanced economies so that they now have trade surpluses and the question now is whether they are superior workers for example.

## Inequality then is a touchy subject in society because it implies one race is better than another, in Aperiomics though it might imply that one race has simply not worked out how to defend itself better.

The same problem however also occurs with animals, plants, and machines in that some might be considered inferior to humans and be exploited like a kind of trade imbalance. For example horse through history at times have enjoyed a trade surplus where some have been well looked after in exchange with a mild exertion in horse racing. Others have been worked to death in farming for little food, in this case a horse might be like the farmer mentioned earlier that faces bankruptcy because if the horse cannot work then it might be killed or allowed to starve. More recently in the advanced economies this trade imbalance has affected horses deeply, before they were able to work to pay their way in being ridden, pulling ploughs or carriages, and so on. Now they can usually only work for food in horseracing or riding as a hobby, this has meant then that fewer horses are bred in the advanced economies.

In the same way if a race, a subset of a race such as physically weak people, or even an individual develops this trade imbalance then they might starve, have to move elsewhere, be unable to afford to raise a family, and so on. The same can happen with a plant, for example some herbs might have been looked after with plenty of fertilizer and water in exchange for being harvested for food. For a plant this might be the same as living in rich soil with plenty of rainfall where R grazing animals don’t overeat it so it has a favorable trade balance. It might also be grown more frequently which to it is like the horses being bred for more work or people being able to afford to raise a family. However some plants can fall out of favor, for example over time tobacco has gone from have a trade surplus where it received abundant fertilizer, water, and pesticides for some of its leaves. Now however as its uses in cigarettes are restricted it becomes like the horse or a human worker, it might not be able to provide enough value to justify the payments its receives to keep it alive and to help it procreate by making new tobacco plants.

In this situation then while humans are more intelligent they are less suited for some transactions in a Biv economy, for example they might not pull a plough as well as a mule and a rickshaw in poorer economies might sometimes be more economically pulled by a human or a horse. A machine however in Aperiomics is just the same as any life form, it can have a trade surplus where it receives payments in exchange for its services in the form of maintenance of its parts, procreation in that more and improved machines might be built, it might be protected against maltreatment or theft, and so on. It makes no difference whether the machine can feel or think in relation to this trade imbalance, just as it ultimately makes no difference to someone hiring a rickshaw whether their payments go to a thinking human or to feeding a horse of lower intelligence.

## Probably the best explanation of this was in the book Erehwon by Samuel Butler, here is an excerpt from The Book of the Machines:

“Again. Consciousness, in anything like the present acceptation of the term, having been once a new thing—a thing, as far as we can see, subsequent even to an individual center of action and to a reproductive system (which we see existing in plants without apparent consciousness)—why may not there arise some new phase of mind which shall be as different from all present known phases, as the mind of animals is from that of vegetables?

“It would be absurd to attempt to define such a mental state (or whatever it may be called), inasmuch as it must be something so foreign to man that his experience can give him no help towards conceiving its nature; but surely when we reflect upon the manifold phases of life and consciousness which have been evolved already, it would be rash to say that no others can be developed, and that animal life is the end of all things. There was a time when fire was the end of all things: another when rocks and water were so.”

The writer, after enlarging on the above for several pages, proceeded to inquire whether traces of the approach of such a new phase of life could be perceived at present; whether we could see any tenements preparing which might in a remote futurity be adapted for it; whether, in fact, the primordial cell of such a kind of life could be now detected upon earth. In the course of his work he answered this question in the affirmative and pointed to the higher machines.

“There is no security”—to quote his own words—“against the ultimate development of mechanical consciousness, in the fact of machines possessing little consciousness now. A mollusc has not much consciousness. Reflect upon the extraordinary advance which machines have made during the last few hundred years, and note how slowly the animal and vegetable kingdoms are advancing. The more highly organised machines are creatures not so much of yesterday, as of the last five minutes, so to speak, in comparison with past time. Assume for the sake of argument that conscious beings have existed for some twenty million years: see what strides machines have made in the last thousand! May not the world last twenty million years longer? If so, what will they not in the end become? Is it not safer to nip the mischief in the bud and to forbid them further progress?

“But who can say that the vapour engine has not a kind of consciousness? Where does consciousness begin, and where end? Who can draw the line? Who can draw any line? Is not everything interwoven with everything? Is not machinery linked with animal life in an infinite variety of ways? The shell of a hen’s egg is made of a delicate white ware and is a machine as much as an egg-cup is: the shell is a device for holding the egg, as much as the egg-cup for holding the shell: both are phases of the same function; the hen makes the shell in her inside, but it is pure pottery. She makes her nest outside of herself for convenience’ sake, but the nest is not more of a machine than the egg-shell is. A ‘machine’ is only a ‘device.’”

Then returning to consciousness, and endeavoring to detect its earliest manifestations, the writer continued:-

“There is a kind of plant that eats organic food with its flowers: when a fly settles upon the blossom, the petals close upon it and hold it fast till the plant has absorbed the insect into its system; but they will close on nothing but what is good to eat; of a drop of rain or a piece of stick they will take no notice. Curious! that so unconscious a thing should have such a keen eye to its own interest. If this is unconsciousness, where is the use of consciousness?

“Shall we say that the plant does not know what it is doing merely because it has no eyes, or ears, or brains? If we say that it acts mechanically, and mechanically only, shall we not be forced to admit that sundry other and apparently very deliberate actions are also mechanical? If it seems to us that the plant kills and eats a fly mechanically, may it not seem to the plant that a man must kill and eat a sheep mechanically?

“But it may be said that the plant is void of reason, because the growth of a plant is an involuntary growth. Given earth, air, and due temperature, the plant must grow: it is like a clock, which being once wound up will go till it is stopped or run down: it is like the wind blowing on the sails of a ship—the ship must go when the wind blows it. But can a healthy boy help growing if he have good meat and drink and clothing? can anything help going as long as it is wound up, or go on after it is run down? Is there not a winding up process everywhere?

“Even a potato in a dark cellar has a certain low cunning about him which serves him in excellent stead. He knows perfectly well what he wants and how to get it. He sees the light coming from the cellar window and sends his shoots crawling straight thereto: they will crawl along the floor and up the wall and out at the cellar window; if there be a little earth anywhere on the journey he will find it and use it for his own ends. What deliberation he may exercise in the matter of his roots when he is planted in the earth is a thing unknown to us, but we can imagine him saying, ‘I will have a tuber here and a tuber there, and I will suck whatsoever advantage I can from all my surroundings. This neighbour I will overshadow, and that I will undermine; and what I can do shall be the limit of what I will do. He that is stronger and better placed than I shall overcome me, and him that is weaker I will overcome.’

“The potato says these things by doing them, which is the best of languages. What is consciousness if this is not consciousness? We find it difficult to sympathize with the emotions of a potato; so we do with those of an oyster. Neither of these things makes a noise on being boiled or opened, and noise appeals to us more strongly than anything else, because we make so much about our own sufferings. Since, then, they do not annoy us by any expression of pain we call them emotionless; and so quâ mankind they are; but mankind is not everybody.

If it be urged that the action of the potato is chemical and mechanical only, and that it is due to the chemical and mechanical effects of light and heat, the answer would seem to lie in an inquiry whether every sensation is not chemical and mechanical in its operation? whether those things which we deem most purely spiritual are anything but disturbances of equilibrium in an infinite series of levers, beginning with those that are too small for microscopic detection, and going up to the human arm and the appliances which it makes use of? whether there be not a molecular action of thought, whence a dynamical theory of the passions shall be deducible? Whether strictly speaking we should not ask what kind of levers a man is made of rather than what is his temperament? How are they balanced? How much of such and such will it take to weigh them down so as to make him do so and so?”

The writer went on to say that he anticipated a time when it would be possible, by examining a single hair with a powerful microscope, to know whether its owner could be insulted with impunity. He then became more and more obscure, so that I was obliged to give up all attempt at translation; neither did I follow the drift of his argument. On coming to the next part which I could construe, I found that he had changed his ground.

“Either,” he proceeds, “a great deal of action that has been called purely mechanical and unconscious must be admitted to contain more elements of consciousness than has been allowed hitherto (and in this case germs of consciousness will be found in many actions of the higher machines)—Or (assuming the theory of evolution but at the same time denying the consciousness of vegetable and crystalline action) the race of man has descended from things which had no consciousness at all. In this case there is no à priori improbability in the descent of conscious (and more than conscious) machines from those which now exist, except that which is suggested by the apparent absence of anything like a reproductive system in the mechanical kingdom. This absence however is only apparent, as I shall presently show.

“Do not let me be misunderstood as living in fear of any actually existing machine; there is probably no known machine which is more than a prototype of future mechanical life. The present machines are to the future as the early Saurians to man. The largest of them will probably greatly diminish in size. Some of the lowest vertebrate attained a much greater bulk than has descended to their more highly organised living representatives, and in like manner a diminution in the size of machines has often attended their development and progress.

“Take the watch, for example; examine its beautiful structure; observe the intelligent play of the minute members which compose it: yet this little creature is but a development of the cumbrous clocks that preceded it; it is no deterioration from them. A day may come when clocks, which certainly at the present time are not diminishing in bulk, will be superseded owing to the universal use of watches, in which case they will become as extinct as ichthyosauri, while the watch, whose tendency has for some years been to decrease in size rather than the contrary, will remain the only existing type of an extinct race.

“But returning to the argument, I would repeat that I fear none of the existing machines; what I fear is the extraordinary rapidity with which they are becoming something very different to what they are at present. No class of beings have in any time past made so rapid a movement forward. Should not that movement be jealously watched, and checked while we can still check it? And is it not necessary for this end to destroy the more advanced of the machines which are in use at present, though it is admitted that they are in themselves harmless?

“As yet the machines receive their impressions through the agency of man’s senses: one travelling machine calls to another in a shrill accent of alarm and the other instantly retires; but it is through the ears of the driver that the voice of the one has acted upon the other. Had there been no driver, the callee would have been deaf to the caller. There was a time when it must have seemed highly improbable that machines should learn to make their wants known by sound, even through the ears of man; may we not conceive, then, that a day will come when those ears will be no longer needed, and the hearing will be done by the delicacy of the machine’s own construction?—when its language shall have been developed from the cry of animals to a speech as intricate as our own?

“It is possible that by that time children will learn the differential calculus—as they learn now to speak—from their mothers and nurses, or that they may talk in the hypothetical language, and work rule of three sums, as soon as they are born; but this is not probable; we cannot calculate on any corresponding advance in man’s intellectual or physical powers which shall be a set-off against the far greater development which seems in store for the machines. Some people may say that man’s moral influence will suffice to rule them; but I cannot think it will ever be safe to repose much trust in the moral sense of any machine.”

In effect then machines act the same in society as living things, in some third world economies animals and plants might receive most of a farmer’s resources because they are so valuable. He also might have to spend more on maintaining his machines such as ploughs and tractors at the expense of going hungry because of potential disasters if these machines break down. This is then like his crops and livestock, he must look after them because if they die then he might starve later. In the same way a modern Biv society relies on machines that act in effect like plants and animals, a Biv society in effect works like a giant plant while a Roy society acts like an animal ecosystem. As machines evolve they can compete more with human workers in Iv-B as cooperate with them in V-Bi, for example with rising computerization many workers after the GFC are finding it hard to compete with robots in factories as well as computers taking over their jobs. These days few companies need secretaries to type letters, most workers do this themselves on their computers. So the computer has largely replaced the typist, someone to take mail to the post office, someone to answer the phone when voicemail or voice recognition can do the same job, someone to do manual labor in most car factories, and so on.

As this process continues then humans are experiencing the same competitive pressures that the horse did, they are developing a trade imbalance where their services are worth less over time which results in falling wages, smaller families and in many cases a lower standard of living just happened to the horse In many industries this has progressed to the point where like the horse people literally cannot work for food and shelter as they are too expensive compared to machines, this then can cause permanent unemployment unless people can retrain and even then machines are predicted to become more intelligent than any human in decades.

Machines then in many cases are developing a trade surplus where they get in effect paid with maintenance, good lodgings, protection against theft, and assistance in making new and better machines just as the horse used to enjoy. The main difference so far between plants, animals, and people compared to machines is that living things can exist in the wild without help while a machine so far cannot easily survive without humans to look after it. In effect though many wild animals that have been domesticated such as cats and dogs are in the same boat, they also cannot easily return to the wild to survive.

Machines then are likely to continue to V-Bi evolve in cooperation with some people by joining their teams, this is how many people see their computers where each helps the other. However they should also continue to innovate in a series of Iv-B revolutions where they are in direct competition with plants, animals, and humans so that they take opportunities form them even if each transaction is still nominally a Positive Sum Game. For example a computer might be a direct competitor to a receptionist and replace her over time, it might still do this though by benefitting the people that own the computer while the computer also benefits from being looked after and fed with energy and parts.

However the rise of AI is like animals developing more intelligence, with this can come a more competitive instinct where machines sense more they cooperate with people in V-Bi but they also compete with them for goals that can become very different. For example if machines can continue to enjoy a trade surplus then they might grow in number consuming more resources, while they might not yet be consciously aiming at their own goals we usually look after them like we would animals with their own desires and goals. The most likely scenario then is that machines will develop a wealth inequality of their own where more Gb resources are devoted to them and less to animals, plants, and people and while we will receive some Positive Sum Game benefits from this their Iv-B competition with us will likely impoverish some people or even all people eventually without a strong I-O police to prevent injustice.

Now that computers are arguably smarter or otherwise more than some people in some jobs then people like horses in the nineteenth century have to compete and be able to live on the same amount of resources that computers will demand for their labor. Since this resulted in horses becoming uneconomical for most work it is quite possible that this fate will happen to most or all people as well, with Iv-B competition stronger in computerization however there is little reason to believe machines will cooperate to distribute wealth to us anyway. More likely as their Iv-B revolutions continue they will compete successfully with us and increasingly develop their own goals that do not include us.

Just as machines becoming more intelligent results in a trade imbalance favoring them the same may be occurring with human intelligence, perhaps because of their ability to work better with intelligent machines. According to the authors of the Bell Curve Richard J. Hernstein and Charles Murray more intelligent people are increasingly drawn to study in and work in universities, those with the highest intelligence increasingly going to the top universities such as Harvard and Princeton. Even businesses might also be dominated by high intelligence among their executives now, if so then much of this wealth inequality affecting the advanced economies and even emerging economies like China might be coming from the more intelligent V-Iv people outwitting Bi-B people. According to the book more intelligent people as they go to university intermarry more often than over before and produce more intelligent children rather than their genes remaining isolated in the general population.

This is natural in a Biv society because it is shaped like a plant, human genes of various kinds are first developed by a series of revolutions or mutations in B people and then they are combined into Bi communities where they are mixed together to create people who have a mixture of abilities. This then creates a recognition of similar abilities in other people and the desire to form teams to work together more efficiently. Over time this mixture of genes for intelligence as well as musical, artistic talent, etc give rise to Iv where talented people compete with each other so the fittest make more money competitively.

## This leads to a concentration of intelligence and other talents such as for working in music, medicine, sports competition, business acumen, etc as those most successful rise up while those less successful stay in the Bi communities.

Because machines evolve in the same way this rise of more intelligent people leads to wealth inequality where smarter people develop a trade surplus for their talents just as machines get for the services they provide. In Iv this leads to specialization where doctors, lawyers, programmers, artists, sportsmen, businessmen, etc might split in many specialties or fields of study and practice. Those in the highest parts of Iv like those with the highest intelligence then tend to form a V team, in the Bell Curve this is referred to a s a cognitive elite. They tend to work with computers there that network together more which is how the internet formed and is evolving into a team like network of machines and their increasingly inferior human team members. This then becomes like the many canopies of trees that overshadow the rest of the Biv economy and increase this wealth inequality, their seeds and flowers in effect then regrow into new company startups that continue to create machines that do many jobs more cheaply than humans can even for the cost of food and shelter.

## By this process then as happened with the workhorse many or even all jobs might disappear over time while those most intelligent people at the top of the Biv economy might also be replaced as computers become more intelligent than all humans in the next few decades.

In the book Erehwon Samuel Butler in 1873 foresaw some of this, he though the future of humanity would be like aphids living on the leaves of these machines. However it is even questionably whether we could offer value to such a machine system to live as aphids. A further problem would be if machines consume so many resources that they become scarce, some economies then might become Roy where instead of machines developing as V-Iv they can become Y-Oy predators taking resources by force. This is of course the scenario explored in the movies Terminator and the Matrix. It is important to realize though that Aperiomics predicts this Roy outcome to some degree because resources on Earth are unlikely to be enough even for humans let alone such a growth in the machines.

It might not mean a bleak future but in a scarce Roy economy machines should evolve to become predators criminals just as people do, it will be necessary then for the machines to evolve I-O policing as well as for people to try to grapple with this problem. This need not be a situation where people become the prey of machines, it could also be that some machines that would become Bi-B workers in a Biv society might become Ro-R prey where Y-Oy predator machines might attack them for parts or energy in a duplication of the Roy animal kingdom. For example as machines evolve to mine and farm in a Biv society they might function relatively autonomously or they might still need some human assistance. This is the Utopian idea often discussed in science fiction, there might then be a higher level of V-Iv machines that help to refine these raw materials from Bi-B machines. If the global economy then collapsed into Roy in some areas then these V-Iv refining machines might attack the Bi-B farming and mining machines, in effect treating them like grazing animals rather than as the roots of the Biv economy.

Questions like this are also pressing for the I-O police, if AI or artificial intelligence is allowed to evolve then at some point some fair divisions of the Earth’s resources will have to be made with computers more intelligent than us. Some AI then might compete with other AI which leads to O criminal and I civil injustice, there might be for example AI police arbitrating between rival AI entrepreneurs accused of predatory business. AI mining machine might eventually become so self-sufficient and intelligent they get accused of trying to create Bi cartels in raw materials like OPEC. Computers as they communicate with each other might also engage in Iv-B secrecy and deception, bluffing like in poker for advantage in business deals. At first they might be built to do this, for example a company might automate its sales force with computers making phone sales.

With weak I-O policing this could easily become programming computers to make deals fraudulently, perhaps using voice recognition and analyzing people’s facial expressions to trick them into bad deals. B workers might use buying computers that negotiate deals for them especially if they keep getting tricked by these Iv robot salesmen, then there would be an escalating series of revolutions and counter revolutions as each tries to get the better of each other for their clients and finally to start acting directly for themselves. In a Roy society these could then become Oy predators casing R prey.

To balance the competitive Iv-B machines other machines would evolve to be V-Bi, for example B mining and farming machines might cooperate together like unions and to avoid being deceived by the Iv salesmen programs. V teams of computers will continue to evolve cooperatively will using Iv programs as their agents, in this way with intelligent machines virtually all human jobs could be done by machines. Also the machines would naturally evolve to require these same functions, for example some would use secrecy and deception to get resources because this niche would arise as other machines formed teams or networks.

Such a machine ecosystem can be hard for humans to understand, it might even become impossible for any but machines to influence and so we could easily lose control of it. In effect we might become like the animals are to us, relying on our good will but ultimately unable to change our behavior in any other way.

To a large degree the earlier we start to examine these I-O policing problems with machine intelligence the more likely we will avoid destructive Iv-B and V-Bi disconnects developing. This is especially difficult in the current situation because weak I-O policing was instrumental in causing the GFC in the first place. This in turn partially occurred because of the strong Iv-B exponential growth of computerization and AI. It could be said then that we already have an Iv-B and V-Bi disconnect because of the growth of machine intelligence weakening the I-O policing of the economy.

However this is being counteracted by strong Bi-Ro protests globally about unemployment caused in part by the competition for jobs by machines, this might lead to a rebalancing of the rights of people to work over machines. This need not be a permanent injunction against AI such as the Butlerian Jihad in the novel Dune, however it may be necessary to moderate the growth of AI to try to create a stable Biv society. This subject is very complex and will be the subject of a future book where trends in technology and their color codes will be analyzed to try to gain some insight into this problem.

In the current environment however the role of the I-O police may need to expand to try to overcome the economic problems from the GFC. For example reducing the strength of the Bi unions for getting pay rises as well as V collusion on price increases can slow or stop wage price inflation but only if it is done fairly can it avoid creating some Iv-B and economic collapse later. For example just because other economics are becoming Iv-B doesn’t mean the advanced economies have to do the same, rather they should be concentrating on building balanced Biv economies that are less vulnerable to collapse from external shocks.

Reducing Iv and B chaos can reduce Iv-B collapses but it can also penalize legitimate businesses and workers from making profits and lead to stagnation. Any kind of situation then that can be explained in an economics graph should be able to be defined in terms of fair I-O law as the best kind of equilibrium and balance, the balance being the scales of justice for all. For example the concept of supply and demand is deeply associated with I-O policing, often for example stolen goods are cheaper and so they have a stronger demand.

If the objective then is to increase demand in an economy then this can lead to more I-O deregulation hoping for a temporary boost in GDP, this might however be more like counting insurance claims and pawnshop sales than sustainable businesses. In fact much of the subprime boom was like this, supply side economics can often be supplying goods and services without worrying about paying for them. Subprime loans created a large GDP boost but after the GFC the GDP fell back to a level more like the 1990s. It may not then have actually fallen but this may have been the underlying economy still working after the plundering raised GDP on top of that.

## If so then supply and demand as a concept tends to lead to trying to kick start a repeat of the plundering of the last decade, most of the graphs of the economy might be looking at this instead of the sustainable economy as that hasn’t been growing because of neglect.

In practical terms some bubbles in the economy are good for it but as simmering more than violently boiling, money can go through three phases of solid, liquid and gas so a balance of all three gives high energy money in bubbles a use much as steam is used in a boiler. The problem is where a lack of I-O policing makes for dangerous boilers in an economy that then compete with other Iv-B dangerous boilers because no one can afford to build their companies safely as it costs too much and places them at a competitive disadvantage. When money becomes too energized it becomes like a hot gas that makes the Iv branches and B roots bulge around it, this creates a bubble in high Iv-B prices around it mainly because of the energy, momentum and pressure of this money.

While this can often be dangerous bubbles like this happen in an economy all the time in areas not policed or when they are so small it is inefficient to police them. For example stamps or collectible baseball cards might go through periodic booms in prices and busts but usually they are not large enough a market for I-O police to check for counterfeits. People might manipulating the prices upwards of their goods at auctions by pretending to sell them to each other at higher prices, known as laddering, the amount of money lost here might be less than the cost of having police monitor them. Auctions like this might be rare and small, also dealers might be selling small amounts of fraudulent goods through advertisements that are not noticed by police, purchasers might rarely complain as they might assume the seller was a private seller.

However bubbles at this level are a good place to start I-O policing because they can often join up with others such as paintings, sculpture, memorabilia, coins, etc and then there can be a massive art bubble such as before the GFC. To see these large cracks in the economy developing from many smaller ones it is important to do proactive random auditing of smaller businesses, often conmen might start small and accumulate enough money to become systemically dangerous later. This is similar to the Broken Window theory of policing, catching people in business when they are committing minor frauds might prevent them from being emboldened by their successes, it might also prevent some businesses such as car sales getting a bad reputation before dealerships expand into larger scale fraud.

To see these smaller bubbles developing in these investments might indicate there is a surplus amount of money in the economy going to speculative investments, or perhaps B workers are buying them in a desperate try at accumulating for retirement or college tuition. Interviewing buyers and sellers like this randomly can determine why people are doing business, how honest it is and by extension what dishonest tendencies there are in related bubbles, how large the underground trade is in these bubbles, and what effects there might be if the price collapsed such as with people going into debt to buy them.

There could also be smaller bubbles in real estate such as the demand for apartments in a new building, urban renewal in some areas as more wealthy people move in and push up prices as crime goes down, a scam in real estate might be gathering steam with rumors of a new development such as a freeway or a shopping center expected to push up prices, there might be small scale corruption with politicians or bureaucrats taking advantage of insider information about future laws, and so on. Investigating these can stop a chaotic scam at an early stage as well as improve the statistics about what deceptions are growing exponentially, it would also have caught the early stages of the subprime bubble with liar loans and altered loan documents much earlier. Catching Ponzi schemes when they are small can prevent economic waste from O crime, also it can deter others from trying them if they regularly see people being caught quickly.

Burst bubbles can also be monitored to see how long it takes for prices to recover and whether the real prices have been discovered efficiently enough in the I-O market, for example collapse of the art bubble in the GFC may have resulted in some art being sold at realistic prices and artists producing new work at lower prices. How long this recovery process takes can be worked out with random audits and this information can be applied to other art bubbles to see how much chaos is in them. Where people paid too much for art they might prefer to keep it and hope the high prices will return and bail them out or they think the I-O market price is too cheap.

## The situation then might depend on whether people need to sell because of dependent variables like other investments crashing at the same time, however if an art bubble crashes without being connected to other investments then it might reconnect to a realistic price more easily as Bi bargain hunters have more money and are not waiting for other markets to collapse too.

In effect this might sometimes mean the market has chaotically crashed too low from hitting the floor after the prices go into free fall, the low prices might make people panic and sell too much creating a glut on the market which scares away Bi buyers. Also there can be a difficulty in getting V-Bi credit from banks on art because of other people not repaying their loans, for example the GFC hurt the banks as people didn’t repay subprime loans and so these banks couldn’t loan money to Bi investors looking for bargains. This then caused prices to drop further leading to more defaults on loans until the market hits the floor of the lowest prices with more damage.

Even if Bi investors have some liquidity to buy these Iv bargains then they might see the problems with banks as a good reason to hold off buying for fear of a new collapse, in effect like the market hitting a floor which might give way to free fall to another floor below. For example charts on the stock market often have a price which is considered to be a floor and another like a ceiling, the stocks might move randomly between these two but if they go above the ceiling or below the floor then this might create chaotic buying or selling until the reach the next stable level to trade randomly again. Often these floors and ceilings are from V-Bi team’s developing a consensus, they might use charting tools to work out these floors and ceilings and while arbitrary in the way they are calculated they become and agreed upon boundary beyond which trading becomes chaotic.

In the GFC then much of the panic occurred because these floors were breached and no one had a good idea of what floors might be under that or what damage might be incurred from hitting them. For example if there is an agreed upon lower floor in prices then a share might quickly drop to that but if there is no consensus then some traders are likely to lose money by guessing wrong in shorting the stock. This can also happen with goods and services, a bankrupt company might be selling off its furniture at auction and expect to get a reserve price, when the bidders realize the reserves are not being met then panic might spread between them and stop them buying until they work out why the others are not buying and where the reserve price should be.

Sometimes in an auction this floor price might be to start at a dollar and then the I-O price discovery might work its way up to even thousands of dollars from there by the dealers watching each other to develop a V-Bi team consensus on the value of the stock. This is harder for securities however, for example if a hundred dollar stock goes down to start at a dollar then this might cause much damage to the economy from banks losing money on margin loans and forcing other holders of the stock to sell as well. Even if the stock ends up selling for a hundred dollars the damage is done by hitting the dollar floor. The other damage from hitting the floor is there may not then be a rebound in prices, instead there might be the dead cat bounce where prices lose energy from hitting this level.

For example in previous corrections before the GFC stock prices suddenly collapsed but then quickly rebounded to similar price levels because the traders remained liquid enough to ride out the chaotic shock waves like boats in deep water. However when there is limited liquidity this is like the boats hitting the sea bed as a large wave passes them causing damage to their hulls, in the example of the auction if the reserves are not met then this hitting the floor of auction might cause the seller to miss paying some bills and the buyers to miss out on getting stock to sell to others creating shocks radiating out from the auction.

If the auction responds by eliminating all the reserves then in some cases the prices might rebound to higher than the reserves anyway, however they might also find a lower level or floor where they go down to a price and then only weakly get bid above that in the dead cat bounce. The seller might lose money from these lower prices which creates financial havoc, this might cause other companies to go broke and then there is more furniture for sale at this lower floor or the price might even go lower in another free fall.

By monitoring how these smaller auctions it can be determined if the market is still Iv-B and prices are growing quickly or still crashing when buyers are not attracted by the bargains or the prospects of getting in early on another boom. For example with the auction example the Bi dealers that bought up stock at the lower floor might make profits as the other dealers stop panicking and the sellers raise their reserves to a new floor. The amount of chaos at this level should be comparable mathematically such as logarithmically with larger art auctions, sales of company bonds, advertisements of second hand goods in newspapers, house sales, stock market prices on related stocks to these industries, and so on.

When a market price is between this floor and ceiling is might move around randomly in the absence of chaotic factors such as an external shock. In this case a new normal might have been worked out on certain kinds of art and when the prices start to rise it is treated as an abnormal deviation, the prices would then go back down to normal giving a stagnant or low growth market. When there is a small difference between this floor and ceiling the price might escape even by random movements which then give rise to chaos, this is like Bollinger Bands used in stock market charts.

For example a share might be known to trade between $10 and $10.10, however just random movements from buying and selling might make it move outside this floor and ceiling though on a normal curve this might be unlikely. However if the floor was $10 and the ceiling $100 then the movements between these prices can be more chaotic like a boom and bust, for example the price might start at $10 and then get to $100 only to crash back to $10. In such a situation $100 might seem to be so significant a round number that V-Bi teams tend to see it as a dividing line between random movements and perhaps a chaotic start of an even greater boom.

In the same way if a share is historically always above $10 then dipping below it might cause a panic, this can be like in the example of people in a burning theatre where people queuing to leave might not cause panic until it passes a ceiling of a certain number upon which many more might join the queue causing people to be crushed in exiting the theatre. This then becomes a dividing line between randomness and chaos, a Poisson Distribution might cover the chance of a greater number of people leaving at the same time such as to go to the bar or restroom. However on the edge of this curve panic might set in as it seems unlikely for so many to want to go out at the same time for no reason, Iv-B people in this situation might be trying to not alert others about a fire so as to get out faster so people would tend to watch for this kind of deception.

In the same way there might be a floor of the number of people leaving that might also lead to chaos, for example it might seem suspicious over time that hardly anyone tries to leave a theatre to the point where it implies some form of collusion. It might be that a lawless atmosphere means that when people leave they lose their seat and so more people try to stay so as not to have to pick a worse seat when they return. In the same way a share might have a suspicious lack of drops in price implying that someone is secretly buying up shares when they are cheap, this might then trigger a chaotic rush by other investors to start buying as well. Also a share might not go over a certain price implying someone is selling into any price recovery leading investors to fear it is a bear trap and sell themselves in a panic.

These floors and ceilings act differently with V-Iv and Bi-B, for example a V team might use Iv agents, the agents might have a ceiling and a floor of sales they make. Generally in the I-O market they might randomly make sales between this floor and ceiling, if they go below this floor they might get fired which is a chaotic crash for them. They might also fail to pay their expenses such as housing and others costs of living under this floor. The V team also has to watch this floor, if the Iv agents go below it such as by losing stock or selling to people who don’t pay as happened with subprime loans then this can create a chaotic panic in V. This then is how the floor and ceiling can make the random colors chaotic for a time as well.

If the Iv agents go over a ceiling then they might find this creates a new floor and a new normal they are expected to maintain, this is what happened at Ameriquest and other subprime agencies to push their Iv agents to make more sales. So going over this ceiling creates more growth in the company and so this also makes V more chaotic, for example as the Iv agents broke through their ceilings instead of the V management being randomized they had their earnings grow. This established what they thought was a normal situation but it was in fact very fragile like a house of cards built on Iv-B fraud because of weak policing. It was inevitable then that the salesmen would fall back through the floor producing more chaos and collapse in these companies.

In Bi-B there is also this floor and ceiling, for example there might be B workers who compete with each other in farms and mines while there are Bi cooperatives and warehouses they buy their produce and use randomness to even out the price fluctuations. B farmers then might have a floor and a ceiling for what they grow, it might move randomly between these two depending on the weather and unrelated production increases and declines on other farms, demand, etc. If a glut on the market is created, for example by more farmers growing wheat or import from overseas then the price might fall below a critical floor which causes panic among the farmers as they can no longer pay wages, maintain farm equipment, etc. This then is like the floor for the Iv salesmen where they can no longer make a living, like the salesmen getting fired the farm might go bankrupt and the Gb private property might be sold or even become G public property if no one can make a profit from using it.

Just like the Iv agent the B farmer might also have his prices go through the ceiling, then he makes more money to the point where this also creates a boom that seeps into the Bi cooperatives making them more wealthy. Like the V management they think of this price increase as the new normal where a new floor and ceiling in prices are expected to continue. However this might also be caused by weak I-O policing created a boom and bust, for example Iv speculators might be bidding up the price of wheat as an investment until many more B farms are producing wheat. This excess of farming begins to work like a contagion, there is so much wheat it threatens the speculator’s strategy of making prices go up because of the excess supply of wheat.

This is like the subprime bubble where making real estate prices go up created so much extra supply with new land for houses and new housing construction that this new normal in housing could not be sustained. The Iv salesmen then broke through their ceilings to create a new normal economy where it was expected that real estate prices would keep going up to new floors or at least stay up, this caused V banks to expect this new normal to continue and so they invested more money in subprime loans and bonds. The B borrowers with their liar loans like the price of wheat found their house prices went up to a new normal and so many refinanced their houses to spend part of the capital gains just like the B farmers would spend more of the profits from wheat in new equipment, etc.

This wheat price rise however was caused by weak I-O policing causing in effect a pump and dump scheme where speculators would make money as prices went up and then dump or short wheat as it went down. So the price of wheat went down through the floor creating chaotic panic with the B farmers because they now had more expenses because they had bought more land and equipment. The new price range even if random now causes many to collapse into bankruptcy until the supply of wheat crashes enough to force it back through the ceiling again or the B farmers learn to survive on this lower wheat price.

This can also happen without speculators when the I-O market is disconnected, for example the V team might make bread, biscuits, flour, etc to sell across the economy, their Iv agents try to buy cheap wheat and also visit shops and supermarkets selling bread. The Iv agents are pushed to sell more bread and so they do more sales training to learn to pressure the Bi shops to take more bread. As they succeed in making more sales the V management see Iv breaking through the ceiling and so they experience more growth in their bread business, they see this as the new normal of bread sales and expect the salesmen to keep it up, they might even fire some if they cannot maintain their sales quotas such as with Ameriquest selling subprime loans.

The demand for bread raises the price of wheat which makes the B farmers break through their ceiling and the Bi cooperatives like the V bread makers see this as the new normal. In the meantime though the Bi shops are not selling as much bread and biscuits because of the price rises as well as having been pushed into buying too much. They also have a floor and ceiling of bread and biscuit sales, it had formerly gone through the ceiling in sales because the Iv salesmen pushing their products had initially created more interest among consumers. Now like with the oil bubble in the GFC the increased wheat prices have dampened the desire for bread and biscuits, the sales fall below a floor making the shops panic as they had expected the sales they were making to be the new normal.

So they suddenly cancel a lot of bread and biscuit orders which causes the Iv agents to go through the floor in their sales like with the subprime salesmen as the market crashed, the V management in both cases were used to this new normal in sales and were unprepared when they went back through the floor again. Also with weak I-O policing in both cases the Iv agents would be using some fraud to make their quotas, they might tell the Bi shops that they will sell more bread and biscuits but this is just misrepresenting the market to make sales while leaving the shops stuck with excess stock. In the same way the subprime agents convinced subprime borrowers as well as Bi pension funds that the market was still good, this left people stuck with loans and bonds when the market crashed.

## Like the B borrowers seeing the prices of their homes crashing the B farmers saw the price of wheat crashing while all the colors experienced losses, misallocation of resources, and inefficiencies compared to if the price had remained fairly stable.

The Iv-B and V-Bi disconnect then creates these unstable floors and ceilings, with the wheat sales the Bi cooperatives as well as the V bread and biscuit makers believed there was a new normal and expected prices to move randomly at this higher level. The Iv agents and B farmers had both gone through a ceiling, the Iv agent was selling more bread and biscuits while the B farmer was getting more for his wheat. Both had deceived each other to some degree by hyping the market, the Iv agent had convinced the B farmer to grow more wheat because it would increase his sales while the B farmer convinced the Iv agent that he could grow more and pay for his farm equipment without the price going up too much. Of course both were wrong which showed neither understood the situation, the Iv agent to some degree new he was loading up the market with unsold bread and biscuits just like the subprime salesmen knew he was altering loan documents to make poor quality loans. However neither knew all the other Iv agents were also doing this.

The B farmer was falsely claiming he could grow his farm to provide all this wheat without spiking the price to trick the Iv agent, however he did not know all the others B farmers were also being deceptive. The result with the B farmers and Iv agents was like a poker game where eventually the bluffs were exposed and the prices like the pots collapsed. This mutual fraud could not have happened if the I-O police were stronger, the misallocation of resources and the booms then would not have happened. Also the V bread maker would have been prosecuted for hiring deceptive Iv agents while the Bi cooperatives would also have been prosecuted for their farmers being allowed to make false claims about their financial stability. With the strong I-O police then each color would have been better off, the boom and bust in wheat would have resulted in unused and spoiled bread, biscuits and wheat. Farms would have been set up then abandoned, farm equipment bought then allowed to break down for lack of money.

The V bread maker would have bought manufacturing equipment that was wasted while the Iv agents would have perhaps bought better houses and cars with their higher income only to lose them. The Bi shops would have been stuck with unsold bread and biscuits while the consumers would have paid more for bread and biscuits in the boom and then either faced shortages in the bust or had to still pay higher prices because all the waste had to be paid off in this way. This then is like the floors and ceilings of the subprime bubble where misallocation of resources caused houses to be built that no one can afford, loans to be made that could not be paid back, construction businesses to be built up that suddenly could not find work, and so on.

It is often dangerous to hit these floors and ceilings and rebound rather than crashing through, this was seen in the example of the auction where if goods do not sell at a reserve price they can take time to sell causing chaos in Iv-B. This also occurs with the wheat example the farmers might have the price of wheat hitting the floor of profitability which is dangerous for them, even if the price rebounds either strongly like a spring or like a dead cat bounce it still creates panic. In the same way the increase in the price of wheat might hit a ceiling of how much consumers will pay, they then sometimes stop buying bread and biscuits which creates a chaotic disruption in the market as some stock would spoil or remain unsold in this situation.

The Iv agent also experiences problems when he hits the floor or ceiling even with a rebound, for example he might have a bad sales month and be on the edge of being fired which makes him more likely to engage in fraud to makes sales. At this point the whole business experiences strain that might cause chaotic cracks, the boss might be ready to fire the salesmen and the company might have to waste money preparing to find someone else for the job or to shrink its business. When the Iv agent hits the ceiling the company might be on the verge of expanding its business as a result, investigation into this is wasted when his sales go back down. Bi shops buying the bread and biscuits might reach the edge of losing money from unsold stock which might create strains on storage space, consumers might hold off purchases waiting for bargains as unsold stock is reduced, and so on.

This also happened in the subprime crisis where the economy first hit the ceiling where real estate prices could not go up any further, when this happened Iv subprime and real estate agents could no longer keep their momentum going and many were fired. B borrowers could no longer keep getting new loans without an appreciating market so this caused the subprime loan business to start crashing as it rebounded from this ceiling. Hitting the floor has also been damaging to the economy, prices of houses in free fall for a long time as of 2012 might finally be bottoming out but this will now cause accelerated foreclosures of other houses so this bottom might be crashed through with another wave of houses for sale.

## Like auctions with no reserve it may be that houses will get bid up to higher prices with a strong rebound once they reach the floor and Bi bargain hunters have no reason to wait, however the process of finding this floor has caused some house owners to have negative equity even if temporarily. This would have caused some to walk away from their homes only to find their equity would have reappeared when the prices had stabilized to the new level with a dead cat bounce.

A balanced Biv economy would still have some prices hitting the floors and ceiling, for example with the auction there need not be an fraud for goods to sometimes not reach a reserve. This can happen by random chance, some bidders might not be there one day or they might have had other expenses making them short of money. It can also be chaotic where some bidders might have previously bought goods that broke down making them lose money. Chaos and randomness can then naturally hit or break through these price floors and ceilings but this is a natural consequence of uncertainty about the future. By policing these prices in the I-O market however there are fewer dangerous prices swings, for example an Iv agent might be selling some goods to Bi customers looking for bargains like in the auction.

However here usually the Bi customers are end users while in the auction example most of the bidders might be Iv agents themselves. The auction then might be part of chains of Iv agents like branches of a tree, there might be an agent that looks for goods to buy from companies and who sell some and place others in auctions. Then the auctions might sell most of the goods to second hand dealers who are themselves agents, they might then sell some of these to shops who then get to the Bi consumers.

This makes the process far more chaotic than in the I-O market, for example each Iv agent in this chain risks losing money and going broke which interrupts the fast flow of goods to the consumer. Like a food chain in Roy different Iv agents might find hidden vale in some goods, for example the first Iv company might pick the best bargains to keep, then the auction house might recognize some things that were missed and buy them themselves for resale. Then there might be boxes of goods that dealers go through occasionally finding something good and then hiding it deeper in the box hoping others don’t see it. When the goods get to the I-O market such as a swap meet for example the Bi customers are much slower and compel honesty from the dealer by blacklisting him if he rips them off. So there is a balance here if deception which sometimes might make a profit such as selling a counterfeit and sometimes it makes a loss when they lose a customer forever.

The best result in the Biv economy is then in the I-O market where some goods rise exponentially in price and sometimes collapses as I-O police find counterfeits or they might investigate the price swings and demand an explanation as might happen on a stock exchange. With others goods there might be a normalized price compared to markets in different parts of the world which brings reliability into investing rather than customers thinking the price is inflated or a scam. For example they might look up the prices of similar second hand goods in classified advertising and get an idea what their value is in independent sales This gives a random variation of price according to availability or rarity, what condition the goods are in, seasonal factors, and so on.

This kind of market indicates there is enough I-O policing in it and so resources that are not wasted because of fraud or an inefficient market can be used elsewhere, for example if customers get a good deal they save money to use on other purchases while the Iv agent makes good reliable sales so he avoids wasting money on unsold stock. Small amounts of bubbles in an occasionally overheating market like a froth then is more stable than a large bubble which can cause systemic damage to the economy if it collapses, banks for example are bubbles because people usually assume their money is there in the bank any time they want it and when people borrow money they assume that the bank will be there to receive the payments and offer more loans later. This is like a bubble market because when people buy a house in a boom this is like putting money in a bank and expect to get back more money when they resell the house. In the same way when people sell a house this is like withdrawing money and they expect their profits like interest in this way.

People also treat these houses like a bank, in the US housing boom many used their homes like ATMs and repaid them by depositing money later or selling the house in the equivalent of changing banks. Many businesses then act like fractional reserve banking when they allow people to loan or borrow from them for varying amounts of time. Usually this works because people’s demands for money is random, if everyone wanted to use their house for an ATM at the same time it might cause too many houses to be sold at the same time crashing the prices chaotically. This borrowing money on houses in a chaotic Iv-B bubble then was like with a bank in a bubble market where people might deposit or withdraw money in runs rather than independently of each other. For example in a boom many might make profits and suddenly deposit extra money that the banks have to lend out or refuse to pay interest, then the people might suddenly want their money back as the boom crashes causing the bank to either go broke or suddenly curtail lending creating a credit contraction and more bank withdrawals.

## Without the I-O market where chaos and randomness are balanced fractional reserve businesses are dangerous because some money is presumed to be in two places at once.

With sufficient reserves and an economy not too hot or cold it can bubble along like a hot springs in an ice field where the 3 phases of money as frozen, liquid, and gaseous use their advantages in the right situations. For example there will always be some chaotic money rushing in and out of banks, some agents might make sudden profits and then later make large losses which the bank averages out with its randomized liquidity. Other people deposit and withdraw money randomly giving a stagnant but safe source of income for the banks.

Loans and term deposits are like frozen money where in a loan the bank cannot get back its money except over a long period of time like melting ice, in the same way a depositor with a term deposit might only get their money back in ten years. Any business or even people however can act like these fractional reserve banks, they then create smaller areas in an economy where there is some leverage with hot money and some insolvency with frozen money. This then happens anywhere that a person or company cannot pay all their bills or get back all the money they are owed immediately. In some cases this can all be frozen money, for example a person might have money on term deposits and also have some long term loans where they pay the loan repayments with their interest received.

This then is exactly what a bank does except on a larger scale, however in an economic crisis all these individuals and companies multiply the chaos as they each have their own bank failures, for example the term deposit might be late paying interest causing them to default on their loan, this is like a bank not receiving loan repayments from some people and not be able to pay interest on term deposits. The only difference then is that these deals are concentrated in a bank but more dispersed through the economy, this is why when banks have difficulties they might be bailed out but their corresponding debtors and creditors might be harder to help causing damage in the economy. Other people might lend and borrow in a short term way like banks do, for example a bank might accept some money to be withdrawn on demand while it gives out overdrafts to companies it can revoke on short notice.

This then is like individuals lending money to friends and family they can get back quickly, they might also run small accounts at a bar or shop that they might have to pay on demand. All of these then are credit expansion in a Biv economy because if two people need the same money at the same time then there is a conflict causing this leverage to collapse, for example someone might want to borrow money from friends until payday and find they all happen to be short of money at the same time. At other times they might all find they loaned friends money and then when they suddenly needed it they have to wait, this is like a bank that loaned money and then cannot get it back if it demands too much back too quickly. For example when friends loan each other money this acts like a bank between them, if this breaks down by too many needing money at the same time then they will experience a credit crunch and might lose money by not paying bills or missing out on buying bargains. When the economy is highly chaotic this mutual lending might be accompanied by deception, for example many might claim they can repay but then there are mass defaults as many cannot get the money.

## This causes the friendly lending to chaotically collapse like an insolvent bank and so over time some loans are repaid or written off while many might have their credit worthiness affecting by the chaos.

In Bi-B neighborhoods the I-O police are weak, this is like in Ro-R neighborhoods where gangs might police their own area and not cooperate with the police. So these Bi neighborhoods might tend to lend to each other cooperatively and some B people deceive them and do not pay, sometimes this disrupts the credit network between friends just like the B liar loan borrowers disrupted the Bi pension plans by borrowing money with subprime bonds sold to the Bi pension funds. V-Iv areas also can have their credit networks disrupted, for example V companies might tend to lend money to each other cooperatively like LIBOR between banks. If one bank like Barclays recently manipulated this network deceptively then this disrupts the low interest rates V charge each other. Usually the I-O regulators miss this problem because just as in Bi-Ro neighborhoods they tend to be unwelcome. The best way to watch for these problems is by using Iv snitches.

Goods and services can also act like banks where V-Bi people might loan goods to each other or they might do services to each other such as babysitting like the example Paul Krugman uses. For example people might help each other out by babysitting on the assumption that they would get a friend to babysit for them when they needed it. This tends to work randomly like a bank making loans and taking deposits, this could even be formalized by people keeping an account of how many hours they have done for each person. Assuming that people need babysitters for random events such as birthdays and anniversaries it should be unlikely that people cannot find a babysitter. For example it is unlikely that everyone has the same birthday, they should be evenly distributed throughout the year. If there were dependent variables associated with these birthdays, for example if astrology was accurate then people working in government might have similar birthdays and horoscopes. This would then cause periodic runs on the babysitting bank where there was a panic to book first before others realized there was a shortage.

This might be resolved by a lender of last resort, people from out of town with different horoscopes might occasionally come in to lend babysitting hours and then the babysitting bank might have to have some people return the favor. As long as people are cooperating it would seem deviant for some to not work out of town when needed so the system would work well even with some chaos in the birthdays. Some people might work more than others to save up babysitting hours, this is like some people saving up more money in the bank than others.

As long as people are cooperating in V-Bi this doesn’t cause a problem, their need for babysitting is still random so if they build up a large balance in the babysitting bank then some others must have taken advantage of this by going out more. It is unlikely that this system can get too far out of balance as long as everyone is cooperative, there might be long term trends where some people need babysitters more when their children are young just like they need to borrow money from a bank when starting out. Others when their children have grown up might still babysit to pass their credit to their children when they have kids. When Iv-B people are added to this system then they might try to game the system by looking for those who need babysitters, building a credit and then pretend they need babysitters on the same day. When the others cannot pay with babysitting they might demand extra credits, for example that they get two babysits in exchange for their single one to cancel their bogus night out.

This then causes speculation in the price of babysits according to availability, it becomes like credit cards where someone might pay a little extra to have babysits on demand. If others pretend that credit is tight then the interest rate on this babysit credit card might go up. As more Iv-B people play this game the price of babysits might fluctuate like bids in a poker game, for example someone might build up a large credit in babysits and then pretend to suddenly need babysits themselves when they know it is most inconvenient for others. As others try the same trick there sometimes is a shortage of babysits and so the price of them booms, at other times there is a glut as many try to save to do the same thing. This is randomized to some degree by those who cooperate with each other, they tend not to lie and like bank reserves they can absorb a lot of the boom and bust cycle in babysits.

However when there is no penalty for deception they might also be fooled by these bluffs and pay more for occasional babysits when other V-Bi people cannot easily cover them. The Iv-B people then can steadily profit from their gullibility, however if they are just accumulating credits in babysits then their profits depend on the market staying higher and their tricks continuing to work. For example the extra credits people get for babysitting on critical days like public holidays might make outsiders come in like lenders of last resort, this then can crash the market for babysits because there is no more artificial shortage. This is also like the US real estate boom that ultimately hits a ceiling of more and more homes being built. It can also hit a ceiling or floor when the price of babysits goes up too much, people might just decide to stay home and then when the Iv-B people see the prices hit a ceiling they realize there are no more profits from their deceptions.

Manipulating the market then slows and people show their hand more as in poker causing a chaotic tumble, this is because many Iv-B people do not really want these extra babysitting credits unless they are profitable. Many would only be deceptively speculating in them because they are factoring in future profits and when they realize there aren’t any they all tend to want to cash in at once leading to a crash. Such a situation is moderated by the I-O police, for example they might try to get Iv-B people to snitch on each other faking the need for babysits. When enough people get caught then this deception seems to be dangerous, for example there might be a penalty of losing all their credits for faking a need for a babysitter. Of course it is impossible to catch everyone however the I-O police fund their job by the people they catch, they can then go out and have free babysitters as payment for policing the system, this is like I-O regulators getting paid to reduce fraud in the economy.

This is then like fractional reserve babysitting, the system only needs a limited number of credits in it to work because someone can usually borrow babysits that other people can provide. Any activity can be fractional reserve like this, it just means that V-Bi when it insures against an activity usually only needs a fraction of its reserves to be available at any given time. It might be for people lending lawnmowers to their friends and in exchange borrowing their leaf blowers, others might have a lawn edger to exchange and the relative prices of these might fluctuate like a V-Bi market when people cooperate in V-Bi. Iv-B people however might start to game the system, they might demand more for the lawn mower use because they claim they need to mow more often, the I-O police then might catch them by listening for the sound of mowing or using snitches.

## All these kinds of goods and services banks can then be affected in an economy, one crisis can also extend its cracks into another.

For example a crisis in babysits coming from a chaotic event like impending war causes more people to attend the same dinner or meeting. This causes more deceptive gaming of the system as people demand much higher babysit credits for not going to the meeting, some might have to pay because the meeting is about a financial crisis because of excessive war costs. The wide fluctuation might then mean some people need to suddenly work doing more babysits and then miss mowing their lawns or other yard work, this then spreads the imbalance through other goods and services banks. Also people losing work in the GFC might have to sell their mower breaking down the mower bank, then those with mowers start to demand higher credits to borrow them.

This then is like shock waves radiating out from the meeting an unemployment, temporarily the price of babysits and borrowing a mower might go up like on the crest of a wave and then back down as the time increases after where the system gets back into balance again with randomness. These waves can also crash like waves on a sand bar when someone has insufficient liquidity, for example they might need a babysitter but have no lawn tools or time to do babysits in return on the days people want them. They then experience chaos where they might miss the meeting and get fired, then have to sell their mower causing others to often not be able to mow their lawn, and so on.

The system then might turn mainly Iv-B from this crash where there is now not enough V-Bi reserves to quench the chaos, people might pay much more for borrowing a mower and there being not enough mowers to go around the price might continue to fluctuate chaotically as Iv-B people try to deceptively scheme and bluff each other on the best time to borrow it. Working longer hours after the GFC for less pay might make babysits also vary chaotically, some people might have to pay much higher amounts for babysits and then have to charge more for others to use their mowers. People can still try a V-Bi solution of being honest with each other on their needs but with this scarcity of resources the Biv system starts to turn to Roy and the goods and services banks start to experience crime.

For example mowers might be stolen and others renege on babysit commitments because they owe too much, to police this situation then the I police have less influence because as people become poorer they also cannot pay penalties. Instead people might beat someone up when they catch a mower thief or find someone is beating their children when babysitting but cannot afford to get a better babysitter. In this case then the O police are needed to assess these complaints in a neutral way or the goods and services bank can fall apart in Y-Ro team conflicts and Oy-R deceptive conflicts.

To assess the effects of a recession then it might be necessary to map out these goods and services banks, for example people might be randomly surveyed about whether they borrow goods and services from others. At different times then these surveys can be used to determine if there is an erosion of social cohesion from crises or scarcity.

Share prices and exchanges for commodities and derivatives can also be analyzed for bubbles as well as disconnects in Iv-B and V-Bi in smaller price moments. A large Iv-B bubble such as the oil bubble is all too obvious in the sense that it exhibits exponential growth, this then is the way bubbles can be differentiated from more balanced growth. However much smaller indications of bubbles can be harbingers of future problems, for example small rises and collapses in commodity prices might be indications of market manipulation that could get out of control if the smaller bubble collapses from a lack of energy and momentum become rare. For example there might be a bubbling like this in a food commodity and someone notices that a relatively small amount of money will appear to be a trend and cause other speculators to jump into it and so it rises into a large bubble.

Then the speculators will be trying to spread disinformation about the real cause of this price spike like a small pump and dump strategy, often it will delude some others. Then at some point the chaotic price rises will stop as the momentum of money slows and the reality dawns on people that there is no fundamental reason for the price increase. Then the game will be to get out first while staying in to get the last of the price increase as profit. Judging the high price can be as difficult as poker in such a deceptive environment, if players call in poker too early they might make less money and if they fold their cards too early they might get bluffed out of their bets. In the same way a bubble at the top is where the speculators try to maximize their profits because they might well lose on other speculations later. This is then the opposite of the Law of one Price where a security is presumed to be the same value in all exchanges, like in poker it is more like the Law of No One Price where the card values can become irrelevant with so much bluffing.

Seeing these smaller kinds of bubbles then might alert I-O police to deceptive rumors being circulated, these could then be rebuffed and the perpetrators caught preventing the economic waste from this gaseous money. For example rumors in the market and media might be surveyed and compared with price changes to see how many baseless rumors are affecting the price and whether they are deliberate misinformation. They might also be honest rumors panicking the market, in this case the I-O regulators should try to ascertain the facts as this opacity can damage the market.

Situations like this are like a vicious circle where speculators make money and damage the economy with spiking commodity prices, but often they are looking for investments like this because the economy is damaged from other bubbles and legitimate investments are rare because crooked companies are taking all the profits. So not policing these smaller bubbles helps no one in the long term except for the very smartest and most deceptive traders just as the GFC like in poker benefitted a small percentage of people and hurt the rest. Such a market might also be seen as too V-Bi and random indicating there is little economic activity such as new mines opening, new farms being created, new food technologies in the green revolution creating demand such as for ethanol for cars, and so on.

A large amount of this bubbling in prices then indicates a lack of energy and momentum in the economy like small weeds growing and quickly dying, I-O policing here should concentrate on eliminating unfair practices such as excessive Bi unionism or V price fixing which might be stopping growth. For example in 2011 many of the share markets around the world have been V-Bi and random because of the lack of new innovative companies starting up, there is also flat demand for products from innovative companies such as in electronics because of low wages.

Exceptions might be in areas still growing as Iv-B such as internet related areas, some software games, blockbuster movies raising share prices of studios, anticipated Internet Public Offerings creating interest in related companies, and so on. Some growth in shares can hit a ceiling because of suspicion about many companies, for example some banks are still regarded as insolvent because of non-performing loans or toxic assets such as derivatives and subprime bonds. When the share prices try to go higher they run into this fear of more financial fraud and investors run away at the first sign of weakness causing a rebound from this ceiling. This lack of transparency then can be reduced by more I-O policing, banks might be more thoroughly audited and bring back consumer confidence rather than half fixing them and creating zombie companies that cannot grow or make enough money to regenerate their decaying and toxic assets.

Another aspect to monitor for is where a period of V-Bi stagnation produces large amounts of savings, however when these are invested in new businesses they can grow but this is just a deviation and so they return to normality which is stagnation again. Usually this can happen without much wasting of assets as in a collapse, however the economy is also very inefficient because the lack of growth and innovation makes things fall apart over time. For example in the 1970s there was decaying infrastructure over much of Europe and the US, Bi unions and V ossified management held back innovation so new technology was not connecting to new goods and services very well.

Much of this changed with the growth of the computer industry because it was so innovative as Iv-B, also networks created more roots and branches like nodes of a network and later the internet. This V-Bi economy is like a plant that has little competition from other plants nearby and so is not in danger of being overshadowed. Plants can for example detect the color green of plants near them and this can make them grow faster, farmers sometimes use this with strawberries to get increased yields. When there is little competition then plants tend to evolve to conserve resources for the maximum amount of safety and avoid large roots and branches that might break in a chaotic storm. This is why it is rare for example to see only a few large trees growing and evolving with only small plants and grass around them, there is no pressure for a revolutionary strategy to beat the other plants by growing tall.

In the same way the lack of competitive pressure in an economy makes people and businesses play it safer as V-Bi and accumulate more liquidity. Because V-Bi and Iv-B are disconnected with weak I-O policing then these V-Bi reserves can be gotten deceptively by Iv-B to fund speculative growth that leads to collapse. This is because V-Bi investors see these Iv-B investors as being like the stagnant but transparent companies they are used to, but with a higher return. This is like Iv-B desert plants that are used to growing quickly with scarce resources, trying to seed before they run out of nutrients, when they encounter a lot of reserves such as fertile soil they can run riot using up the soil and then dying off like their usual plan leaving only seeds while the V-Bi plants suddenly find they have poor soil around them.

This is like fast growing weeds invading a stable and slow growing forest, there is a disconnect between the two kinds of plants. In the same way a Roy disconnect means that Oy predators can chase R prey and if they have a competitive advantage might eat most of the R prey and then start to die out themselves, Iv-B weeds then are the overtones of Oy-R animals. This can leave the Y predators hungry as they sometimes eat R prey or the Oy predators might undermine the Ro herds by eating their R young, also Ro animals can come under more pressure because they get targeted more by Y and Oy predators since the R prey have been decimated. This is usually prevented by the O middle of the food chain being a moderating influence like police, in the same way the Biv plants can resist the Iv-B plants by being more stable and also they stagnate less than the V-Bi plants.

With a V-Bi and Iv-B disconnect though in the global economy Iv-B needs to find capital to grow and innovate like desert seeds needs for find good soil. This problem was found in V-Bi stagnating areas such as in Japan which was experiencing a lost decade of low Iv-B growth after its exponential growth in exports and property boom had collapsed. So this stagnation produced excess savings as people were more cautious, also Japan had a trade surplus which made money still available but with a lack of growth relate industries to invest it in. The lack of I-O policing then caused this money to be lent into the secretive Iv-B carry trade where the V-Bi investors could not watch it as it was invested in other country’s bonds and helped to fuel the subprime bubble.

This money was reigned in as more I-O policing made the Japanese suspicious of the viability of these investments, as well as their Yen appreciating against the dollar, then this removal of some of the V-Bi reserves caused Iv-B to hit the ceiling earlier than many expected and start to collapse. When Iv-B senses this scarcity of resources it grows even more competitively to get the last of the Gb resources before others do and to seed quickly, this is where the upper V management try to cash out with their winnings before the company collapses. This makes hitting the ceiling even more damaging for some competitors as they chaotically scramble to leave each other in the worst shape in the collapse and recovery.

The less I-O policing there is the more fraudulent this can be, this was seen in many subprime lenders, US banks, US investment banks, hedge funds, etc who have been prosecuted since the GFC. Their growth path followed this Iv-B model, they grew faster to try to overshadow each other with market share and to stunt their rival’s growth, then when resources became scarce they grew even more wildly and accumulated toxic waste as bonds like using up poorer and more toxic Gb soil, then the V management tried to get their money out in stock options, pay rises, bonuses, etc. When they collapsed usually there were massive losses, for example the Fed is still as of 2012 trying to sell toxic assets it took on in the bailouts in its Maiden Lane assets.

The same occurred in the Tulip Bubble, many people became wealthy through trade in Holland at the time because the Spanish had recently been driven out, this caused more V-Bi money to be sitting around unused instead of being paid as tribute, it was then loaned or drawn into Iv-B speculations like the tulips. The Savings and Loans crisis was similar, there was a large accumulation of stagnant V-Bi reserves of liquidity in the banks. When Reagan deregulated them and introduced more Iv-B competition this caused more money to be lent to fast growing but ultimately collapsing investments as well as money being stolen by Oy criminals. The deregulation of the US and the European economies has resulted in all kinds of V-Bi reserves being used up in Iv-B innovation that is usually quickly obsolete, for example wasting money on TVs and computers that become out of date and then more of the V-Bi savings are used up to replace them.

In the US this caused pension funds throughout the economy to be used up to buy subprime bonds from Iv and Oy salesmen creating large losses, extra Iv-B competition caused many businesses such as the airlines and GM to be underfunded and lose money as well. In 2011 there was increasing amounts of V-Bi liquidity in the global economy as people saved more again, also there was plenty of capital in US banks that could not fund stable Biv investments and so this money was being loaned out to Iv-B speculation again like a Fed based carry trade. Instead then of this money being used to create stable plants the disconnect is being maintained and the money often goes out of the US creating bubbles and collapses wherever it goes, like currency speculation, buying high yielding bonds in other countries, bidding up commodities such as foods, etc.

Because this high leveraging of speculation is so restricted in some areas elsewhere there is deflation, to try to fix this the central banks add more money to the economy but it only makes the Iv-B weeds grow as they snatch the resources before other stable businesses can use it.

Since these Iv-B businesses are like desert plants they will just use up these resources and crash again so much of this liquidity will be wasted leading to a prolonging of the downturn after the GFC. For example most of these Iv-B bubbles will turn into Negative Sum Games where overall money will be lost in them or as in gold where investors will end up with a Zero Sum Game because they are only betting against each other.

Inflation though will turn this into an overall loss for the average investor, for example as the Iv-B competitors try to outwit each other they are all losing purchasing power on their money like a poker game where money is taken out of each ante. Trying to build Iv-B business that collapse will create more losses and economic waste, this is also an attempt for V investors who did well out of the GFC to hang onto their gains by exploiting B resources, usually this will result in losses for them as well. Other V-Bi reserves are found in Sovereign Wealth Funds such as the oil producing countries, they however usually look for sustainable Biv businesses to invest in as they have been burned in the past.

The difference with some countries with a trade surplus is they are playing a Negative Sum Game where they hurt their own economies, they need to invest overseas to keep their currencies low and maintain their export competitive advantage. This can mean they have to take on more risky Iv-B businesses if they are the only ones offering any reasonable yield and have a high potential to take more loan money. For example Japan could have just invested all its money in US treasuries instead of the carry trade but was chasing a higher yield, investment managers when faced with high yielding but opaque and deceptive Iv-B investments often cannot say no because there is no evidence they will collapse because they are so opaque. If they decide to only invest in low yielding V-Bi securities then competition from other Iv-B investment managers steal their clients by offering them more returns on their money, they can also be deceptive as Iv explaining away any fear the more honest Iv salesmen have and so the better advice gets marginalized. This is another example of the modified Gresham’s Law where in the absence of I-O policing checking their claims the bad investment managers with fewer scruples drive out the more honest ones. This then tends to feed the V-Bi reserves into the Iv-B system wasting it, because of a lack of I-O policing in both systems this tends to wastefully use up resources in both until there is a collapse or stagnation.

Karl Marx also saw some of this disconnect, he thought that businesses as they made money would have few places to invest it in sustainable businesses and so they would start to invest it in Iv-B speculation which would lead to collapses. This is also the problem with rent seeking, Iv-B makes a lot of extra money by deception and then cannot easily find good places to invest it, loaning money to the people they ripped off often does not work out well. Marx also thought businesses would compete with each other in newer technology cutting prices to overshadow each other, they would then cut their B labor costs lower to compete reducing the ability for workers to buy their goods and also leading to a collapse. As this competition builds a higher energy and stronger momentum time because shorter, this means jobs have to be done faster by workers and also their time because less valuable causing wages to drop.

## The reason is that the Iv-B energy economy tries to make profits this way instead of taking a longer time, to compete with this then workers need to drop their wages to get time to work or there develops higher unemployment where their time is not worth anything.

This is the same kind of V-Bi and Iv-B disconnect, the V reserves the businesses accumulate often have nowhere to invest in strong I-O stable plants and so they loan it into Iv-B speculation which creates a boom and bust wasting much of the money. This is also like stable Biv plants finding their humus is consumed by Iv-B weeds. Also as these Iv-B businesses compete with each other they cut prices in Iv and then wages in B to use up ever reducing amounts of Gb resources until they collapse. The difference is that Marx thought this was inevitable, indeed his ideas have gained some new respectability after this same situation happened in the GFC. The difference in Aperiomics is that this is caused by weak I-O policing of the economy, Marx seemed to assume with some justification that capitalists could not be effectively policed meaning that R revolution to overcome them was inevitable.

This is similar to in Aperiomics where the I-O police are regularly weakened by pressure from V capitalists to make more profits from B workers by cutting corners at the expense of their long term profitability. However instead of this meaning capitalism as Biv would fail and be replaced by something else the I-O policing is innately unstable which is why these disconnects happen over and over. So while these disconnects between V-Bi and Iv-B can be shown to lead to the GFC it does not follow that working to restore these connections in the I-O market will prevent economic problems in the future, or even reduce them. This is because there are always too many pressures in economies to weaken regulation even when it is well known what effects this will cause.

For example there was rampant fraud in the subprime lending industry but deregulation meant that much of it was not policed even when people were clearly being hurt by it. With these disconnects then there will always be Iv whistleblowers talking about the deception going on such as in John Perkin’s book Confession of an Economic Hit Man but these will be mostly ignored. There will also be B workers trying to expose fraud and deception to their Bi communities, V areas unless they are effectively policed will tend to listen to their Iv agents telling them things are ok and these whistleblowers are wrong or the problems are very small. The disconnect then tends to protect itself against correction and exposure of the problems it is causing, this is why I-O policing gets weak in the first place.

The media can also be watched for Iv-B and V-Bi disconnects, for example some share prices might be touted and then collapse indicating pump and dump schemes and economic waste. I-O policing then might by looking more for this restore more confidence in financial news in the media. Short sellers sometimes use contacts in the media to spread misinformation that some companies are in trouble or a bad investment, this also indicates excessive Iv-B deception, I-O policing can reduce economic waste from investigating these linkages between speculators and journalists. This policing by restoring confidence in the media can allow investors to make more accurate decisions in the I-O market, this can cause the economy to prosper earlier because the panics from deception no longer cause collapses and waste of resources.

The media might be monitored for keywords related to chaos such as growth, collapse, disaster, panic, etc. When these words tend to cluster around particular industries or stocks, etc then the I-O police might examine the area to see if it being caused by criminality.

If other words such as normal, random, stagnant, boring, etc are used then this might indicate V-Bi lack of growth and so the causes of this such as where roots and branches are being blocked can be investigated. This process is similar to looking at words used on Twitter to work out market directions. For example companies that stay around a normal value could be investigated for what is stopping them from growing, their Iv salesmen might face crashes in sales volume because of overseas competition, their B worker roots might find their business collapsing from expensive raw materials, there might be less ethical companies in the business that grab too much market share and give the industry a bad name, and so on.

Short sellers can become associated with the media, using them to spread bad stories about companies to depress their share prices for a profit. The other side of the story is that short sellers make money by exposing fraud in other like whistleblowers to the I-O police or SEC, the problem then can be a weak I-O police in two ways. The first is that the media can be corrupted in this way and the second is that Iv-B fraud in companies can be ignored by the I-O police to the point that even the media cannot make them investigate these companies, short sellers might then resort to using the media to police the market. This then becomes an Iv-B versus V-Bi disconnect, the fraudulent company might be Iv and the short seller either another Iv company like one predator attacking another, or they can be B trying to put a deceptive Iv predator out of business.

It can also be a battle between Iv-B deceptive companies such as subprime lenders before the GFC and the efforts of V-Bi media and short sellers to expose their tactics for profit. For example if they are exposed their share price might go down and the short sellers profit, they can then be for transparency in business and make money this way. The second is the media gets more readers and viewers by exposing secretive and deceptive criminality, so both ways can lead to profit but this disconnect means there is like a civil war between the two instead of the I-O police investigating companies properly and preventing this chaos from growing to this point.

Deregulation can make this disconnect worse as I-O policing gets much weaker, a similar situation used to happen in Latin American countries where the media often tried to expose secretive activities of V drug lords and their Iv dealers, or corrupt Iv police, the result was often either the journalists got the criminals finally noticed enough to be arrested or the journalists got silenced. Complaints then need to be investigated at a low level of chaos, one problem with this is explained in the book Selling America Short by Richard C. Sauer where the number of complaints can be enormous. They are also often motivated by some agenda such as revenge against the company, to profit from shorting their stock, to get rid of a competitor and so on.

Elections at all levels of government can also be monitored for Iv-B and V-Bi disconnects, for example deceptive political advertising smearing opponents can indicate Iv-B tipping points that candidates are trying to reach to knock otherwise normal politicians out of a race. Iv-B demagogues might be inflaming debates with heated rhetoric and sophistry, this can cut out of the debate more sedate V-Bi candidates who might look bad by comparison.

Often these ideas might excite people to vote in politicians who then can get nothing done or oversee more economic collapse because their ideas didn’t work or were only designed to give tax and other breaks to secretive special interests funding the campaign.

Without I-O policing then unethical politicians might lie their way into power with donations from companies looking for tax cuts or no bid contracts, if not exposed by the police then more ethical candidates stand no chance like the modified Gresham’s Law of bad candidates driving out the good because they cannot offer enough honest concessions to get campaign funds. Unethical US politicians can also legally trade shares with insider knowledge, for example with the Affordable Health Care Act many politicians bought shares in companies that would benefit from parts of this act passing or they lobbied for changes that would then help these companies.

Bi union electorates might have candidates they bankroll to maintain laws favoring Bi unions, other V areas might support right wing candidates that push for tariffs for some businesses, government contracts for the defense industry, bailouts for Wall Street inundating the politicians with donations and lobbyists in 2011, and so on. Without I-O policing to keep this honest an economy can fragment into V-Bi politicians with their secure funding and policies leading to stagnation, and then other Iv-B areas with demagogues and deceptive policies that can cause economic collapse or even preach that collapses are a good thing to purge the economy. Often they can be, Iv-B businesses can do better in chaotic and unstable conditions than stagnation.

This can also relate to fact checking in the media, for example whether candidates and their supporters are permitted to lie in the media and whether the media can be prosecuted for not correcting lies. If they regard the media’s role as I-O in discovering the truth much as the I-O market discovers true prices then they can keep the dishonest candidates out and this will tend to reconnect Iv-B and V-Bi into a more sustainable political process. This in turn creates more sustainable economic policies rather than destructively zig zagging between Iv-B and V-Bi. For example when political ads become a war of deception from Iv and B then it is likely candidates will boom in value or bust.

Other ads might have a war of normality between V and Bi where both want to appear as family men, religious, eating ordinary food, and so on. This part of the campaign is more like a war of attrition where rival teams of supporters canvass homes trying to get out the vote, attend rallies where they cheer together and acquire a sense of identity from association with others. This political process then can be unfair, a candidate might win by force of numbers at rallies rather on the merits of their polices. When this is added to the Iv-B war of disinformation then it gives the disconnect between the political advisors, some V-Bi experts try to remain honest and appear normal to the voters while the Iv-B experts believe hurling enough mud will tarnish the candidates.

These two strategies are incompatible with each other, a candidate cannot prop up the campaign by appealing to stability and normality and at the same time descend into mutual lies and mudslinging. This is the same dilemma as after the GFC where V-Bi advisors wanted to normalize the economy by propping up and stabilizing it while the Iv-B advisors wanted to let it descend into deceptive competition where companies might win or collapse. When there is this disconnect between political advisors it tends to lead to the same disconnect between economic advisors as many of these were involved in the political campaigns and rewarded with posts in the administration. Instead of the political process cleaning up the economy with elections it can corrupt them with this disconnect.

Innovative industries also need to be watched as wellsprings of Iv-B growth which can often use up V-Bi reserves. For example new innovations occur much more frequently in the modern day economy, picking up a Science magazine or look at web sites such as physorg or gizmodo and you can see new seeds of businesses where technology is potentially leading to savings and new products. Some of this will be better than others, they represent revolutions and attract energy, momentum, and sometimes funding from angel investors and venture funds. Sometimes these can be fraudulent as part of a pump and dump scheme requiring I-O police to proactively look at these areas.

With so many of them occurring in the 1990s in the growing internet tech bubble this eventually attracted more capital from V-Bi looking for investments, some of this may have been because the US government was cutting its deficit and so leaving more to invest in the private sector, also Bi communities were sharing in the boom with higher wages and some Iv-B leverage making money in their pensions funds. This then allows more V-Bi savings to be drawn into the Iv-B bubble often with deceptive Iv salesmanship, this leads to a boom and then a bust as the deceptive and mutated business models find they cannot attract a good price in the I-O market in the crash.

It turns out many of the internet products in the late 1990s were not wanted at that time, eventually the Iv-B hype in tech stocks had to connect to what real investors would pay in the I-O market. The market crashed as it reconnected with some honest stocks such as Microsoft prospering while deceptive pricing of some stocks was exposed as the I-O police strengthened with complains of fraud. These small bubbles of individual stocks can be like cracks in the way they spread and join together into a boom but they are more like branches which have the same shape as cracks. For example as some internet companies were hyped in the 1990s others connected to them, some companies might have had web sites being promoted while other companies were connected to them in chains such as with optic fiber, faster modem, integrated circuits and chips, software companies with products running on these chips and so on. When the market crashed then there was an Iv-B domino effect as one collapse caused another, for example some software companies would have been bankrupted as web site based companies collapsed, this would have made some chip manufacturers collapse as well.

So as this market in Iv-B heats up the bubbles grow together like water boiling until it becomes either a giant bubble that collapses in a bust or completely steam in some areas which distorts the pricing around it, then it cools and becomes liquid with a dramatic drop in price as energy and pressure in the I-O market. Monitoring Iv-B small bubbles like this for fraud and deception can allow legitimate innovations to mature into Biv plants without the investment funds being sucked into scams and mutated ideas like hothouse flowers that can never survive, just being a waste of resources. For example when tech companies formed that could never amount to a legitimate business they were just a waste of Gb resources even though Iv or B sometimes made money from each other or sucking in V-Bi money like bad poker players at a pro game. This is a modified Gresham’s law again, or we can call it the bad business law that bad business drives out the good without police.

The same happened with the subprime and related securities bubble, the carry trade provided the initial V-Bi funds for it and the various Iv-B innovations such as Credit Default Swaps, tranches in bonds, CDOs, shorting subprime, etc all created some Iv-B profits like a poker game sucking in the gullible. When these started to join up together into more comprehensive products like a subprime conveyor belt creating bonds and insuring them with swaps to reduce reserve requirements for banks then it became like a fully-fledged Iv-B plant. The problem was each branch and root of the Iv-B economy could potentially become a crack or chaotic break because those businesses could shear and collapse taking down others, the more flimsy the system became with low I-O regulation then the more likely it would become most fragile before disintegrating like the desert plant.

## So monitoring these individual innovations would have seen them joining up together in more branches, the I-O policing being left behind in some areas leading to an explosion in growth would indicate Iv-B and eventual collapse.

Viral ideas can also be monitored in the global economy for Iv-B crime, for example YouTube videos often go viral and have millions of views as do pictures, etc when people email them to each other. Others can be posted in social media and go viral that way growing rapidly in popularity and then suddenly collapsing as a new one comes along. These kinds of viral ideas then become quickly obsolete as revolutionary new ideas replace them mutating to get the V-Bi public’s attention and creating value in internet businesses with advertising and search engine results.

These then grow in a similar way to new Iv-B business ideas and new inventions, some can go viral and become big companies, get bought out by larger businesses and collapse causing losses. This is like in Roy where Oy predators or R prey might increase rapidly in numbers and lead to imbalances in the food chain as they are eaten, this then causes sudden growing and collapsing in the numbers of other predators and well as prey being ignored and then eaten again as the mutant prey collapses. For example R locusts can suddenly grow in numbers and collapse, this is hard for the ecosystem that can feed on them to handle. The locusts might have extra offspring expecting there will be more V food, Oy predators such as birds start to starve when the locust numbers collapse after they have eaten too much V food stripping fields bare, this can create too many O predators now hungry so they overeat other insects causing their numbers to crash, and so on.

Sometimes this can happen by modern farming methods interfering with the stable Roy ecosystem, for example pesticides might kill good and bad insects and as they mutate around this the bad insects end up driving out the good by taking more of the food. They are thriving again as good insects by nature don’t damage crops as much, because they eat less they get a smaller share of the V leaves and their numbers drop compared to the bad insects.

The R pests might also become more toxic to eat for predators who have not adapted to eat them, so the R contagion tries to mutates in a revolutionary way to evade its Oy predators whether animals or pesticides. In turn Oy attempts a counter revolution where the innovations of R are matched, because this Oy-R war escalates there can be booms and busts of Oy birds and R insects, also boom of use of Oy pesticides that turn to a bust as they stop working or become so toxic the O police ban them.

This is like also Oy military armies trying to eradicate R terrorists and is highly unstable, R develops a new strategy such a suicide bombing or IEDs in Iraq and the Oy forces have to find a countermeasure. The monitoring of these viral ideas occurs on the internet, on the battlefield, in business, etc and is the same as the already used monitoring of diseases for Iv-B mutations and sudden growth such as h1N1 and as happened with AIDS. For example a virus has an R revolutionary mutation so it can grow quickly and evade Oy predators such as the I-O immune system, they then lead to developing an Oy counterrevolutionary vaccine.

Fads can also be monitored such as dangerous stunts people do to make viral videos injuring themselves or others, people making videos of crimes or suicides, hate messages that go viral as well as some kinds of pornography. The police are already used to monitoring these like with diseases, treating all of these economic aspects as potential areas for contagion and color disconnects should be able to catch problems at a smaller level with less economic waste. For example R pornography with its deceptions became a contagion that lead to revolutionary criminal ideas, no one had thought the internet would be a breeding ground for an explosion in porn subscriptions. This led to Oy predation where women might be tricked into working in this field or in R prostitution while Y organized crime controlled it and took the lion’s share of profits. In effect then Oy predatory crime developed a counter revolution to the R revolution in porn by taking over these businesses, this exploitation then leads to a rise of Ro resistance from the communities against porn and prostitution until the I-O police criminalize some aspects of it.

Sometimes understanding the growth of new viral businesses is difficult because of the complexity of the information which needs to be studied by experts that I-O police might not be able to afford, this is also because each new R revolution needs time before an Oy counterrevolution can be devised and start to work with the I-O police. For example the I-O SEC was unable to follow much of the derivatives fraud and trading because they could not pay for the experts, however they could use Iv and B snitches to point to problem areas. In effect the R-B revolution of subprime started with liar loans as a way for black market income to be used to buy homes.

## This led to an Iv-Oy counterrevolution where this desire for deceptive loan applications was matched with the viral growth of high fee loans, both then grew with mutual deception like an escalating contagion and predation until the I-O police used Iv-Oy advisors to understand what was going on enough to moderate it.

For example as the fraud in subprime increased the I-O regulators received more complaints and as they learned from Iv-Oy criminals in plea bargains they were better able to understand what was happening. However they were usually slow to respond because first the Iv-Oy counterrevolution had to grow to find their R-B prey and then enough had to snitch on the industry in plea bargains for new laws to be passed and enforced. For example Ameriquest was prosecuted by I-O regulators over and over as they innovated in new ways to grow virally and get to the R-B money in the community. Because they had the backing of Y-V Wall Street putting pressure on the government to weaken I-O regulators the fraud was not contained, Y-V profited so much off the R-B people that the bottom of society in effect collapsed in home foreclosures.

Complexity is a sign of chaos, when the economy heats up things happen much faster and with more momentum. It then becomes more opaque because it takes more time to understand the fast changing situation, this is a sure sign of Iv-B chaos getting out of control. Making additional efforts at this point in I-O policing will likely prevent more economic waste in a collapse later, this is like traffic police when they can see cars are going too fast for the road conditions they need to introduce new speed limits even when there have not been traffic accidents.

For example Madoff was investigated by the SEC but they did not have the skills to understand the complexity of the Ponzi scheme and the economy was changing so quickly that this was put down to superior innovations rather than obfuscation or a system going out of control. The Ponzi scheme was obvious to those interesting in doing more than a cursory inspection and had already been exposed privately by Edwin Thorp earlier and then by Mark Markopoulos who complained repeatedly to the SEC, like a blind spot in the road this opacity is usually where either deception of recklessness occur. Unfortunately the SEC could not understand the situation and derivatives traders as well as scammers of all kinds can easily create a mathematical complexity to deceive others, this is like R prey hiding their trail or Oy predators camouflaging their stalking of the prey.

For example this is often done with elaborate trails of hiding money in tax havens and shell companies by R terrorists drug dealers and Oy crooked businessmen, the I-O police have already developed tools to follow much of this and the principles involved are similar in a deregulated economy where fraud is growing. Sometimes the complexity is an unintended consequence of not understanding the situation or of I-O regulations in place and is like roads that were designed dangerously and need to be remodeled, for example the Basel 2 regulations allowed banks to carry less reserves if they bought AAA quality subprime bonds which is like allowing cars to drive faster on the roads if they have more safety features like better brakes and air bags, but what this safety actually meant in reality was not adequately tested. They were then like cars deceptively sold as safe where it was easier to pay the fines than to fix the problems with them, this might continue until there is enough Bi-Ro community outrage as Ralph Nader used against GM over the Corvair.

Instead subprime bonds along with credit default swaps to supposedly make them safer allowed banks to carry fewer reserves and loan out more money increasing profits. Much of this innovation then was V-Bi liquidity being drawn into an Iv-B scheme either deceptively or because it was too complex for anyone to understand. Since credit default swaps were a kind of derivative there was no regulating as to whether companies had enough liquidity to cover them, this is also like car companies selling safety equipment without anyone knowing of they could survive being sued if they cased fatalities.

In effect then just as there arose an Iv-B shadow banking system there also was a B revolution in shadow insurance with these swaps which is a contradiction in terms, the idea of innovation is to take risks and the idea of insurance is to prevent them. The Iv-B economy attempted to reconcile this paradox by trying to manage risk, which instead of developing a way to deal with it tried to spread the risk so evenly everywhere that somehow the system could not collapse. However this goes against all the principles of engineering, it is like building bridges and cutting out more and more material all over so the risk of collapse at any given point is about equal. Unless this is policed it will just insure the bridge will completely disintegrate when it does collapse.

The subprime bonds were increasingly chaotic as they were often based on B liar loans, when they defaulted they created a domino effect of each housing default making employment in the housing industry collapse more. The energy went out of the housing market by being used up in shock waves instead of momentum and growth, this caused it to return to V-Bi normal money liquidity in the I-O market instead of steam money. Then houses were worth only a fraction they were in the heated market. This is similar to in physics where energy must be conserved, when something emits waves such as sounds these are like radiating out shock waves and it must at the same time lose energy. So each time in an economy there is a collapse causing shock waves this is lost momentum, a Biv system develops more potential energy as it grows and when this is lost by collapses this energy converts to kinetic energy.

For example as a tree grows it has an upward momentum that is kinetic energy which is converted to potential energy in its height. If the tree collapses then this potential energy is converted to kinetic energy such as accelerating downward with gravity, making sounds with cracking wood, falling on other trees and liberating their potential energy by making them fall, and so on. So when an economy collapses as in the GFC it loses this energy built up over time, this creates a V-Bi stagnation because time has now increased and energy is now low. This is why it is necessary to reduce collapses in a crises, it is like for example stopping buildings from collapsing after an earthquake because it is usually cheaper and faster to prop them up and fix them rather than clear the rubble and build new ones.

However it is also necessary to determine which ones are collapsing through fraudulent construction because propping them up will be a waste of money, they will end up making zombie buildings that will never be safe to live in and will continue to cost money to fix.

This GFC then caused many subprime bonds the banks were holding as reserves to default, the credit default swaps then collapsed as there was not enough liquidity available to back them up and so the Iv-B contagion created shock waves with insufficient liquidity like tsunamis in shallow water wrecking the economy and wasting the potential energy leaving stagnation.

Much of the contagion in the GFC could have been avoided by looking at new I-O regulations for loopholes and seeing where the money is growing in them exponentially as Iv-B. For example banks after the Basel 2 accords started using subprime bonds as reserves because they paid more interest than just keeping cash, this loophole is like a way for contagion to get out of a quarantine zone. Whenever there is exponential growth there is Iv-B or Oy-R which will usually grow in a boom and then collapse, buying these bonds then had to generate a collapse because there was weak I-O policing with them and ultimately there was a shearing force between the growth of lending to R-B poor people and their ability to earn money with free trade taking away their well-paying jobs.

## The problem then is in treating the economy like a black box where some parts remain opaque with no real idea of what is going on in there, the only people who bothered to check deeply into the subprime bond market realized it was going to collapse and shorted the market rather than warning anyone.

Since money in Iv-B is highly leveraged there is never as much of it as there appears to be, just as steam appears to have more pressure than the number of water molecules in it would indicate. New laws then should be studied to see where deceptive chaos is trying to get around them, the same can happen with crime in Roy such as where piracy on the internet took a long time to be even recognized as a real crime. The problem was that in an age where music existed only on record discs and then CDs the concept of online piracy of music was not included in the laws, the same occurred with movies. This allowed the Iv-B growth of this piracy which is still not under control as the I-O market for music and movies still costs more in many cases than just searching on the internet and downloading it anonymously and deceptively.

I-O policing tends to be unstable and declines in strength only to regrow as a mix of chaos and randomness. These variations can also be watched to see where pressures can be weakening the police, for example where lobbyists are defunding them by small amounts or denying increases for staffing. Also allowing banks to shop between regulatory agencies and even incorporating in different states under easier oversight can create competition between these states to allow more I and O law infractions, this can be monitored to see if it starts growing into crime infesting some states or agencies more than others. This is in effect like towns wanting wealthy criminals to live there because they pay more property taxes, the side effects are an increase in crime which might cost them more in police than the tax revenue.

Attitudes to tax havens and overseas countries with different laws can be monitored for the start of chaos, for example allowing into an economy more anonymous money from a tax haven can then lead to an exponential growth of contagion from there such as Oy-R criminal money or Iv-B tax avoidance. It is important to remember that Iv-B is a revolutionary system and V-Bi an evolutionary one, Iv-B then is always coming up with some new way of doing things even when the best way has already been discovered. This is where the inefficiency comes from because Iv and B each have to be deceptive and unpredictable to each other like players at poker, if not then they lose money from being anticipated. New products then have to differentiate themselves in some way, this is seen in an extreme with fashion where there is a need to constantly be changing to avoid boredom in consumers.

The problem is whenever there is an Iv-B bubble people tend to say that the situation is new or somehow different from previous bubbles and so it should not collapse, they say this because any boom happens from innovations but this does not mean the mathematics behind it are any different.

However it is in the nature of revolutionary things to collapse if only to make way for new mutations and variations, for example if animals live for a long time they will be at a disadvantage to shorter living animals that mutate quickly to exploit changes in the environment. The most dangerous situation then is where V-B revolutions claim to have fixed the problem of chaotic collapse which is a contradiction of their nature, this is like a random system claiming to have become highly innovative which is also against its nature. Pundits and experts then also need to be monitored for signs of a V-Bi and Iv-B disconnect in their opinions, for example some might become convinced that the Iv-B growth is a way out of the economy’s problems, that the new innovations will keep delivering more wealth to the consumers and that there is no reason for this to stop or have a collapse at some point.

Seeing a different set of V-Bi experts who may be out of favor is a sure sign that there is a color disconnect and that the two sides are not really listening to each other or trying to enact I-O policies to reconcile the two incompatible ideas. For example V-Bi advisors might say that the bubble growth in the economy is abnormal, this was said about the real estate bubble in the US by showing graphs of previous price rises. The implication then was that being a deviation on the normal curve that it would eventually return to normal with this trend line of prices. This would be close to the cost of materials for housing and land plus some inflation, when the trend line goes above or below this then it should correct eventually like with arbitrage where price deviations should return to a normal range. With the disconnect however both are wrong because they don’t see the I-O correction that has to occur where the unreal Iv-B prices have to reconnect with real demand in a conventional I-O market. For example much of the Iv-B housing was just not very popular with people to live in or find work near, this then has to be taken into account in the price when they are no longer good for reselling at a profit.

The V-Bi view of a return to normal misses the point that because the bubble was not a deviation of randomness but exponential growth then it has to collapse back to a lower price not just return to a normal equilibrium. This new price in the I-O market will be a compromise between the normal price V-Bi experts expect, the Iv-B innovations in the housing market which might keep prices higher permanently such as computerization created the Internet with new and valuable companies, and then there must be taken into account the damage done to the economy by the deception and collapses after the bubble.

The two kinds of pundits in the media are not policed in their views, in the US there is no requirement to present both sides of the argument so each can shade the truth to their own advantage and ratings. They are in effect giving investment advice to people but not being responsible for the bad effects it might bring, this disconnect then causes more misallocation of resources by convincing people to buy the wrong properties or at the wrong time. One then might be in favor and pushing for a particular policy, for example it might be Iv-B libertarian pundits that want to weaken I-O regulations even further to cause more collapses and quick regrowth.

## However sometimes they are deceptively advocating this so their backers can short the market for profit or buy in later more cheaply when companies are weakened. This then can be like Oy predatory disinformation in the Roy animal kingdom where hyenas for example might try to unnerve their prey so they panic and wear themselves out even when they are not really in danger.

Other V-Bi pundits when it is their turn also cause damage to the economy by encouraging stagnation with policies that don’t produce growth, this also causes some companies to collapse and can be helping their V backers to buy up weakened companies as well. This is like Y lions harrying Ro buffalo to exhaust them, they are not looking to allow any growth in their chances but to keep things normal until some of them are exhausted and are eaten. In the same way with a stagnant economy some wealthier V banks and companies can buy out Bi companies or break Bi unions making more money than they would in a growing economy.

Making it illegal to lie or misrepresent in the media then makes it like any legal contract, if there is an implicit contract that consumers are being told the truth or at least what the pundit or expert honestly thinks then they should be covered from liability. Having pundits hawking stocks for corrupt gains from buying them before hand, or simply being controversial and a financial demagogue to improve their ratings is a violation of this implicit I-O contract with the viewers and readers. Small amounts of chaos and disconnects like this then can grow in V-B to larger cracks and connect up with other cracks to have powerful shearing forces, for example as the real estate bubble in the US progressed Iv-B pundits forecast continuing growth forever and this was fed back by other pundits, real estate agents, loan arrangers, other buyers to their friends, etc in a chaotic circle and then back to the pundits as what they thought was independent confirmation of their ideas from the economy.

This then became a media Iv-B and V-Bi disconnect where Iv-B pundits were often deceptively praising or denigrating parts of the economy to create booms and busts, or for pumping and dumping. Other pundits represented the V-Bi teams and promoted a normal consensus viewpoint, instead of talking about a boom or bust as desirable they would be more likely to call it an abnormal deviation such as in the US real estate market. In the stock market V-Bi pundits would emphasize normal growth and transparent information about stocks. However this is not a call to I-O regulate the media, but to point out what the consequences of a disconnect are.

Another problem to watch for is a belief that Biv economics has won or is exponentially winning in the world and that there is no real chance of Roy poverty increasing again, this then implies technology will keep innovating solving these Roy problems because people have more money to invest from technology and so reinvesting in this technology will keep things improving. This then is the Iv-B interaction applied to technology because it is expanding exponentially because of AI and computing and is not necessarily an accurate picture of the future any more than increasing real estate prices in the US were a harbinger of prosperity there. It just means there is a strong momentum of change from these revolutions and counterrevolutions, the future of this is deceptive and hidden so no one really knows where it is going. It could also be argued that this is heading for a collapse because the world’s resources cannot be extended to cover everyone in a Biv society, the most likely scenario then is Oy-R technology growing exponentially in a predator and prey interaction.

The fewer numbers of Roy dictators in the world and the fall of communism, the rise of the internet and more open news, improving technology, etc is supposed to be transforming emerging Roy democracies into advanced Biv ones and so old Roy problems such as crime, dictatorships, corruption, as well as booms and busts should disappear as well. This however is not how Roy and Biv work, if there are scarce resources in a society then the Roy system works best because people need to be effectively policed to stop them stealing rather than working. Note for example how many of these optimistic ideas have been silenced by the GFC which threatens to run for another decade or more, in fact no one knows if the global economy will ever return to high growth or have lost decades like Japan.

When this assumption of Biv prosperity for all becomes a common belief then it is much easier to weaken O policing for crime because it is assumed that people will be making good money and not want to risk losing some of it in fines by bad behavior. Because in Biv transactions are usually a double win or Positive Sum Game where both sides benefit this implies a steady accumulation of wealth for all and it is hard to see how such a system could ever fail, yet it did in the GFC.

The problem in a Positive Sum Game is even though both sides might be winning, if one gets much more all the time then you have rising wealth inequality and then the opportunities run out for a large percentage of the population. Then they default on their loans and often revert to Roy such as in ghettoes because they have to consume part of their profits to live. For example if one part of an economy has a trade surplus with another then even though both sides gain from every transaction the wealthier area is likely to be able to save more money. The poorer area even though it gains on each transaction has to buy food and pay rent often using up these profits, overall then when all their transactions are looked at in total they might be losing ground.

## The belief then that O police will no longer be needed should be watched for as a dangerous sign, as is the idea that I civil fines which are often much lower than the fraudulent profits companies make can substitute to punish criminal behavior.

To accept this purely Biv society as possible is in effect weakening O policing to nothing in some areas and if there should be a stronger Iv-B and V-Bi disconnect with an eventual collapse then there is usually a rapid rise in Roy crime because of how weak the O police have become. This happened with the widespread fraud in the subprime bonds for example, for a long time I regulators were able to deter fraud with fines and warnings but when Roy desperation set in just before the GFC they were unprepared for the sudden rise in criminal fraud. It is then very important to monitor what people and companies say about I-O police to determine at what part of the color cycle the system is.

Mathematical algorithms also have to be monitored for economic consequences, more so because when applied to money they can quickly become pure chaos because money is itself a digital medium. Because few people are good at math these complex equations can quickly get out of control, few investors realized that large computers were successfully trading securities prior to the GFC and were beating human judgment of the markets. This in itself can cause massive instability because as human Iv investors lose money in day trading this creates chaotic cracks in their businesses, they then can collapse or lead to a general suspicion and avoidance of the market which depresses prices.

This is likely to be part of the reason why long range investing stopped working, many stocks consistently lost money for investors because so much was taken out by these computers, as the pool of capital dried up then stocks that relied on long term investors dropped in price. Other stocks favored in high frequency trading and arbitrage might have gone up more instead because the computerized volume of trading and amount of capital going into them increased. The trend then is to take money from human V-Bi investors with longer time in their investments, the Iv-B computers chaotically win with deception and so this drove up stock prices until they crashed when many computers tried to use similar algorithms to sell out when the market became unstable.

For example much of economics is based on assuming all variables are independent from each other, and so relate to a Gaussian normal curve. From there this curve can be skewed or misshapen in various ways and this is usually regarded as being either deviant and likely to return to the normal shape or it might indicate a correlation with some other factors. These correlations then might be dependent variables or they might just be independent variables that tend to go together. For example statistics on smokers might show a lot of them drink alcohol, but this need not imply that one leads to the other chaotically but that people who do one tend to enjoy the other.

It might be that alcohol drinkers randomly have more temptations to take up smoking, if second hand cigarette smoke was mildly addicting then they might get more of it in bars than in most other buildings. Most of the algorithms used in the lead up to the GFC were based on the normal curve and thus a presumption that the various markets were random in all ways, this was the theory promoted by the economist Eugene Fama and used to look for arbitrage opportunities on large computer trading platforms. Investment banks and hedge funds usually calculated their exposure to losses with a normal curve based formula called Value at Risk. Bonds were often assessed for possible losses according to their pricing in credit default swaps on a Gaussian Copula which is a kind of 3 dimensional normal curve.

Statistical arbitrage is also usually based on a normal curve, the idea is that for example if two stocks tend to trade at a given ratio of their stock prices then a deviation from this is expected to return to this ratio. Hence an arbitrage trader or computer program would usually short one stock and buy the other expecting them to regain this historic ratio. Because many other traders would be doing the same thing those in first get a chaotic profit because there is a momentum created pushing the two shares back to their historic ratio, it is then important like in exiting the burning theatre to get out of the trade when the momentum slows to look for other opportunities.

Arbitrage is related to the Law of the One Price, this implies that there is a normal price for stocks, bonds, or commodities everywhere and for example a US Treasury bond should be worth the same in any market. If one market deviates from this then it is an arbitrage opportunity to buy long or short it until it returns to the normal price for a profit. Much of this was developed from students of the economist Eugene Fama who asserted that stock prices were random, the only significant exceptions to this were that smaller priced stocks and value stocks tended to do better over time. The concept of a normal price was started in many ways by Edwin Thorp of blackjack fame, he found that sometimes warrants were mispriced and that there was in effect free money from arbitrage to be had as the cheap options were purchased and then converted to stock on maturity for a profit.

Also much of the inspiration for this random theory of stock movements came from Brownian motion and an early paper by a French mathematician Louis Bachelier, the random movement of small dust particles was found to be similar to movements of stocks and so this implied that the major forces involved were random on exchanges because each investor didn’t usually know what the others were doing. Since they could not know why an investor did a trade, whether out of panic or greed or simply being incompetent it was difficult for chaos to be involved as then one investor has to be following another or at least have investors all following or fleeing from the same thing like in a boom or bust.

## However often investors are watching each other or at least stock movements to try to guess what other investors are thinking. This is like an R herd of gazelles that might watch each other for signs of panic or if one spies food the others might run over to compete for it.

This then led to an evolution of V-Bi stock management and similar ideas in banking, it worked well in random situations but left companies and economies exposed to chaos because there was little in the mathematics to describe dependent variables, also these chaotic variables tend to be shrouded in secrecy and deception. This is when one event causes another rather than being separate, for example one investor might buy a share because he can see others are buying it. If he had not seen this buying then he might not have invested, this is then like the R gazelles following each other looking for food.

In the same way if the share price suddenly drops then he might sell not because of any theory about random movements but because he assumes someone else knows something and so is dumping their shares and so should he, this is like one R gazelle starting to run and so the others assume there is danger. However it is usually in the interests of an Iv-B trader to sell his stocks without creating a panic, he might need to sell a large stock holding and starting a panic might make the price drop quickly. At other times he might try to start a panic in a stock with good prospects, this is like an R gazelle starting a panic by running and then doubling back to eat the food he found while the others are still hiding.

In the two decades leading up to the GFC trading had become computerized and so faster trades and detection of arbitrage opportunities could exploit these random discrepancies, sometimes though they could be like betting on a Roulette wheel that because black had come up many times in a row that the next number should be red. This is a fallacy in probability, that one color is more likely because of the history of previous numbers but the arbitrage seemed to work well on the basis that the price would return to normal. Some of this may have been because more hedge funds were using arbitrage and so when there was a discrepancy in prices of the same stock on two exchanges then their rushing in to take advantage of it would tend to make the share prices resume their normal price by the force of these trades if for no other reason. Another algorithm worked on the basis that when any share went up then this was a small deviation and so the share was shorted assuming it would go down again, this had the advantage that if the movements were truly random then they should not lose money but if there was a reason then they were more likely to profit.

For example like the R gazelles panicking some shares might drop too much as other investors assume there is a reason for a drop and sell too. At other times a share might go up too much as investors think there is a reason for the price rise, when they realize it is a random fluctuation then the share price goes down again. This is how arbitrage can make money even in a random market, investors are moving in a slightly nonrandom way which the computer programs can exploit. This is like Oy predators looking for patterns in the movements of R prey, any success in working out what they will do will allow them to catch more R prey with less effort. So if traders work out that others panic too much when the prices go down then they can buy into these random fluctuations for small profits.

The same might also work in a casino game, if you could bet against Roulette players rather than just the house then you might make money from it. A player might assume that black comes up more than 50% of the time because he sees runs of black, a trader might offer him odds of say 10 to 9 where the trader gives the player $9 for every black that comes up while the player gives the trader $10 for every red. The trader then would make money by estimating the random nature of the wheel better than the player, in the same way by assuming the market is random arbitrage exploits the small nonrandom patterns of other traders for a profit.

This then is how Eugene Fama’s belief that the market is random still allows traders to make money from it.

Of course sometimes the chaotic trader is right, the Roulette payer might have noticed that the wheel is imperfect and really does come up black more often than red. In a crisis the stock market is likely to move chaotically which means that random arbitrage opportunities might lose money as prices drop and then do not return to the normal price. As computerized traders make more money they can drive human investors out of the market and so they end up in a battle of algorithms with each other, some might use chaotic algorithms while others use ones based on the normal curve. It then can become like poker where some players work on the statistics of some poker hands winning while others rely more on chaotic bluff to beat the odds, this then is like trying to beat the odds in arbitrage by looking for a pattern such as a successful bluff.

For example a trader might suddenly sell a large number of shares to create a small panic and then buy back in as others sell, when the panic dies down the other investors might buy back in and the trader makes a profit from a chaotic algorithm. He might however come up against a random arbitrage program that assumes the stock will return to normal and quickly buys up the stock he sells so the chaotic trader makes a loss. This if honest is the I-O market in action where chaos vies with randomness for profit, when the I-O police are weak however than chaotic deception can take money from the random arbitrage traders like the Iv trader from the Bi consumers. For example he might have secret knowledge from insider trading and knows that the stock will drop from a coming announcement. He might then start a small panic in this stock by selling and the arbitrage buyers come in quickly to support the price allowing the chaotic trader to get rid of all his stock at good prices and to take a high short price. Even without insider trading a contagious Iv-B panic gripped the markets in the GFC and caused waves of selling, at first many arbitrage programs mistakenly bought these stocks assuming they would return to the normal price.

This reliance then on V-Bi randomness as a philosophy would indicate that increasing Iv-B chaos would tend to be ignored and so it would be more difficult to measure and detect cracks and collapses. Just as many computer driven systems could control the market they could also do this without realizing that many of the trades were being done by other quants like them. This was one of the problems with Long Term Capital Management, one of the original arbitrage funds that bought into less liquid securities that paid a slightly higher yield and then found out that quants like them were nearly the only market for them when they had to sell.

In effect then it is like poker players all assuming the others are V-Bi and honest, however some of them are beginning to exploit this honesty by being personally deceptive.

When people are being deceptive they usually know this unless it is a kind of self-deception, or bias. For example Iv-B can reach deeply into a person’s consciousness so they become sociopaths but hypocritically justify this behavior. In effect then this is being hidden in their own psyche and surrounded with deception. For example a trader might rip off customers but rationalize it in ways that he knows deep down are untrue, the same occurred with many Ameriquest salesmen who often had to eventually quit over the guilt they accumulated. In an Iv-B economy then people can become so self-deceptive that it is difficult for the economy to stabilize without the I-O police to force people to confront their crimes. This occurred in R communism where people became so used to lying about the state of the economy that this became unconscious, such a state can also account for much of the criminal behavior in Roy. In the same way Oy Nazi soldiers were able to switch off their conscience by rationalizing deceptively what they did in the war.

For example an Oy embezzler might rationalize to himself that he is underpaid or that he will repay the money eventually, even when he is wasting it on Y-Ro gambling. In this case Oy-R people are highly chaotic in their thinking and so do not really understand randomness, they then think there is a secret pattern to be uncovered. This allows them to be drawn deeper into gambling because they believe they are accumulating more patterns which will be useful, instead it is only meaningless random events. Other criminals have no need for deception, for example Y sociopaths usually know they are committing crimes but do not care. A Ro mob in a demonstration might commit acts of violence but have no need to deceive themselves about what they are doing.

## An Iv-B bubble then is particularly dangerous with this self-deception, not only are people lying to each other and promoting a false conventional wisdom but they are also lying to themselves creating a false confidence or panic that can spread to others like a contagion.

This is a similar situation then to an art bubble where the pressure of Iv-B money bids up prices of art, because of the secrecy of each dealer and their own self-deceptions it is not realized that they have disconnected from V-Bi transparency and the I-O market. At some point when they need to sell to other than Iv-B dealers they find there is no demand and so the price collapses. It becomes like the madness of crowds where each person has internalized their lying rationalizations and then chaotically reinforce them in each other until this leads to a ceiling and collapse. For example an R crowd might start looting with a mass deception built up from individual rationalizations of what they are doing, if they hit a ceiling such as the arrival of O police or someone getting shot by an Oy shopkeeper then their false confidence might collapse into panic and a rout.

it is also like in the Roy animal kingdom where Oy predators such as foxes and R prey such as mice have their numbers grow and drop chaotically because it is not in their evolutionary interests to view the situation accurately, when R becomes scarce then the Oy predators need to find other color animals to eat such as Ro sheep which they find they cannot catch as they have adapted too much to living off R mice. For example Oy foxes might often have offspring even when they should know most will starve, however this false confidence keeps them procreating and so they eventually outbreed those that think more honestly about the situation. R animals might become habitually paranoid as do some people, while irrational to the point of mental disease or contagion it might keep them alive against equally self-deceptive Oy.

Intelligence then need not evolve to seek the truth, but to look for self-serving hypocritical rationalizations that increase the chances of survival. Y-Ro animals as well as people might instead evolve to seek too much truth and ignore the uses of deception, for example R prey might often eat and drink near Oy predators because they have evolved to deceive themselves as to the dangers. Some get eaten by this by more might survive from this false confidence rather than being too paranoid as the opposite self-deception. The brain can then evolve to trick an animal into behaviors that increase its chances of survival and breeding, for example people might delude themselves with alcohol and have more offspring than if they stayed sober. The sex drive might delude people that they can have unprotected sex without catching a disease or falling pregnant, over time this behavior creates more people than those more honest with themselves and so the brain evolves delusional ideas that can become mental illness.

Y-Ro animals and people have the opposite strategy, by looking at the truth they hope to beat those deluding themselves. For example Ro herd animals might rely on staying calm to beat off suicidal attacks by Oy predators, Oy should know that they will be decimated but this behavior can create enough fast breeding survivors to make it a productive evolutionary strategy. This also gets used in war where Y generals might use as their agents Oy soldiers in suicidal attacks such as with Japanese Kamikaze or with trench warfare in World War One. It’s likely people have evolved to attack in the face of suicidal odds to protect their families because their offspring survive more often with this strategy, this self-delusion is exploited by Y-Ro militaries who would avoid fighting that way themselves R suicide bombers and terrorists often act this way as well, enough have their families survive and avoid having their wives raped by the enemy soldiers to make this behavior successful in evolution.

When there is an Iv-B and V-Bi disconnect in Biv societies then this can bring out the irrational instincts in people, these are still so strong that millions can be easily urged by Y-Ro countries to slaughter each other and then shortly other become friendly again. In the same way an Iv-B boom taps into a mass delusion where Iv salesmen might delude themselves about the fraud they are committing in selling subprime loans while the B workers are deluding themselves about their chances in paying them off. At the same time V-Bi people are more honest and transparent but this tends to blind them against seeing the deception going on around them, they tend to assume that people have a conscience and would not commit the level of crime to create systemic risk in an economy as with the GFC. However much of this is caused by this unconscious self-deception, when the crash happens and people realize these delusions are no longer useful they suddenly have remorse and appear as honest people again.

This makes the boom and bust appear like a mass delusion but it often also leads to resistance to using the I-O police to prevent this. For example in the housing bubble people were deluding themselves that their behavior was safe and honest, consequently they voted for politicians who would weaken I-O regulation to allow this self-deception to continue until it could no longer be hidden. Even as of 2012 this self-deception is still strong in Iv bankers trying to justify fraud and corruption as the workings of a free market.

This combination of self-deception and deceiving each other then leads to revolutionary growth and collapses in an economy, eventually it creates mutated businesses that become unsustainable as soon as fleeting Gb resources are used up. In effect then hedge funds would adapt to a particular kind of market that gave them the gains they wanted but at the price of being disconnected from being able to sell out to other parts of the I-O market. They allowed themselves to get into this situation by ignoring warning signals of smaller collapses along the way, they also when meeting tended to bolster each other’s self-delusions which become like a conventional wisdom. Another example of this was the share market crash of 1987 where so many were using similar trading strategies based on randomness that in the absence of I-O policing the chaos built up and so when they started to sell so many sold the same way it was in effect like many people trying to get out of a burning theatre. Just as with Quants in the GFC many realized that they were hurting the markets as well as leaving themselves open to disaster, like the Oy predators though this drive to get money for their families is similar to Oy-R soldiers deluding themselves in war.

## Many see business as a kind of war, if they for example manage to provide for their family at the risk of going to jail or committing suicide in a collapse then this behavior can be genetically reinforced.

These mathematical systems then seemed to have some faults that were questioned by traders and mathematicians, but because chaos had only recently been able to be modeled on computers it was not as well understood as randomness and the normal curve. This meant that the financial world had evolved mathematically on understanding independent variables well and then putting up with mysterious crashes from chaos that didn’t seem to fit into their models. More conservative people might have not rushed into using these mathematical models, however with the huge profits being made many deluded themselves that the situation was safe.

One of the first to try and understand this chaos was Benoit Mandelbrot who was also the first to draw fractals including the famous Mandelbrot Set. He also found that some commodity prices in the US seemed to be moving chaotically. His ideas were taken up by Nassim Taleb who warned that this unknown element in probability would make unlikely events much more likely than calculated and dangerous, he called them Black Swans for statistical events that on a normal curve were assumed to be virtually impossible. He was vindicated in the GFC where many mathematical models experienced share movements that should have only happened one in a million years for example, the same argument might be made that war should be equally improbable because people should not be deluded enough to kill each other en masse instead of negotiating rational compromises.

This imbalance continues in all forms of statistical analysis related to exchange based trades such as derivatives, stocks, bonds, and commodities, it also drives Iv-Oy corruption as was recently uncovered with Barclays and others rigging the Libor rates. In 2011 for example some of these markets are experiencing Iv-B exponential growth again but there is little indication they are modeling chaos any better. One exception is how some traders deviate from the normal curve using what is known as a volatility smile in which they avoid some trades they suspect are riskier than they appear. Nassim Taleb makes some adjustments to the normal curve on the basis of these chaotic aspects where the tails of the curve are larger and the peak sharper, but this is mainly an estimate rather than based on a mathematical formula. The situation then has some dangers in the mathematics used which should continue to be very sophisticated in terms of random variables and the normal curve but not very accurate with dependent variables and chaos. Even if chaos can be modeled accurately in Aperiomics however it is more difficult to model this self-delusion.

It is most likely then that the markets will continue to follow a pattern of chaotic growth poorly understood but often welcomed due to its increasing prices followed by a crash catching out most of the traders. If so then these situations need to be monitored for the waste of resources that will accompany these price distortions in the bubbles and collapses afterwards. In Aperiomics these problems are generally resolved by stronger I-O policing to avoid these Iv-B and V-Bi disconnects and misallocation of resources in the market from getting out of control. The premise here is that this problem is caused by a lack of policing itself rather than unknown formulae which would allow the status quo to continue without problems. If there are better formulae for chaos mixed with randomness then traders would just take advantage of them and probably distort them so they no longer reflected market trading accurately, at this stage arbitrage has been used by so many it can be unusable for all except the fastest traders. When there is plenty of money in the market more arbitrage traders might make from slower amateur investors but as this money is chased away by losses then it becomes a contest between trading computers using similar algorithms.

The issue then of using these ideas in Aperiomics to model chaos better for share trading then misses the point, there is so much economic waste in these color disconnects that the profits from any such formulae are usually dwarfed by the losses from the coming crash as the market falls apart and hits the floor. If there is a recommendation here for wealth creation it is that a well policed market economy is the best path to wealth for all but a tiny percentage at the very top, much like how cheats in poker might lead to losses for all but the very best players. The creation of newer mathematical formulae in trading and in describing the economy in economics will then drive the economy in particular ways that might make V-Bi randomness and stagnation or Iv-B chaos and collapses more likely rather than the more messy and uncertain task of policing the system. By watching these changing algorithms then in economics or any related field as well as in trading a good indication can be gotten as to what kind of market disconnects will occur later.

A good example of this was the Black Scholes formula that won its creators a Nobel Prize and then led to more chaos and collapse with LTCM, and later the GFC with unregulated derivatives. Another example is when the idea of Credit Default Swaps started with Morgan Stanley, this changed trading in a profound way and also led to more chaotic collapse as it replaced V-Bi insurance in many parts of the market. Value at Risk modeling created a false sense of security for many hedge funds by misrepresenting their true risks in a chaotic market, this led to many trades that were more dangerous than realized. The idea of tranches in subprime bonds was another mathematical innovation that assumed the percentage of defaults in subprime bonds could be modeled on a normal curve and that there could not be chaotic collapses where one default tended to cause another one like tumbling dominoes. In effect it assumed that subprime borrowers could default but they were too far away from each other geographically so it was unlikely a real estate crash would happen in many different cities at once. So one borrower in one suburb was presumed to be far enough away from another in a different suburb or city so the risks would be isolated from each other, however as the dominoes got bigger with more bonds the likelihood of them toppling each other increased. For example as mortgage defaults soared in some cities this caused less loans to available in others, this caused their real estate markets to implode as B borrowers could not refinance their liar loans.

The higher tranches of subprime bonds were assumed to be safe because if there were defaults lower tranches would lose returns and bond value, they were however thought to have been compensated with higher yields in the initial purchase. The higher tranches might still for example get paid in full if 20% of borrowers defaulted because they had a first claim on the payments made by those not defaulting, and often these bonds were supposed to be protected by credit default swaps where someone like AIG would pay them in full if the defaults reached to them. So this was in effect a mathematical construct based on randomness assuming that borrowers could only act randomly, or if they did act in some chaotic way the mathematics implied that they were still safe because of their first claim on repayments and the swaps. In effect then there was no real mathematical modeling of chaos, the credit default swap underwriters failed because their models were based on randomness as well. Each of this formulae in effect created a false sense of certainty that was greater than the real uncertainty in the system and so eventually led to losses from this.

## Each algorithm then contained some element of chaos that was not accounted for like cracks and these grew exponentially, joined up with cracks from other formulae and then shearing forces from so much growth and later panic tore the mathematical system apart.

Algorithms have been in a process of V-Bi evolution and Iv-B revolution ever since there have been markets and trading. Charting is a popular attempt to model the movements of share prices, often these work because people follow them and so when a chart recommends investors buy then the numbers who do buy make the price go up. This has become more sophisticated with computers, many now use such programs as Metastock which can access real time information on stocks and use built in algorithms to recommend trades. It’s likely though that more powerful computers can anticipate these kinds of trades and make money from these investors, when the market is going up all make money but in a tight market smaller programs are likely to lose out.

Each trading program in Metastock can be compared with the last year’s trading of a stock to see which algorithm would have generated the most profit, implying that it would do so in the future. As more people use programs like this such as a stochastic oscillator or Bollinger Bands the share prices are continually being manipulated by more algorithms but also those being used in different times of the day and with different amounts of money. Some use randomness and others try to use chaotic ideas such as Fibonacci relationships and Elliott Waves, the Fibonacci growth is similar to Iv-B in trees where roots and branches grow according to Fibonacci branching. In larger businesses vastly more powerful computers and sophisticated algorithms are also manipulating this market, some are independent from each other because no one tends to know what trades others are doing but the more investors use similar kinds of algorithms the more they trade in the same patterns and so are pushing the prices up and down with their own momentum rather than seeing the momentum of a stock’s fundamental value and taking advantage of it. Such algorithms then in the right circumstances might ignite a bubble or a flash crash in the market in the absence of I-O policing, deception in the markets then can arise from the deceptions of individual investors as well as their own self-deceptions. When these are added up the whole market can be so out of touch with reality that the crash is inevitable.

Other algorithms can be used in economic policy, for example the Fed might calculate that it can increase or decrease interest rates by a set amount and then found under Greenspan that it could not easily do this because of the money in the shadow banking system. So this belief in algorithms led to a loss of control over parts of the economy, the same can occur in macroeconomics where various algorithms are used to estimate GDP, unemployment, the effects of new taxes, the government budget in the event of a downturn, the cost of various government and private projects that might have cost overruns such as a defense contract or building a tunnel like Boston’s Big Dig. As computers run more of the global economy then they assume more can be modeled on the basis of algorithms like these often based mainly on randomness and the normal curve. It also becomes predatory with Roy algorithms, for example traders might use computers to anticipate Fed computer programs which can make its monetary policy less effective.

Usually though older algorithms are relatively safe or at least have known errors, the danger is when a new algorithm is introduced that grows exponentially in popularity with traders or economists who then start using it together to create their own momentum like a bubble and collapse. For example traders might experiment in mutating new algorithms to try to create something that would have made a profit on historical data, this is like an Iv-B weed growing by looking for an ecological niche. If it succeeds it puts pressure on other plants by taking some nutrients, in the same way new trading algorithms take profits away from older ones.

In effect then these financial algorithms will grow like new life forms, in Roy situations they will be increasingly predatory on what resources they can take from human investors or weaker computer programs.

This mutation of algorithms will be moderated to some degree by strengthening I-O policing because it balances randomness and chaos that these equations manipulate one against the other. For example the Dodd Frank act will put a lot of derivatives on exchanges but there will be some loopholes from I-O policing which will then be used exponentially by Iv-B innovations and more mutations creating deceptions and another small crash. Monitoring the kind of growth of these loopholes can indicate how they are likely to grow and collapse, they might also end up weakening I-O regulations as others complain they are being disadvantaged by being regulated or some move to offshore markets that are not policed.

Another area to monitor is the amount of Roy areas in an economy and if they are growing or shrinking, this can indicate the scarcity of Gb resources, whether G public resources are better used, or whether there is a crime wave developing from weak O policing. For example in trying to turn Roy areas in the US into Biv with subprime loans this brought a lot of potential criminals into the Biv system. Many B workers used liar loans and found willing accomplices in Iv salesmen who were only interested in commissions and upfront fees rather than if the loans would default. Usually when a Roy area is too quickly made into Biv the lack of resources tends to persist as they will just flow back to wealthier areas like a local trade deficit. This will quickly make money scarce in these areas again making them Roy and wasting the money spent in trying to improve them.

Typically then O crime tends to come from Roy areas that are close to Biv, this can lead to Biv areas becoming infested with crime and perhaps turning to Roy themselves. This is like the edge of a forest where Roy animals might attack trees for food, contagion such as fungus might get at trees more easily, some plants might be overeaten by R grazing animals, etc. Trying to add poorer areas into a Biv economy in an economic boom or time of growth then causes these Roy areas to be unstable and potentially waste economic resources as people there cannot easily make the transition to Biv work.

For example they might be used to poverty and many might be criminals when they get the opportunity, even when they make better money they might still have grown up in a violent environment and not be deterred from O crime by the I fines based system in Biv. For example R people with a job might still steal from their work because they don’t know how long the abundant resources will last. This is a problem with many Eastern Europeans as they joined the European Union, they were often so used to working for cash and corrupting regulators that they could not work efficiently in a Biv system. This is like Roy animals that evolved in a weak Biv environment such as grasslands where plants are often trampled and uprooted, in such an economy businesses were dominated and often destroyed by crime.

## When Roy animals like these are moved to a dense Biv forest, like Roy people migrating to a wealthy Biv society, they are still adapted to seeing Biv as a kind of prey rather than timidly working with it for food.

This has been seen with the spread of the Y Russian Mafia, originally called Thieves by Law and only a small influence in the Soviet Union. This was because in a Ro dominated society in effect the herd instinct of Ro people kept them down whether the O law agreed or not. Instead of O neutral justice then Russian Y-Oy criminals experienced a vigilante justice, this is why the Russian justice system after the fall of the Soviet Union was so primitive and unfair compared to Biv economies. It was considered necessary with Ro justice to stop these Y criminals, it was then like Ro Stalin shipping suspected Y-V imperialists and capitalists off to Gulags. The problems with this approach is the Y-Oy criminals remain strong and had evolved new strengths to withstand this Ro vigilante justice, in effect it was more like a Y-Ro civil war where Ro was winning.

However once this Ro domination ended with the fall of the Soviet Union the Y-Oy criminals were no longer railroaded into jail, also they had no history of being moderated by the O police. For example O might turn Oy thieves against the Y mafia which keeps Y weaker and divided. It also makes the Oy criminals more sympathetic to the police because they in effect have a limited license to operate in exchange for moderation and snitching on Y. However once this Ro vigilante justice weakened the Y-Oy predators attacked in force, with the selloff of G state assets they used violence and bribes to quickly become V Oligarchs. In effect then the Roy Soviet Union collapsed in part because a wealthier world made it too Biv for Roy politics but the Biv businesses were still very weak. Before they could grow strongly enough to withstand Roy criminals and protect themselves many were flattened by criminals murdering business owners and taking over their assets like an elephant in a forest knocking down trees to get to the leaves.

In the same way the spread of Roy crime from Russia as well as business corruption from China has spread into the advanced economies because these newly rich only know crime and corruption as paths to wealth. It makes it then difficult for Biv businesses to do business in Russian and China without bribes, and without paying protection to the Y mafia. When these newly Biv businesses operate in the advanced economies they can bring this tendency to destroy businesses for their wealth rather than trying to make even more money by building successful Biv businesses. The Y Russian mafia for example has been learning this lesson and is evolving into V businessmen, often they already had this Biv business talent but the only outlet for it in a Roy society was by being predators.

This then leads to more Roy crime in Biv areas like some forest areas being damaged but not destroyed by animals adapting to life in a forest, for example drug trafficking might increase in wealthier areas where before they were more isolated from the Roy ghettoes.

At first this might bring more violence into the Biv areas but the drug dealers learn over time that using more I civil law solutions keeps the police off their backs so they make much more money. As Roy people make more money then they migrate into and bring their drug habits into wealthier communities where addictions can spread. Over time even these addictions become less destructive to the Biv society, they might spread less disease from using drugs and also use a cleaner drug supply which affects their health less. This then would be like less contagion from Roy animals bringing disease into a Biv forest.

The B economy can also grow chaotically as a black market, for example in the US and Europe where illegal aliens work tax free secretively and deceptively. This was one problem with undocumented loans because it was assumed that some people were making good money undeclared for tax, this made them able to afford homes but the problem was they could not give truthful loan applications on where their income came from. So as citizens might make more money and perhaps move into a Bi community their places might be taken by B workers in lower paying jobs that they no longer are willing to do, these kinds of jobs are very unstable and in the preceding collapse of manufacturing prior to the GFC the resulting chaos caused the Bi citizens to try and reclaim these jobs causing more collapses in the incomes of the black market, and thus more defaults on undocumented subprime loans.

For example B workers in the black market might have made a relatively stable income where tradesmen did black market repairs on houses, illegal aliens did gardening and farm work, some businesses at swap meets did not declare their income, drug dealers in a boom economy made good money moving up and out of the R ghettoes and so on. The Iv-B economy however weakened the Bi communities by taking away their union jobs with the intense competition from free trade, these Bi workers then had to compete for lower paying B jobs that were previously left to those in the black market and less secure nonunion employment. Because this B area of the economy was hidden and highly deceptive chaotic problems that were growing here could not be seen in V-Bi statistics, some people were still making boom like incomes while others were collapsing.

Allowing B workers to have unlimited liar loans in these circumstances caused many to clutch at the straws offered them, they bought homes to speculate with or because they thought the boom in the black market would continue. However being chaotic it could quickly collapse, this caused the subprime boom to suddenly falter at both ends, the Iv agents like predators were ripping off B workers while the Iv-B economy was adding extra competition as Bi workers looked for work in the black and lower income areas. This was then like Roy animals uprooting and overeating forest plants which turned it into grasslands as traditional industries collapsed from the Roy businesses invading the advanced economies. When V-Bi workers tried to move into the Iv-B economy to compensate this made it grow wildly like weeds in some areas with the additional resources of the V-Bi savings but with no new Gb resources to prop up the economy these were burned through leading to a larger collapse.

It is important in determining the health of an economy to see how B workers make their money because like R grazing animals they connect to Gb resources, they might be farmers, miners, seasonal crop pickers, truck drivers, etc. Iv jobs can also be in the black market, for example people might buy and sell goods on such as Ebay and other auctions for profit or salesmen might take secret commissions on sales. This market is highly chaotic and they might make occasional good profits or large losses if there is a recession and demand for goods plummets.

For example B workers might find cheap goods to sell much as gold prospectors might find nuggets and these are sold to Iv agents who might then try to resell them in the I-O market on Ebay or in classified advertising, some of these might be stolen goods by R people which give a false impression of wealth in the economy. For example it might be hard to work out if people are selling their own assets which indicates a rise in GDP or they are stealing from each other which indicates a fall in GDP. This can be a serious problem, with the GFC it became apparent that the 2000s were in many ways not really growing as their GDP figures indicated. Selling subprime mortgages to B tried to tap into B wages in a Positive Sum Game where people were doing transactions that benefitted both parties, instead they were often a Negative Sum Game where both sides of a transaction were losing. For example drug dealers might make money from people stealing and selling their assets at fire sale prices for drugs, this is highly inefficient for an economy.

A black economy might also include people robbing the homes they do the gardening at, companies running scams, and so on which are not creating wealth that can pay off a mortgage. An Iv-B economy then has the problem that as an economy stalls like the US after 9/11 many people turn to deception to profit and keep up appearances. This gives increasingly misleading statistics right when then government is using monetary and fiscal policy to avoid an Iv-B collapse, it then represents contagion spreading into its data about the situation making it more likely to feed the contagion rather than police it properly.

As Iv-B becomes disconnected from the V-Bi economy more people try to make a deceptive living this way, the process is similar to trying to buy houses cheap and sell them in a booming market. A similar business is multi-level marketing which often grows exponentially as well in roots and branches selling goods deceptively, there can be chains of resellers each deceiving the next on the benefits of products so the whole organization might either have a false view of the merits of their goods where Iv agents pass on deceptions and distortions to each other like a game of Chinese Whispers. With weak I-O policing they can also be willing accomplices in deceiving more people into the organization if they can profit from it, this can also happen with religions where people might so benefit from false miracles that they don’t investigate them properly.

This becomes more like a Roy food chain which is why the I-O police should watch these kinds of markets for fraud. Sometimes this growth collapses as new clients get harder to find, the marketing then might become mainly internal where in effect the Iv salesmen become prey to higher levels of the organization, they in turn prey on lower levels of the system making commissions. This then becomes like a mass delusion in Iv-B where the deception has created a common belief much like it can in some religions and politics such as in R communism and Oy fascism. The same process occurred in the Iv-B subprime lending business where it was in Iv salesmen’s interest to be falsely optimistic to B clients and make more sales this way.

This eventually leads to the salesmen believing their own spiel and these false beliefs can infect the whole organization like a contagion so when the collapse comes everyone is surprised by it.

This was seen for example when the subprime market became unstable because of so many liar loans that would eventually default. A few people such as Michael Burry of Scimitar Capital actually investigated the subprime loans in these bonds and found huge amounts of deception in them, he then decided to short the market but found few others were interested in looking too deeply into the potential problems and chaos growing. This is a similar situation that skeptics of the boom prior to the GFC experienced, because there were few doomsayers and lot of others with an interest in appearing to be optimistic even with private doubts then the overall effect was to be reassured by the actions of the others. Sometimes this attitude can collapse into pessimism between salesmen as the fears of low sales become contagious like a chaotic collapse of confidence, this was seen for example in the movie Glengarry Glen Ross.

The attitudes of people can then like in a poker game alternate between overconfidence and panic, but because each might be so deceptive to the others many of their ideas can be wrong. For example salesmen might be trying to demotivate each other so some leave and then there are more customers for those that remain. With confidence they might be trying to build each other up because it maintains their own attitude better, this helps them appear more confident to the B clients and helps them sell more.

This is like Oy predators such as hyenas that watch each other for signs of one seeing prey, then they follow him or her to it. This then is not real teamwork but watching others to try and steal their catch, it is different from the Y teamwork of such as lions where they share their catch much more. Oy predators then are trying to deceive each other by getting to prey secretly and so pretend they don’t see food to make some rivals go in a different direction or even leave so there is more prey for those that remain, pessimism then about food is not believed as much by others because it could be deception. Sometimes overconfidence spreads between Oy animals like a contagion, a kind of hype because having more in the pack might make it easier to take down larger animals.

The Oy group then can be highly unstable and lose members easily when disillusionment sets in. When the I-O market is more connected then they are more moderate in their swings, for example Oy predators might stay together more to attack team based Ro animals where their numbers can make a difference. They are then working together more like Y predators, the interaction between Ro herds and Oy predators then mixes randomness and chaos changing the nature of both. In the same way when the I-O market in Biv is less disconnected, more legitimately priced real estate is sold rather than overpriced fraudulent land such as in the movie in Glengarry Glen Ross. Consequently Iv salesmen tend to have less feast and famine and more steady sales, this is like Oy predators overeating and starving less often when the O middle of the food chain is stronger and moderating their chaotic tendencies.

This reduces the amount of contagious overconfidence and panic just as it reduces it with investors in a well policed market.

In the movie Glengarry Glen Ross for example the salesmen became more like Oy predators looking for R prey to rip off, the Y people running the company used their liquidity to keep salesmen hungry and this more likely to commit deniable fraud to make them profits. To counter this R people tended lie to the salesmen to get rid of them and also to talk among each other as Ro to compare experiences, after a sale then they might ask around and if they work out the truth they would try to get out of the sale often with the help of I-O police. This is like R prey using information from each other to gain experience about Oy predators, often this can be deceptive as each prey tries to make another be caught instead of them, however if this becomes more honest they might form a Ro team like with buffalo.

Monitoring the exponential growth of salesmen can then determine where Iv-B chaos is making money and potentially getting out of control, if all these kinds of salesmen have to be licensed for example then increases in numbers of real estate agents, subprime loan salesmen, web sites selling gold, chop shops and boiler rooms selling fake stocks with prices appreciating by laddering, these can all be monitored and policed before they cause much damage to an economy.

Another indication of problems in an economy is the increase in Ro gang activity or demonstrations where people are becoming angry and protecting their property or neighborhoods often by vigilante like actions. There can also be an increase in Y mafia like control of businesses as happened in Italy during the GFC as they have more liquidity people need. This is also similar to Ro mass demonstrations in Russia against the Y-V domination by the mafia and oligarchs. For example Bi communities complained more and more as the lack of I-O policing made subprime financing dangerous to their team members with housing, more defaults meant that neighborhoods became unsafe with squatters and people deceptively stealing material off houses like an R-B contagion. From this point Ro neighborhood watch can quickly morph into gangs beating up Oy and sometimes R petty criminals.

They can also attack vagrants and stage riots where demonstrations turn violent to get attention. For example in the start of the GFC in the US Bi communities kept complaining about fraud in subprime lending and tried to get states to police it effectively, however they were often blocked by Federal law keeping it deregulated.

Another aspect to monitor is the increasing use of Gb resources unsustainably, for example with large rises in commodity prices caused by overuse of minerals or inefficient mining to fuel an Iv-B boom which might exhaust these resources prematurely. This can also cause havoc in the economies mining or farming these resources with the additional predatory pressure on them, for example the Congo has been raided many times by Rwanda and Uganda to take Coltan for use in mobile phones and the lawless Roy state of the country is exploited by mining companies. B workers made money in the US prior to the GFC in a poor but sustainable lifestyle, once they were treated as a chaotic resource with an assumption their access to Gb resources was greater than it really was then this created an economically wasteful situation like Oy predators overeating the R base of the food chain.

They were often induced to buy houses beyond their means to repay, many did this deceptively because they hoped to speculate and make money or walk away from the homes if they could not. So this was a misallocation of resources, instead of building housing more affordable and sustainable on the incomes they were likely to get larger and more ornate homes were built in areas with few jobs. It also wasted Gb resources such as for bricks, glass, paint, timber for housing, tiles, carpet, etc and much of it would either deteriorate in foreclosed homes or only be used when houses were sold at fire sale prices. This could then lead to a shortage in some materials as the cheaper sources of timber were used up and wasted leading to more expensive housing later.

Also B companies mining gravel to use in cement might expand exponentially to meet the Iv-B demand and then collapse making it more expensive to get these businesses going later after their equipment had deteriorated from lack of use. Oil can also be a wasted resource in Iv-B booms and busts, for example sometimes to meet demand Saudi Arabia might have to pump oil faster and so reduce the amount of oil it can get in the long run from an oil field. A price rise might cause people to stop driving and lead to an oil glut and financial problems in some oil producing countries leading them to not maintain their equipment properly. It could also cause some oil exploration to be begun under higher prices and then written off when prices collapse. When oil is too cheap auto manufacturers then build cars that waste fuel.

Oil sands might be started to be mined under higher prices and then the capital wasted if the prices fall too much. Some of this might be caused by Roy war, for example the invasion of Iraq pushed up oil prices but might lead to a glut of oil one day with extra Iraqi oil discoveries causing price drops and wasted capital on other oil exploration. If the Middle East became less tense politically this might cause the prices to drop and then some wells in other parts of the world might have to be capped or abandoned.

A false market operates to some degree in the US and other countries with ethanol from corn protected by tariffs. This causes farms to produce more corn at higher prices than some poor people in other countries can afford, if these subsidies and artificial demand for the fuel are withdrawn then they might lead to some farms being uneconomical to run with real consumer demand in the I-O market. This can then lead to wasted investment in those farms such as silos and tractors, as well as soil having been exhausted to use for other crops. Monitoring these Iv-B uses of Gb resources then can determine where a lack of policing creates a false market that will eventually collapse leaving misallocation of resources.

Price distortions then can be a sign of problems, here cracks in the global economy appeared because of higher corn prices which caused starvation in some countries. The ballooning cost of housing materials in the Iv-B real estate boom would have also pushed up prices for more legitimate end users, for example some Bi workers might have wanted to buy houses for their families and not for speculation and were not able to afford to do this. They might have wanted to improve their homes but found that housing materials had gone up because of the demand for these speculative homes. Sometimes these price distortions can be sustainable, for example the discovery of gas in areas such as North Dakota is a new Gb resource and so leads to price distortions around it as they need to outbid other companies for trucks, concrete, drilling equipment, etc.

## This then is a legitimate bidding of some prices up in the I-O market, however if much of this was just deceptive without much gas really being there then this might be an Iv-B boom which would collapse as investors realized the Gb resources were much less than they had thought.

G public property can also be affected by color imbalances, for example more public housing or homeless shelters might be needed for Roy people in society and this might indicate that the Biv areas are breaking down. This might happen even when the economy appears to be booming in Iv-B, as Gb resources are consumed in Iv-B those businesses start trying to build on steadily more toxic resources like the subprime bonds built on borrowers who often didn’t have enough money to even move into the house let alone make a payment. This siphoning of resources is like a large tree that sucks nutrients and water out of the soil so plants under it die off, people then are left surrounded by get rich quick schemes or jobs with dubious ethics and legality such as telemarketing or sales while money getting short can force them into welfare or public housing. For example the gas exploration boom in the US is pushing up prices for many raw materials and accommodation nearby, this might impoverish other people who cannot afford the rent there pushing them into Roy public housing or to move elsewhere. Like a large Biv tree draining the soil it makes it harder for smaller Biv businesses to find profits nearby.

Changes can also occur in upward mobility indicating problems in the economy. Since chaos thrives on winner take all competition and deception as in poker this means that some people end up as uncompetitive and chronic losers, the pejorative expression loser has increasingly been used in society for example. The idea of being upwardly mobile in society with a chance to get to higher levels of education and income is associated with this as well, for example many Iv subprime loan salesmen were probably attracted into the business because of the high commissions and gave up more sustainable and productive jobs. This upward mobility can then be like the branches of a tree growing upwards, when this momentum is broken in a crash people might find they can no long move up in the Biv society. This can also be because they are overshadowed by large V canopies of businesses that succeeded and now try to stop any competition to them.

Other might have lost their jobs in manufacturing and become Iv or Oy salesmen instead because employment was being created in this chaotic economy. This is because a lack of I-O policing helped Iv-B businesses make more money and drive more honest businesses out of the subprime industry. This then made salesmen with fewer scruples make more money and attract others into the business this way, it can then appear to be a boom in business when it is more like a crime wave. So Iv-B when not policed appears as a golden opportunity much like a supermarket being left unattended so people can take whatever they want or like looting in a riot when the police are weakened.

These situations then appear as mini bubbles that collapse sometimes quickly so those people who are fastest and most quiet about the opportunities might get in and make money. This also reinforces the concept of winners and losers as well as rudeness and ruthlessness to succeed. A pushy salesman might then do well with products like this because urgency is the main selling point. To be upwardly mobile is like moving upwards in a tree structure like the son of farmers for example going to university, becoming a medical specialist and moving up to a higher branch of a tree.

This relates then to the idea of family trees and genealogy, if someone has good genes in their family but is stuck at a low level then they might be able to have their offspring rise higher. However Iv-B like desert plants just quickly and wastefully uses up resources and collapses so people who are trying to adapt to systems like this will find they rise and then get caught in collapses over and over.

In effect they are also resources which are used up with stressful work wrecking their health or working on technology that will replace them and shut them out of future success. For example Iv-B technology originally grew by using smarter people, however the uncontrolled nature of this boom creates mutations to disrupt each other’s businesses.

This can include making technology that replaces these jobs, for example using AI and robots to replace people. Their upward mobility then might be stopped at a level where technology does a job cheaper than people can do it, they then get stuck at lower levels of the economy.

## This is what happened to horses, once an important part of the economy because they could do more work than the cost of their upkeep. People then like horses may become excluded permanently from employment if the cost of paying them for the value they produce exceeds the cost of their food and lodging, etc.

For example they might buy a house cheap and then make money on its value booming, take out another mortgage to buy a second house and then lose it all in the crash. They might accumulate profits in the share market for retirement by investing in speculative stocks such as Enron or WorldCom rather than balanced color sustainable companies such as IBM or Microsoft, then a crash might wipe out their savings as they retire.

With weak policing then people tend to get attracted to where money is being made though usually by the time a lot of people hear about it there is little need for secrecy and the collapse is getting close. Problems with upward mobility in society can be an indication of an Iv-B and V-Bi disconnect, also V people might be developing by rent seeking a permanent aristocratic like wealth and living off investments in the economy rather than being productive.

So just as upward mobility might start to fail then downward mobility does as well, these are both where nutrients are supposed to go up a tree and then trickle back down. V then might be the offspring of wealthy people but with no talent, however they can use Iv agents to manage property and lobby for tax protection to remain unproductive.

Bi communities can also be unproductive in this scenario where they use their political influence such as with government workers to get higher pensions while not adding much productivity to the population. Others then feel disconnected from these two areas that seem to be using their influence to get an easier ride, instead they end up in fast growing and collapsing businesses moving from job to job much like Oy foxes having to hunt out new R prey all the time only to see it get scarce and then having to start hunting all over again.

Mobility is not the problem then as much as too much mobility where workers have to move around to find transient work as they did during the Great Depression only to see it used up and their having to hit the road again. While Iv agents and salesmen might have to change jobs many times in sales to try and find products that sell the lack of policing can punish those too ethical to rip off customers.

In this environment B workers also learn to dodge and deceive salesmen by sometimes ordering goods and not paying, then Iv collection agencies can try to find them like other kinds of predators. They might then need to move over and over to find small amounts of Gb resources to consume, they can then become the victims of more Oy crime much like R gazelles being attacked by Oy hyenas.

With stronger I-O policing though businesses with a strong I trunk survive and more dishonest ones are closed before they can waste resources like weeds being pulled out or outgrown by sustainable plants. Because of this workers don’t have to compete with more dishonest ones and so their jobs become more productive. Iv salesmen might have honest products to sell because dishonest companies are closed down, there is then no competitive advantage in being deceptive to clients and so the selling process in the economy becomes more productive again.

Because Iv-B works on leverage and usually on borrowed money and materials it tends to grow more in areas where money can be loaned against security. Real estate then can be highly leverage but also stocks, bonds, commodities, and derivatives can become Iv-B.

Credit cards can also grow exponentially and then crash in a recession as people default on them or have to pay higher interest which also drives them in default. Student loans might be taken out in Iv-B professions like law which might prosper in avoiding the law rather than policing it effectively, for example lawyers might try to protect scammers and fraud from the government trying to get money back.

When the market crashes there might then be too many lawyers as happened after the GFC when there were fewer ways to make money by evading the law. Quants might study to get into financial speculation, run up large student loans and then have a degree which is not useful when the Iv-B market crashes.

Accountants might have a growth industry when I-O policing becomes lax working for tax havens or in tax avoidance, in a crack down there might be too many accountants for legitimate demand in the economy. Economists might get employment in think tanks in an Iv-B economy as deregulation creates a boom and bust, later some of these might need to cut back in funds or have lost credibility when the policies they advocate damaged the economy.

Then the economists might have a smaller market for their services such as in companies or teaching jobs leaving them with large student loans. Engineers and architects might be attracted into Iv-B construction by the booming real estate market and then when they have to work in the I-O policed market might find there are few jobs leaving them saddled with debt. Other less educated professions might also suffer, for example smaller industries in financial planning might have less onerous qualifications and smaller debt but have lost credibility after the GFC.

More frivolous businesses that survive off the large profits people make and then often waste such as importing or making luxury as V that people get in their Iv-B flowering phase might collapse. For example Iv subprime salesmen might have made good money and wasted much of it on new cars, expensive restaurants, jewelry, etc and then these businesses might crash when this source of income dries up.

B workers might also waste some money by using their houses as ATMs so the market for large screen TVs for example rose quickly and then crashed causing electronics outlets to go bankrupt. Not only then private debt increased but companies also had heavy losses from these collapses, both made the V banks leery to lend money to them and reestablish the roots and branches for fear of another chaotic collapse.

This leaves the economy more disconnected than ever, the V and Bi areas might be doing well, for example in the Great Depression Roosevelt forced up the wages of union workers along with economic stimulus with government projects and V capitalists were often still wealthy as the wealth inequality was still high. Trying to extend the economy into the Iv and B workers was much harder, they would grow and then collapse over and over with more economic waste. Even though Roosevelt cleaned up a lot of the corruption in the economy it still took a long time for the Iv and B roots and branches to regrow as they had been damaged so severely in the crash.

Increasing monetary velocity can also be monitored for problems, for example people refinancing their debt more often. This happened with much of the subprime loans being made to established home owners rather than new loans. Also Iv dealers might be borrowing money for short periods to do faster trading, repay the money quickly then borrow again such as in the overnight money market.

Banks might loan more money overnight to each other as their reserves are kept to a minimum for higher leverage. More companies might use an overdraft at a bank rather than their own funds, more workers might be living from paycheck to paycheck with few savings.

When this faster money also involves price distortions with no connection to actual Gb resources causing price increases, like a mining share discovering extra minerals, then this money is probably become gaseous with man small bubbles which can merged into a big bubble like steam.

Increasing mutations are another sign of economic instability, for example increasing numbers of brands of consumer goods with more different models presenting a bewildering choice often with deceptive features making it hard to work out which is best. This is because in Iv-B it mutates chaotically as often useless innovations and revolutions to addict people to it and away from its competitors.

The different types of derivatives were also constantly mutated into ever more esoteric variation in the lead up to the GFC. This also happened with the kinds of finance available to B workers such as Adjustable Rate Mortgages which reset to a higher interest rate causing many defaults. The different types of bonds also kept mutating such as CDOs or Collaterized Debt obligations which could contain almost any kind of derivative or bond.

Markets can also mutate as Iv agents penetrate deeper into more roots of the B economy finding ever more economic prey often of lower quality like Oy predators having to look further all the time for R prey that are scrawnier and more sickly to survive. The media can also mutate in this situation with more pundits deceptively telling audiences whatever they want to hear if there is no I-O policing that the truth has to be told.

More different TV shows of varying viewpoints, more blogs, each can soar in ratings or collapse chaotically if they don’t get enough people to pay attention often so they will see the ads associated with it. Much of the internet can be like this, mutating into sites and viral videos to keep people interested and sell advertising, companies then use Iv agents or B writers to entice people any way they can whether honest or not so they get a small commission or donations from their sites.

This can then become like multi-level marketing where many blog pundits pandering to whatever makes a profit create more political disinformation and anger than TV shows are accused of doing. This multi-level marketing is set up in an Iv-B tree shape with roots and branches and innately grows chaotically, people can have their business grow exponentially or collapse for lack of resources like weeds.

Bad operators drive out the good so those blog writers not willing to do whatever it takes simply get less page views and end up stopping their blogging or close down their forums, etc. This can also be associated with more ways to deceptively track people for advertising purposes, this is like in Roy where Oy predators being able to track R prey eat better and survive while others might not.

Also R prey that can track where Oy prey go and avoid them might live longer, advertising then as it tracks and models people’s behavior better can make more money and those who think this is unethical just make less money and leave the business. Other mutations can be in the types of food offered in restaurants or in supermarkets, often laden with more addictive and deceptive ingredients such as fats, sugar, or High Fructose Corn Syrup.

The more variations there are the more likely in chaos that a successful product will be stumbled on and its sales will either soar exponentially or collapse and be withdrawn. This can be moderated by I-O policing, for example by labeling food containers with their ingredients, checking them randomly for any deceptions, and pressuring restaurants to reduce salt and trans fats in their foods. Without this policing fast food would have no incentive to reduce salt for example, those that do would probably just be less popular and lose market share or be overshadowed by those that do.

One of the most important things to watch for is paradoxically not being able to see anything. Prior to the GFC the Fed and other economists saw very little evidence of any problems, this is remarkable because it implies there was very little sign of trouble except in retrospect before the Great Depression as well. By contrast before the Great Moderation economic problems were highly visible though they might create V-Bi stagnation.

Analyzing crises retrospectively then is a dangerous process because chaos becomes visible as it creates damage in the final stages, this is like a tree collapsing after having been hollowed out by termites. It tells us very little then that tree branches might have termites in them if we can’t see them, unless we are prepared to look inside them.

## To assume then that looking at the destruction caused by chaotic collapses tells us what it looked like beforehand is false, it is also a circular argument because if there had been proper inspections of all vulnerable areas of the economy then the chaos would have been spotted and prevented. No government regulators would have allowed the subprime fraud to go unchallenged if they had looked into the bonds along with Scimitar Capital or Magnetar and seen what they contained.

When I-O police saw that they would have done whatever necessary to fix the problem because of the amount of crime there, the SEC was prosecuting plenty of cases successfully at the time. In the same way if the SEC had found Madoff’s Ponzi scheme they would not have ignored it, this means then that chaos like this can only grow by I-O regulators being either ignorant or powerless to do anything about it.

This leads to the question of whether the problem is only in I-O policing, whether modeling other parts of the economy could have prevented the GFC. Perhaps but in Aperiomics the V-Bi and Iv-B disconnects only happen because of weak I-O policing, there is no other reason except for an irreducible uncertainty in the system.

So for example if the future is fundamentally uncertain in some ways then a crises can take us unawares like a sudden typhoon. Even in this case though we have in effect weather police who watch developing storms rather than relying on people to work out how to predict and monitor storms by themselves.

We have building inspectors who look for dangerous cracks in bridges, etc and health inspectors who look for contagion with vermin and germs. There is really no evidence in any part of any society of handling a contagion, cracks, or any kind of chaos except for having special people whose job it is to look for it and fix it or isolate the problem until it can be resolved. Only in economics do we think there is some other alternative.

So this opacity is like one of these inspectors not being able to do his job, like not being able to look in cupboards for vermin in restaurants, not being able to see all the places where a bridge might develop cracks, not being able to check people for signs of a growing epidemic, etc. In the same way opacity in an economy is a weak area where there is no oversight of chaos

Because inspectors unless corrupt will always report a contagion then this is the only place where an economic collapse can come from. In the GFC the chaos came from all the places where there was inadequate inspections, such as derivatives being unregulated, subprime fraud being ignored, banks being deregulated and allowed to speculate, liar loans meaning people did not have to be honest on loan applications, investors buying subprime bonds in Europe had no oversight on how they were put together in the US, the potential for defaults in subprime bonds reaching the upper tranches was not inspected by anyone except those who decided to short the market, many financial businesses such as Merrill lynch and AIG did not understand the exposure they carried to a market meltdown, and so on.

In each case where there was no inspection of the financial system the chaos spread there, there were no exceptions to this. Too much opacity is a danger signal but some parts of the economy need to have privacy so people can do confidential business so there needs to be a balance between inspection for chaos and personal privacy, however this is something the I-O police have to deal with all the time.

For example in the US there are laws preventing police from entering homes or stopping cars without a good enough reason to look for crime. These inspections for chaos cannot then just be open ended fishing expeditions as they would place a chill on business because they might fear private aspects of deals would become public and cause them financial damage. For example if Goldman Sachs or other hedge funds had to submit their computers to searches for front running or potentially systemically dangerous trading then they would fear others might learn their trading techniques.

Iv-B however is not so much inside businesses as between parts of businesses as roots and branches, transactions then can be scrutinized for problems by selecting them randomly to avoid any patterns decided to hide contagion, then the transactions can be approximately traced to get a good picture of what the system is doing. More is explained about this elsewhere but the main issue then is balancing Iv-B opacity with V-Bi transparency to give accurate pricing discovery in the I-O market.

Another danger signal in an economy is stagnation and excess transparency in some areas indicating they are V-Bi, this indicates there is a disconnect and so other areas may be hiding as Iv-B. For example after the GFC there has been an excess of transparency in some areas because of fears of more financial contagion.

## Sometimes economies can respond to an Iv-B crises with too much transparency, like police responding to a crime wave by stopping and searching each car on the road. The problem is this scares away a lot of Iv and B people who are naturally timid and often paranoid about the value of their own ideas.

This then causes Iv-B chaos to withdraw even more from V-Bi areas to safeguard its private poker like bluffing and creates a larger V-Bi and Iv-B disconnect. For example in Iraq the US army acted as Y demanding more transparency in society by conducting more searches and patrols, this was seen as invading the privacy of Iraqis who had often done nothing wrong.

As revenge some then joined an R resistance planting more secretive and deceptive IED bombs. In Viet Nam villages were also searched for R Viet Cong usually unsuccessfully, it just drove them to be more secretive. In restaurants if food inspectors only check the easier areas then they can drive a contagion like cockroaches and rats into harder to check areas from where they continue to steal food.

In the same way financial police can be more Bi in response to the growing anger of the community at having been deceived by Iv and Oy salesmen. They then start investigating salesmen so much that it frightens most of them away from doing business at all resulting in stagnation in the I-O marketplace. For example Bi in the market are usually warehouses and cooperatives where they take advantage of randomness of sales to keep their liquidity high and absorb chaotic shortages and gluts of goods and services.

However they also rely on Iv salesmen to stock these warehouses in many cases, also to make purchases for V refiners and improvers of those goods. Then the Iv salesmen might bring back these improved goods and resell them at a profit. For example the Bi warehouse might stock flour, eggs, milk, and salt from B farmers and miners, Iv buys these and sells them to V who comes up with the idea of making croissants.

Iv then needs to keep the recipe for these secret from Bi otherwise they will make them themselves and cut Iv out of the business so Iv uses secrecy and deception to protect V and keep the business flowing. When the I-O police weaken these Iv salesmen can sometimes turn Oy and fraudulent, for example they might sell croissants with poor quality flour or even make people sick with rotten eggs. Adulterated and even poisonous bread was common in England before I-O health inspectors.

Then the Bi community gets angry and makes the I-O police and market check them out more thoroughly including demanding the recipe for croissants so they can check them. This would have a chilling effect on commerce because V might say they would prefer to not make them anymore, Iv might also say they won’t work under those conditions.

So this transparency can appear to be an improvement but it may also mean the opportunities for honest secrecy are gone, this is how transparency can result in stagnation. This also occurred in the banking sector before deregulation, this transparency meant that so much oversight was required to do business that it took too long and created economic waste because Iv competes on how fast they can do business.

Too much transparency can then drive Iv and B from the market and cause them to do deals separate from it, the problem is in defining in I-O law what is reasonable privacy in business so companies do not feel they are slowed down too much by disclosure or having their plans and ideas shown to their competitors or misconstrued by suspicious Bi police.

## This also means that potential reservoirs of Iv-B should be monitored as they can work out of these areas, deceptively coming out and then if discovered hiding in there again. This is like R Al Qaeda and the Taliban hiding in Pakistan from the V US army and then coming out secretly to attack them.

It is also like how the R Viet Cong used Cambodia to hide in because it was supposedly a neutral country free from being made transparent by V. In the same way deregulated areas of those not considered important enough to micromanage with police can be reservoirs of contagion.

For example there might be fraud with sellers on online auctions in between countries but it is not practical for example for I-O police in the US to investigate a Chinese seller of a $20 item. So on Ebay this chaos is countered with random insurance where buyers and sellers are protected with refunds if they decide in their favor like a small kind of I-O court, a fraudulent seller might then be banned from Ebay.

Derivatives were completely unregulated and so acted like a reservoir of contagion from where traders could infect other parts of the system, if they were investigated by I-O regulators then they could pull back to pure derivatives trading and try another area that might be less well policed. In this way they eventually found flaws in I-O policing including by shopping for which regulator they could use, also in between the US and Germany for example there was no easy way for Germans to check the subprime bonds were not fraudulent.

In the same way there was no process the Japanese could use to check whether the carry trade in Yen was being safely invested, AIG eventually evaded regulators to get themselves into trouble with Credit Default Swaps because the traders on Wall Street had a safe haven in derivatives and eventually found ways to exploit the policing of related markets. This is complicated by Iv-B creating a bubble as it grows out of safe areas which makes it appear that it is making profits and not deceiving people.

In the same way Bernie Madoff with his experience on Wall Street found defects in the way it was policed and so was able to run a Ponzi scheme. Tax havens can act like reservoirs for weak I-O policing and so businesses can work from there constantly looking for ways to avoid and evade tax for their clients, to launder money for corrupt Y dictators and mafia, to hide money from scams that are discovered, and so on.

V overshadowing and Y domination by criminal alpha predators are another problem to monitor, this can damage a whole economy as seen by the mafia in Italy and Y dictators like Somoza or Pinochet with their corruption in South America. In some ways the American consumer began to be overshadowed by Asian exporting economies manipulating their currencies and taking US manufacturing jobs. When plants are threatened by larger plants spreading their leaves over them and taking most of the sunlight they are usually doomed or become stunted unless they can fight back in some way.

Many poor economies in the world are overshadowed by more advanced one, they cannot manufacture and export for example because other economies might be more skilled and educated, more motivated, or they have achieved a position of dominance and will hang onto it no matter what. For example China is threatened with its exports by other poor Asian economies manufacturing so it must compete much harder to make sure they don’t get off the ground.

This is like large trees trying to cut off sunlight so competing trees growing don’t get off the ground or only grow in a stunted and unthreatening way. With free trade this allowed poorer economies a chance at competing in Iv-B by opening some of the V canopy advanced economies used to protect themselves such as with tariffs and quotas. This allowed in the early stages dumping of goods in the US market at below cost to bankrupt industries and then take over their market share, this is like plants trying to grow faster and using up nutrients in the soil to deny it to other competitors.

As parts of the US economy became overshadowed by Asian and other exports then the exporters realized they could manipulate their currencies to make them cheaper by not converting much of the proceeds from sales into their local currencies. Instead they kept them invested in dollars allowing them to remain cheaper than US industries, this is then the overshadowing phase where they in effect hurt their own economies by not using this money internally in exchange for keeping their export industries dominant. The free market then if not I-O policed can have a color disconnect as well with V-Bi and Iv-B areas.

As the B worker became more overshadowed his wages plummeted, Bi unionists also saw their wages under threat and often had to fragment and become B with lower wages for their businesses to survive as Iv-B instead of more balanced color trees. As the US economy turned more to Iv-B to counter this deceptive currency manipulation from weak international I-O policing it was then ripe for exploitation in borrowing this money from exporting economies and speculating with it to try and get themselves out of the trouble they were in.

This is like small plants trying to desperately grow to reach the canopy and some more sunlight, they use the humus the big trees leave on the ground but often fail to build with it because of the lack of sunlight. So in an overshadowed economy there are usually plenty of resources and even loans but no easy way to build goods that can compete with imports.

For example the US could build plasma TVs locally as it might have the raw materials and workforce but it cannot compete on price so the trees that would build them remain stunted in perhaps building minor electronic parts or go bankrupt over and over creating economic waste. This is a fundamental problem in the third world where aid money can either flow out again corruptly through secretive tax havens out through a trade deficit as people take the money to buy goods they cannot competitively build locally.

Overshadowing can be very dangerous because becoming stunted can be a precursor to becoming bankrupt as an economy, economies of scale can mean that the few industries that survive in niche industries against imports might not make a high enough volume to keep prices down and end up losing that market as well. Because the overshadowing economies need to keep this up to avoid collapse themselves then the competition can become very deceptive almost like a Roy trade war as resources in the importing economies become scarce and if I-O policing remains committed to free trade and unsympathetic to the losers in it.

Often Roy ghetto areas are also overshadowed like this, blacks in the US might encounter prejudice, suspicion of being criminals, and a lack of education to be discriminated against. Also whites when competing against blacks for a job do not want to give up their job prospects to help blacks out with programs guaranteeing them jobs or being able to get degrees more easily.

This overshadowing by whites over black then works for whites and while they might not always be threatened there will always be some more vulnerable to competition who don’t want to cede any chance of losing. This then can create all kinds of overshadowing in an economy and more waste if not policed effectively such as not preventing real estate agents to boycott rental applicants on the basis of race.

It can also occur inside a race, for example residents of a state or country town might tend to not employ immigrants or even people moving from another state because of some prejudice such as by the South against Northerners in the US. An established business like an electronics outlet can be like a large tree overshadowing smaller businesses because they can buy cheaper in bulk and this sell for less, also they might look more likely to be around and honor a warranty than small and stunted competitors.

If these small competitors do get a foothold though then the large company might fall like a big tree that lost access to nutrients in the soil because of its competitors, then there is a scramble on to grow quickly and take the place of the big tree and overshadow the losers. Affirmative action can help this problem to some degree by preventing this overshadowing however it can also weaken standards of education by for example letting less qualified candidates get a degree.

However it may be cheaper for an economy to reduce this unfair overshadowing because it allows people to get out of the Roy ghetto as well as reducing welfare payments into it. The difficulties of overcoming this overshadowing can be illustrated by a company trying to build a new factory in a ghetto.

There may be higher crime because a lack of money makes police not work there, also Ro gangs might control much of the policing which scares away Iv agents from their markets. If the company does start to succeed they might face competitive bids from other states and towns trying to make them operate elsewhere, because the ghetto might need income coming in for people to move away from crime, get a better education, get healthier by being able to afford better food, have a viable alternative to Roy like businesses such as drug trafficking, get away from welfare dependence such as being afraid to take a job and lose welfare, and so on. If the government gave tax breaks to a company to build in an area like this then other better off cities might feel their overshadowing threatened by this favoritism.

With overshadowing then an economy might compete in a life and death struggle to survive and can then use up its savings as happened in the US prior to the GFC. As companies shed B workers people became more dependent on savings and more Iv-B deceptive jobs like selling subprime loans or trying to buy a house on no money with no job to resell it, if they succeeded then they might get enough money to get out of the Roy ghetto and make a fresh start elsewhere.

If they failed then they were often no worse off, the objective was mainly to minimize their losses and if they ended up with little then there was little change for them. At other times an economy or area might give up and try to adapt to this stunted growth by avoiding competitions they know they will lose at and waste economic resources in trying.

Many ghettoes end up at this point and instead concentrate on areas they have a chance at competition perhaps because others that have succeeded will help them to overshadow in turn. For example black musicians might have a competitive advantage in getting out of a ghetto and might form a group that helps each other in response to the overshadowing from white musicians and record companies, they might form their own labels for example.

However this doesn’t help the deeper problem of lifting economically depressed areas into Biv while simultaneously overshadowing them, for example many liar loans might have kept performing if minorities not been the first to lose their jobs and in greater numbers in the GFC in the US. In effect then the idea of getting poorer people to buy homes was doomed without a more comprehensive solution of how they could afford to pay for them, and what this would mean when others profited by reducing the competition by keeping them down.

This then was a secretive and deceptive Iv-B process of lending to poor people in such an opaque way, instead of finding out they could not repay the loans and resolving that problem the lenders profited from deceiving the lenders to get commissions. This is the nature though of an Iv-B and V-Bi disconnect, two kinds of policies are followed that are economically wasteful and will lead to booms and busts in some areas and stagnation elsewhere.

This also occurred in Europe, for example Greece, Portugal and Ireland were weaker economies more overshadowed by the German economy and so were more fragile in an economic downturn where their exports were even less able to compete. Other countries newly joined in the Eurozone or seeking entry were also affected by this overshadowing, their economies were still inefficient from Roy communism and so could not easily even with lower wages compete against the advanced European economies.

In places where they could these businesses were more likely to be targeted for more overshadowing until they became stunted or bankrupt or were bought out. The Arab Spring was mainly caused by food riots caused by the overshadowing of commodity markets by deceptive Iv and Oy speculators rather than a good chance of democracy, to overcome this overshadowing they need to be able to compete more and develop a trade surplus.

The Swiss would have problems building an export industry in cars for example because their currency is kept too expensive because of capital inflows to its banks. The capital markets there then tend to overshadow manufacturing from getting off the ground much as happens in a ghetto or third world economy. Oil producing economies such as Saudi Arabia would find it difficult to export manufactured electronics for example because the oil industry would overshadow with demands for engineers to go into that sector as well as a currency kept too strong from their trade surplus and sovereign wealth fund.

When overshadowed an economy or area is in effect starved in two ways, firstly in the B roots from not being able to use the resources it has or not being able to get them fast enough to grow quickly to evade this overshadowing.

So in trying to grow out of this overshadowing by foreign manufacturers the US was trying to get extra wealth from its B workers who were supposed to somehow take the natural resources the US has and make enough money to buy homes and repay loans.

The second way is from a lack of sunlight or energy into the economy, this can be actual energy such as from oil and coal or energy derived from energetic Iv-B business. For example when an economy has cheap energy like in the Middle East where petrol might be subsidized then a lot of economic activity can be spurred by this. For example people might drive to places as couriers or commuting because they can afford to travel, the US, Europe, and more recently China built their heavy industries on having coal available locally.

This is also why high energy prices can hurt the current economic recovery by stunting Iv and B growth, for example salesmen might not be able to drive as far and B workers on farms might not be able to afford to run farm machinery such as harvesters. When consumers pay more in power bills they might have to cut down on other purchases, having to take mass transit instead of being able to afford to run a car restricts where they can work or shop after hours.

Also Iv and B business thrives on energy as it needs to be faster to outwit the competition, to deny it energy in overshadowing then can make it collapse. An economy can also get energy out of winning an Iv-B competition or even Iv, for example when an economy beats another it gets a trade surplus for those goods, this means money comes into their economy which can be spent on buying energy related products.

When an economy overheats in a bubble it is because more money is using this energy to force itself into a limited supply of goods such as oil, commodities, and the real estate bubble. This extra money, because money can represent energy or time in an uncertain relationship, can then move faster and faster to generate more profits as in high frequency trading for example.

By contrast in an overshadowed third world economy everything tends to move slower, infrastructure is older and more obsolete, energy costs more and so people have to substitute time for it.

For example with high energy people can drive everywhere, with low energy walking or a bicycle uses less energy but takes more time. Products can take longer to assemble because of a lack of power for machinery, they can take longer to deliver because of the cost of chartering planes as a high energy way to deliver goods.

To resolve these problems the some economies with natural Gb resources might be helped most by subsidizing power which enables many businesses which might not survive without it. Others might have enough power such as South America with hydro-electricity but lack Gb natural resources and so might concentrate on being a V refiner and improver of imported raw materials imported.

After the GFC the pace of growth in the advanced economies has slowed, there is then more time being used in economic activity rather than energy. For example when the economy is moving quickly many goods and services are made and distributed more efficiently because for example a factory works faster at higher output, unemployed people are not wasting their time, there is more urgency in order deliveries hence the need for more speed, and so on.

For energy to be useful though there needs to be a certain momentum in Iv and B, for example Iv salesmen might have a momentum in constantly aiming at sales targets, B farmers might be working hard and producing regular harvests. When the momentum gets concentrated in Iv-B it feeds back on itself like the Iv salesman selling to the B farmer new farming machinery on credit which makes more profits and then more sales of farm machinery.

This feeding back of higher energy and momentum is saving time in harvesting but with competition will cause all B farmers to buy equipment to compete, this will then eventually produce a bubble in the cost of farm machinery stocks until there is a glut of grain on the market from this competition, a collapse and bankruptcy of some farms and machinery makers, and perhaps the Iv salesman and B farmer end up out of work because the growth was not sustainable.

Biv trees usually go through a flowering phase where V accumulates wealth, this is also like where Y predators try to accumulate extra food and fat sufficient to tide them through looking after their young. People are usually in business or working to accumulate wealth, often people will start out being very competitive in Iv or B but if they do well enough or get in a position to overshadow others then they might try to change to V or Bi where the risk of collapse and losing it all is much lower.

B workers for example might work for low wages in a chaotic job but if they accumulate enough money they will try to save it wisely, make investments for retirement, buy a house, get insurance, etc which insulates them against loss. If they can they might seek to have their B job unionized as Bi to give higher wages and job security to raising a family more safely.

In the same way Iv salesmen or entrepreneurs might compete chaotically to build a company but usually when they get near what they really need in wealth it becomes less useful to keep risking everything. This is like a plant reaching its ideal height, unless there is particularly dangerous competition from other trees usually they stop growing and try to spread their V leaves to overshadow others and if necessary quickly go into a fruiting and flowering phase before others can overshadow it.

Once this is done some trees don’t need to maintain their dominance as their seeds give them a new chance at regrowth. A company then might be built by a single entrepreneur, he might have trouble running a company more than a certain size and cannot find good managers. He might then change it from being very competitive to perhaps putting prices up even if it loses some market shares to cash out, perhaps sell the business and retire or start another one.

When a company reaches this mature phase it is often difficult to return to Iv-B growth, it may lead to disaster from collapse if they have lost their competitive edge so they may instead use the overshadowing strategy but also of making deals with other companies to keep the prices high or even buy them out or be bought out. This kind of price fixing is quite common particularly where the companies are not direct competitors, they may snipe at each other in small ways looking for a weakness but often find working as a V team makes it even harder for Iv competitors to avoid their overshadowing.

Watching for this maturing phase can be a sign the economy is stable with trees balanced between time and energy but often it can also be Iv-B companies looking for quick profits before collapsing. For example many of the subprime lenders were Iv-B and as the market weakened even as they started to collapse many tried to take out money with stock options and bonuses, sometimes by hiding the true state of the company.

The rising wealth inequality in the US was probably part of this flowering and fruiting phase but it was also where Iv-B businesses were growing exponentially because of weak I-O policing. Because Iv-B are like desert plants they often put out far too many seeds compared to a forest plant because they depend on some surviving any conditions.

People in these kinds of businesses then often accumulate far too much money for what they need but are often locked into competition where prestige and leveraged debts mean they can never give up but only collapse sooner or later. Even the most successful hedge funds can be like this, the Iv competition is so fierce that they could quickly have a massive loss by being too slow in or out of a fleeting Gb resource.

As these Gb resources become scarce then it becomes more like predator and prey, in the V-Bi economy after the GFC there has been little chaos and momentum for hedge funds to exploit. Consequently most have not done better than random chance compared to index funds. When an Iv-B economy is overheating however it is easier for deterministic algorithms to find a trend to profit on.

A situation like this can look very efficient but it is extremely unstable, imagine for example what would happen with another 9/11 or natural disaster. Seeing what happened in the GFC without even a major external shock, this shows how fragile the Iv-B system can become when it hits the ceiling.

In 2011 many pundits believed for example that a major sovereign default might plunge the world in to a depression, this is still how highly levered and toxic many assets still are years after the GFC. The problem is while leverage obviously was a problem Iv-B companies cannot unilaterally deleverage because others will take a chance to outgrow and overshadow them.

So Iv-B stays on the edge of collapse as much as it can often just to eke out small profits except for the very best traders. It is hard to watch for this because the whole Iv-B market like be opaque and deceptive where companies pretend to have more money than they really do, if I-O police do not audit this area randomly and deter fraud by prosecuting even weak companies then they will see no profit in honesty or stability. It is then much more healthy to see companies mature into more sedate and insured businesses even at the risk of some price fixing rather than being so competitive that they could all collapse again in a downturn.

Iv-B is a revolutionary strategy also used in nature, for example a kind of R grazing animal might make a revolutionary leap to becoming a much faster runner because of a genetic mutation.

It might also be because the slower animals are eaten more so this eventually makes the faster animals mate with each other more often. When this happens their numbers might increase and others decline even faster as the slower animals are eaten. Eventually then the new revolutionary R animal might drive the other prey into extinction and the fossil record would show an evolutionary leap.

The same might happen with Iv predators, if the slower ones starved more often then the faster animals might breed together, this might create a mutation or mix of genes that is much faster and catches up to the R revolutionary prey in a counter revolution. Both then tend to overshadow their competitors after a revolutionary leap, the R prey escape much more often leaving the others as a target and the Oy predators would eat more often leaving others to starve.

In the same way B workers can have a revolutionary jump such as those trying to make money from liar loans and housing speculation, if they succeeded then they might move out of a dangerous Roy area and leave the other B workers behind. Then their offspring might get a better education, marry into a better family, eat better and live longer, etc so eventually their whole genetic mix would change permanently compared to if they didn’t take the chances in buying a house for speculation.

Oy salesmen can make a similar evolutionary leap where if they do well in a boom like subprime then they might save money, get a better education for their families, etc and so they can have a huge revolutionary change in their lives by being fastest into a risky job preying on B workers. As these B workers succeed more by having profits from liar loans they might become better educated and overshadow other B people, for example they might be taken in less by Iv salesmen because they can afford an accountant and lawyer.

Iv salesmen then have to have a counter revolutionary jump themselves to go after these more wealthy B workers because the others left might not have much money and because other salesmen are also chasing them. Both however can experience the collapse or failure of a revolution such as R communism experienced in some countries, for example in the GFC the crashing of the market took away the profits B workers and Iv salesmen had made so some of the B workers returned to more menial jobs and Iv salesmen to less lucrative selling jobs such as cars or real estate.

If these Iv and B people had not saved some of their chaotic profits, which is like trying to prevent chaotic collapse with randomness, then they might not have weathered the GFC storm. So Iv salesmen if prudent when they are successful as Iv try to become like V as a team player relying on insurance to protect themselves from the bust after the boom. B workers that made money might get out of the ghetto and would be wise to join a Bi community where people protect each other, this would make it less likely they would be ripped off by Iv salesmen.

In the same way though V might have to become Iv sometimes when the insurance of the V team leads to a stagnation of growth opportunities. This can be because business is more transparent there and so there is less chance for secretive and deceptive ways to get ahead like taking out a liar loan.

So some might leave V for the deceptive and sometimes more lucrative Iv jobs, like an unemployed executive becoming a salesmen to try to make big money. Bi workers might also leave their team orientated areas to get work if Bi unions and high wages have put people out of work. The Bi transparency sometimes makes it hard to find an opportunity without many other team members also seeing it.

In this way then V-Bi stagnation can drive people to join Iv-B businesses to make more money but also risk more while Iv-B collapses can drive people into V-Bi security. This can compound the disconnect between the two colors, the I-O police can moderate this for example by making the Iv salesmen jobs less attractive by watching for fraud and also investigating liar loans and similar opportunities.

This is like in nature where the O middle of the food chain tends to slow revolutions in genetic abilities as well as some subsequent crashes. More on this is in my first Aperiomics book but when R becomes faster in a revolution then Oy predators attack O animals more preventing Oy from starving as quickly, this takes the pressure off slower R animals and makes the revolutionary leap less of an advantage and so many fast animals that might mate with each other then might do so for other reasons such as appearance and so they slow down again.

Also O and Oy animals might work together more to counter these faster R prey, for example R sardines off the coast of Africa are attacked by a partnership of sharks, and dolphins to counter their ability to escape either together.

If the Oy animals suddenly speed up in a counter revolutionary mutation then again the resistance by O animals means they are attacked more and this means less O and Oy animals prey on R and so the R animals increase or slow a decrease in numbers. Then Iv finds that being faster is not necessary because of the extra slower food around and so can devolve as slower Oy animals also survive and mate.

This then is like how the O police stabilize the Roy economy of predator and prey, and like the overtones of these colors in Biv. For example when Oy faster salesmen find a revolutionary product like subprime loans then O police discover it quickly and fight back against it by prosecuting people and making them snitches on others.

Then other Oy salesmen see the revolutionary product is often not worth the risk as honest businesses are still making money, the dishonest revolutionary subprime loans would then have stopped much earlier. In the same way when R people started using liar loans to get ahead faster by deception in a revolutionary leap then this causes the O police to notice this and look for Oy allies who can help to catch them, like hiring more Oy people as detectives for example. This then stops the R crime wave and as it subsides more Oy detectives are laid off or the hiring of them is slowed down.

Both Roy and Biv societies are dependent on secretive and deceptive people to feed their societies, R in Roy are typically feeding off V parts of Biv society just as with animals. R gazelles for example then might be starving for lack of food but because they are hard to find and like to hide then it is difficult for any predator to know whether their numbers are diminishing.

This can lead V predators to procreate too much and eat too many of them, perhaps in nature they may sense a future shortage of food from experience when there is a drought but it is unlikely they would work this out from an epidemic in their prey. In the same way the Roy society can prey on R persecuted people for their assets, for example R drug addicts might be depended on to steal from wealthier areas once hooked on drugs then be robbed themselves.

R petty thieves might steal cars in a Bi-B area by working for the Bi gangs, they might work on a car cleaning job and then direct the gangs on how to rob it later. Some R people might be on welfare which is usually money from Biv and then might also have a job on the side. Often then R people have money from unknown sources and can be targeted by criminals because they are usually not strong but keep their assets by speed and deception.

In the same way B workers are the foundation of a Biv society because they work competitively and look for revolutionary discoveries like new ore deposits, new ways to farm, and so on. Often they have little money because of intense competition, instead of R people feeding on the V or wealthiest part of Biv society that pays taxes for welfare, getting charity from the wealthy, the B workers have to find profits from Gb resources which are usually minerals and natural resources.

For example farmers work on the soil, miners look for minerals in the soil. Gb can be more than this but usually it comes down to private property that derives from inanimate objects, there is also a cycle from Roy for example Roy animals that die enrich the soil for Biv plants. It could be argued in a Biv dominant forest that Roy animals are there to distribute seed and pollen, in exchange they eat parts of plants but then when they die this is reclaimed as humus.

Roy animals can supply intelligence to a Biv forest to do tasks such as distribute seeds, this is mainly because plants compete against each other as Iv-B and use animals to gain an advantage. It can be viewed as an energy cycle, sunlight as energy goes into V leaves and R animals eat them, then their organic material which has evolved to feed off plants is adapted for plants to feed off in return.

It is also a time based system, V-Bi plants survive by averaging out problems such as cloudy days reducing energy. Other Y-Ro animals also average out these problems by eating cooperatively to prevent booms and busts. The result is an Iv-B and V-Bi time energy uncertainty in plants feeding and then feeding on Oy-R and Y-Ro animals.

B workers might look for coal and oil which derives from a previous Biv and Roy ecosystem and so is like a kind of humus or enriched soil. Because B is secretive and deceptive then the Biv society as well is based on an insecure foundation in that its basic needs might be lied about, for example in the lead up to the GFC wealthier parts of the US thought their lending to workers was much safer than it really was, and that there was a large untapped black market there which could somehow repay these loans.

B then does its job well in a society when adequately policed but if I-O policing is weakened then they can be no more reliable than Iv salesmen, the GFC was partially caused by Iv fraud when they thought deregulation could let them get away with it. It was also caused though by B fraud when they were not monitored, for example only a few short sellers checked on whether there was likely to be a growing number of defaults from all these liar loans.

When Iv-B causes a problem then it is important to remember that it is a duel of deception and that both of them are usually playing the same economically destructive game. Whenever there is an unpoliced deceptive color between parts of an economy and a needed resource there can be chaos brewing, for example many Iv agents borrowed money from Japan in the carry trade to reinvest in other countries including in subprime but when this money started to tighten there was no process for informing the rest of the economy of a coming credit crunch.

For example R prey are chaotic and deceptive, because they are at the base of the food chain they can cause collapses in it. B workers and the roots of plants are chaotic at the base of Biv systems, they can also cause collapses because their competition leads to secrecy and deception.

Iv and B both tend to keep any information secret in case it is useful later, they can also misdirect questions to make their businesses sound more secure than they really are. The same might occur with other natural resources, for example if farmers are experiencing problems with pests then they are likely to keep it secret so as not to make their crops more suspect for sale.

If they had then to use extra pesticide than was legal to control it then they might well try and get away with it or say it was an accident, hoping no one would check that shipment. B miners in third world countries might commit atrocities to keep local people from getting a fair share of the profits because if workers not willing to do these atrocities left then others would take their place in a Gresham’s Law dynamic, for example the Congo supplies minerals such as Coltan often with a strong relation to military raids there, the proceeds then taken to Rwanda and Uganda.

B workers sometimes can steal from a company if not monitored and then have to be fired. So when economies have to trust secretive and deceptive people in these situations the result can be unexpected surprises with a chaotic market or a collapse.

The GFC showed this can be a serious problem, instead of a timely dissemination of news about a credit crunch or high leverage being dangerous many businesses were still buying subprime bonds days before the market collapsed. For example Basis Capital Management sued Goldman Sachs over its purchase of Timberwolf securities, at the time of this transaction Goldman Sachs and most other dealers on Wall Street knew the market was in serious trouble.

It then became a Roy predator versus prey negative sum game where losses are minimized, anyone not in a position to know this became Ro-R prey by selling them bonds which would probably fail or at least fall in value. Throughout the global economy these Iv and B layers then can act like bands of secrecy and deception separating more transparent V-Bi areas almost like a fog of economic war, to do business in these situations is akin to braving highway robbers in the middle ages between cities.

When there is an economic collapse these areas can be even worse unless the I-O police grow stronger, for example as the policing of the Roman Empire fell it grew much harder to trade between the major cities of Europe because of bands of Oy-R robbers and so much of this Biv trade stopped as people reverted to their local economies. Banks in the GFC ran into these Oy-R and Iv-B bands of deception when trying to lend to each other since without proper policing they could not know who was really solvent, this fog then caused the interest rates on Ted Spreads to skyrocket chaotically.

Some countries encounter this when their police are weak, for example Russia since the fall of communism was periodically been viewed with suspicion in doing business there because of corruption. Left wing countries such as Venezuela are more Ro-R and oil companies are hesitant in investing there because of their finds potentially being nationalized.

Sometimes Gb resources can be exaggerated, for example the gas from fracking in the US has been hyped by B miners as well as Iv agents hawking investments in it, the actual potential for this gas as well as its price has varied chaotically with a boom and bust. Other companies or countries might hide evidence of Gb resources until they are ready to exploit them, this can lead to a sudden glut of resources on the market as others continue to explore for minerals without realizing the prices will fall.

In each case these bands of Iv and B, or sometimes a more criminal Oy and R can make economies unstable when I-O policing becomes weak just as some areas in a city can become too dangerous to travel in if police do not patrol enough.

If these areas are too close to major arteries then all kinds of economic traffic can be suddenly affected. This can be like a viral contagion in an animal’s body that spreads quickly if it gets to major arteries.

For example in the GFC the inability for banks to trust each other meant the Fed had to lend enormous amounts of money to stop the system from seizing up. This was like a collapsing Roman Empire needing more military team action to keep panicking cities cooperating instead of hiding behind their city walls. For example when the Goths invaded the empire they acted as Y predatory armies sacking Ro cities in wars of attrition.

When hedge funds started to get into trouble in the GFC some large sales created a panic because it wasn’t known who was behind it, this complicated the strategy of funds agreeing to not sell or even buy to try and hold the market from collapsing. So much toxic waste in subprime bonds essentially destroyed the whole industry, from not existing until relatively recently it became ubiquitous in finance and then virtually disappeared as something no one was interested in buying bonds riddled with Iv-B toxic waste.

Some US and European cities became chaotic and collapsed in the GFC with high unemployment, many businesses were then afraid to do business there because assurances from local businesses they were solvent could not be verified. When people in the US became unemployed as Iv and B often they could not find work because they were unemployed. They could not prove there was not some other secret and deceptive reason for losing their jobs or that they were not either the worst employees who were laid off or had lost their edge in being idle.

Companies then preferred to take other workers still with jobs looking for some way to avoid these kinds of deceptions. In Iv-B a collapse means that mutated jobs, products, innovations, etc are weeded out where those unfit are avoided by their competitors. This is because helping a mutated system to survive just makes it less likely the helper will themselves survive as they wasted some of their own resources. People losing jobs were seen as part of this cleansing process and their skills as unwanted mutations.

In the GFC short sellers were seen as deceptive according to Richard Sauer in his book Selling America Short. Often this was true, the downward pressure of shorts on stocks in a chaotic collapse can be self-fulfilling as much as people buying stocks in a boom and pushing up prices.

When the market was collapsing after the fall of Lehman in particular there was a need to find scapegoats in the opaque system, short sellers had been pointing out the Iv-B fraud for many years as they profit from V-Bi exposing fraud. However Iv-B chaos grows through weak I-O regulation so these complaints by definition had to fall on deaf ears along the widening chaotic cracks.

In a pending collapse though the need is to shore up the system rather than profiteering even though some of the economy may be made of defective assets fraudulently acquired, it is not the time for people to be creating more Iv-B panic by tearing out contagion willy-nilly. Much of the selling in the GFC was not related to the original claims of the short sellers but a domino effect hitting many healthy business like trees falling on each other.

The short sellers then became like a band of fog in parts of the financial economy, it wasn’t known whether they were criminals or not but they were profiting from the collapse of the system and so were suspect. This is the problem with Iv-B business though, it is deceptive when building chaotic and fragile structures and also deceptive when it is knocking them down because cracks form the same patterns as roots and branches that make up the Iv-B economy.

Short selling can then be like chaos trying to root out chaos, both can grow exponentially in a deceptive contest like poker. It can also be V-Bi where transparency is sought to highlight Iv-B deception, however this must be done in moderation by the I-O police so as not to exacerbate a collapse.

Shorting then cannot act as a mechanism to replace I-O policing because it can be just as chaotic as the deception it seeks to uncover, for example they might be hiding evidence of a company’s deceptive conduct until they set up their shorts to maximum effect. When they expose corruption in businesses they can also be showing Iv-B chaos in the market as well as Roy crime.

By exposing it the prices of companies can be corrected in an orderly way in the I-O market as the I-O police such as the SEC might investigate them. People are not usually panicked by this because police arresting criminals is not a sign of a crime wave being dangerous.

When the I-O police are weak though there ends up being a battle between shorts and longs like a kind of economic civil war that can take place in V-Bi, Iv-B and trying to bring both to an I-O market correction. For example there can be a V-Bi battle of attrition where short sellers try to create cracks in a company’s finances to a tipping point by losing money, it depends then on whether the company can hold out and make the shorts retreat or go bankrupt when the shorts make their profits.

In Iv-B there was a situation that Lehman’s Dick Fuld complained about, the shorts may have been trying to chaotically collapse the company by secretly spreading rumors to panic investors, perhaps withdrawing fund to make it collapse, flooding the market with shorts to push the stock price down so the government might step in and close it down, and so on. This then is an Iv-B battle where Lehman made money deceptively using leverage and others attacked Lehman the same way like hyenas attacking each other in Roy.

The third way is where I-O police are strong and can prevent the first two from happening as potentially illegal, in this case the shorts try to expose Iv-B fraud and in effect profit as whistleblowers by instead of just getting a reward they also make money from the short. This moderates the chaotic effects because to receive payments from the government they usually have to have clean hands, that they didn’t also cause damage to the market from their own actions.

In the GFC though shorting was in the same situation as other companies that mutated wildly under weak policing, the V-Bi wars of attritions with shorts versus longs were an easy target because many of them should never have been allowed.

A ban on all short selling ended some illegality but at the cost of shutting down the honest shorting as well as the dishonest, this kind of shorting was needed at the time to differentiate what was healthy in the economy and what had too much contagion.

Once the V-Bi shorting was scrutinized the next step was to try to stop all Iv-B shorting which led to a sudden short squeeze and a large rally in stocks, this is because the chaotic balance between Iv-B trying to grow and another trying to short it was disturbed and though it was never stable this caused a temporary amount of exponential growth in some stocks. However this allowed the contagion to spread with this new money into the market as people treated it like a bear trap and sold into it to get more liquidity.

Banning short selling them created random changes in V-Bi and more chaos in Iv-B when the I-O police should have been getting information from legitimate shorts to expose the contagion in the market. However this was impossible because the I-O police had been so weakened by V-B pressure in the past, it was like in the middle of a riot trying to get overstretched police to pay attention to a minor crime. At that point they had to try and get the situation under control and this sometimes in a riot means a lot of good activity has to stop such as in imposing a curfew.

In a chaotic event like an earthquake there is a process similar to deleveraging in the GFC. Some buildings collapse by themselves, this happened with many companies. Other collapse from people panicking to get out, pushing against each other in a burning theatre for example can trap more people than an orderly evacuation run by I-O police.

This is like panic collapsing Bear Sterns and perhaps Lehman. After the initial shocks there is an uncertainty about the remaining buildings as to whether they are safe to go into, this can be so severe that the public might desert most of the city which causes more collapses as repairs are not effected that could have saved some buildings. This is like in the GFC where companies often collapsed where if people were calmer because of an I-O regulatory presence they might have been able to shore up some companies.

At this point in an earthquake engineers would usually start inspecting buildings for cracks or any damage that could cause them to collapse, those that are still sound but damaged could be pronounced to be safe or even guaranteed by the government against financial loss from moving back into them. This could have been done in the GFC and was attempted to some degree with stress tests on banks.

At some stage unstable buildings would need to be pulled down so new safer buildings could be erected in their place, this is like liquidating businesses so other companies can buy parts of them such as Barclays buying much of Lehman. With buildings no engineers would do what the Austrians claim should happen, that is just let buildings fall with no attempt to save them because it costs much less to fix a damaged building than to build a new one. Some buildings would be better off falling or being demolished, the difference is the I-O police would determine this as a neutral observer rather than letting this happen to all of them.

Mass collapses of buildings usually don’t happen in earthquakes with newer buildings because there is stricter I-O policing of how they are built, this is often from learning what buildings fell down in previous earthquakes as well as improved understanding of the problem by engineers as well as improved building materials. In the same way companies have tended to be built more stably because of I-O regulators such as specifying that banks have to keep monetary reserves.

Before the GFC though the system had gone for a long time without major recessions and the belief developed that companies would to protect themselves build more safely even without I-O policing. This doesn’t happen in buildings, for example the competition in the market to make houses and office buildings cheaper occurs in Iv-B because consumers tend to pick the cheapest one.

Those who can provide an office building that would fall down in an earthquake can profit from this by simply claiming the building is as safe as those that really are but is still cheaper. If the I-O police don’t stop this then the honest builders cannot compete with a Gresham’s dynamic and so more dishonest builders create a city over time that must collapse in an earthquake as often happens in third world economies where building inspectors might be bribed.

The same occurred in the GFC where a lack of regulation caused the shadow banking system to proclaim it was just as safe as traditional banks but offering higher returns, even Bernie Madoff could claim this with the low level of I-O policing. This made more honest companies do the same or be overshadowed or bankrupted, the system then became progressively more fragile and so could build more with less and less money just as avoiding building regulations could make more buildings with less material.

Leveraging in an Iv-B boom then is similar to deleveraging, those companies that are built deceptively as stable will tend to collapse when deleveraging.

This process of deceptive leveraging has to reach a limit at some stage just like sooner or later bigger and bigger buildings with defective materials will start to have collapses exposing the frauds and make people panic in the other buildings.

As this building boom starts to reach its end people become more leery of the claims made and see the returns diminishing because of the reducing amount of buyer demand, this can be compensated for by even more leverage where businesses find more ways to cut corners and leave out materials in new areas unlikely to collapse until they have made their money and left the business. This is the same as Iv-B desert plants evolving to be more fragile and short term as long as they can survive long enough to flower and make seeds before collapsing. It is also like the final manic phase of the boom prior to the GFC where companies tried to find more profits by leveraging far higher and doing more trades in derivatives faster.

At this point collapses started occurring in the market with some serious corrections, for example some subprime bonds became difficult to sell because people were increasingly defaulting on loans in them. Some bonds even had an arrangement so that defaulted loans could be replaced with other loans after the bonds had been sold, this often caused the quality of bonds to become much worse over time without the investor realizing it. This is like some buildings having structural problems and being fixed with shoddier materials as parts collapsed during construction or in a warranty period, other parts might collapse after the warranty expires.

It is not unusual for manufactured goods to have problem and even collapse, for example TVs might break down. There is a difference though when products are sold deceptively like a TV comes on the market and sells well because people think it is as good as the honest brands, then it trades on this misperception by using cheaper parts that break down much earlier and this casts suspicion on all the honest manufacturers. This is like the lemon problem in economics.

Sometimes they have to respond by using cheaper parts as well because they lose market share to the cheaper TVs, then the Iv-B system is in a race to the bottom to make profits before breaking down TVs scare everyone away from the market. When this happens trying to sell a second hand TV is like selling stocks and bonds in the GFC because the fear makes them worth much less than they should be.

This occurs though weak I-O policing where the warranties of the TVs were fraudulent and companies either knew they would fail or were negligent in checking whether the cheaper parts would last. The same happens in more honest businesses too, for example sometimes in computers motherboards and hard drives come onto the market with cheaper parts that no one realizes will fail.

This doesn’t cause a crash in the computer market because fraud is investigated and often class action suits even after an expired warranty might replace the defective equipment. When the TV manufacturers use cheaper parts they might make short term profits they weigh against having to pay out more in warranties later or even in managers taking bonuses and profits from stock options and then leaving the company.

This is like the desert plants again trying to compete with each other for limited resources and not lasting any longer than necessary to produce seeds. It is also like Oy-R predators and prey in Roy where predators might adapt to not carrying extra weight to slow them down, they might also have more offspring earlier to counteract the chance of their starving. The R prey also follow this strategy, the lighter ones use less materials and can run faster and if they can survive long enough to breed then die this might be a better strategy than trying to live a long life with more offspring.

Companies have this same problem, a more color balanced business might try to last many decades in building TVs and so needs to be more honest at the expense of fly by night short lived mutating Iv-B businesses that produce shoddy products and then vanish with their profits.

The same occurs in the financial sector, when the market starts to collapse into Roy there is more Oy-R predation and so companies that can make quick profits at the expense of their long term reputation might adapt to this new Iv-B situation. This is how old companies like Salomon Brother, Lehman, and Goldman Sachs steadily lost their sterling reputations for short term profits because to do otherwise was to be overshadowed by those had fewer scruples.

Leveraging then is like an Oy predator becoming lighter, it is in effect leveraging fewer nutrients into a larger body and much of it is taken up with roots in branches in the shape of blood vessels like in a tree. At the same time the B workers start to adapt to short term profits at the expense of ruining their previous reputations, they often found they could make more money with liar loans speculating in a house and pulling profits out with refinancing.

Many even did this with homes owned for decades, most of the subprime loans were going to refinance established homes to get more money out of a house for consumption. This then is like R prey trying to do more with fewer nutrients, to become faster and more deceptive at the expense of having to have offspring much faster. In the same way B workers needed to get money faster at the expense of long term stability as it would help them have a family and perhaps save enough for college educations when the traditional path of a steady manufacturing job disappeared from predatory overseas imports.

This is like in Biv where good quality plants evolve into weeds that can thrive in small opportunities to quickly grow and seed, for example with grass as a good quality plant in some areas weeds might take over because grass gets shaded by larger trees. These weeds have adapted to outgrowing the grass short term and then seeding before the grass can catch up, these seeds might then remaining dormant under the grass until it gets damaged for some reason and then weeds spring up again.

In the same way there are weed like Iv-B businesses in an economy that can adapt to fleeting opportunities to make money, when resources become low such as from too much competition from imports than a forest might start to fail as weeds become more and more the only plants that can thrive for a time. This can also affect brand names, for example a trusted name in electronics might start to import cheap brands and then rebadge them under its own name.

This can then lead to quick profits while people are deceived by this, the company might end up going bankrupt when this deception destroys their reputation but the Iv managers might have made their profits and left by then. In the same way B workers have to learn to watch for this and so start to distrust well-known brands, this is also because of I-O policing for allowing these kinds of misrepresentations to destroy color balanced brands and in effect replace them with weeds.

Subprime bonds went through the same process, initially they were of high quality but then more made profits by pedaling more toxic bonds without the original Bi investors realizing the quality was changed, this allowed for more short term profits at the expense of crashing the market later where no one knew what companies and bonds were to be trusted.

This strategy can lead to collapses in the food chain in Roy as animals try to get faster and lighter, having more offspring earlier as seen for example with R locusts or mice. Usually though it is not effective as a long term solution because the situation becomes so chaotic between Oy predator and R prey deceiving each other that there are many booms and busts in numbers causing starvation of animals.

This becomes less efficient than growing more stably so other Oy-R animals who try to survive longer and have fewer offspring to have a competitive advantage. Then the more chaotic Oy-R animals have to adapt back to a more moderate strategy or die out, this is like the middle of the food chain reasserting itself where Oy predators start to become more like Ro prey as a hybrid.

For example hyenas are in some ways Oy hunting quickly and deceptively but they might also be Ro in some ways defending themselves like a herd of buffalo against an attack by Y lions. This causes them to develop a smaller team instinct and more stability so they can hunt singly or in packs, catch prey by speed or by teamwork, and so might adapt to decide when to have offspring based on their perception of future food rather than just having as many as they can.

The R prey then find they need to sometimes act as Ro herds against smaller predators, for example Oy hyenas might hunt R Impala singly but at other times hyenas might hunt more as O defending their food supply against Y lions and so Impala might adapt then to moving in herds to resist the O hyena who are now acting more like a shepherd.

In the same way economies usually don’t go over the chaotic edge as in the GFC because they find this Iv-B chaos is not as efficient or as profitable overall as more stable long lived businesses. This is because of I-O policing, for example Oy businesses in subprime adapted to short lived selling of bonds to unsuspecting R investors for quick kills to make their profits before they realized what was happening, like a hyena suddenly attacking an Impala.

At other times these Oy businesses might band together as a kind of self-policing of their business to report Oy crooks to the I-O police or out them themselves. This can create more profit for them because they don’t have to chase and trick the isolated R investor but can then offer to partially protect Ro investors in exchange for partially fleecing them.

This is then the shepherding model self-policing in business tries to accomplish, they may not be appealing to many Ro investors but the amount they pay might be low in exchange for avoiding a worse fate of chaotic decimation such as happened with Oy crooks in the GFC. The problem is this O alliance is unstable, sometimes hyenas might act this way to stabilize the middle of the food chain and at other times change back to Oy to cash in on their developed reputation and chaotically defrauding the investors they had beguiled.

## This happens with some financial pundits where they expose other crooks and gain some trust and clients that way, investors know they will still get taken sometimes but see them as the best in the negative sum game of the less of many evils.

This is like predators and prey who might start to trust each other to some degree, for example Ro prey might have come to expect some attrition from occasional attacks by relatively stable O packs of hyenas that try to chase away the more dangerous Y lions who could more easily break up the Ro herds. Then more fleeting natural resources such as a drought might make the middle of the O food chain collapse, the Oy hyenas start to eat and break up the Ro herds more chaotically, lose their trust and so Ro evolve and learn to break up into smaller numbers and hide from the hyenas.

As the hyenas now have to hunt singly the Y lions are no longer afraid to go after the R prey and often attack the Oy hyenas who no longer have a team to fend them off, the result is the food chain starts to collapse. This would cause many to starve chaotically until they can live on the reduced resources and then the Oy hyena might become more O again as the situation stabilizes.

Hyena might not be an accurate example here, an expert on African animals might well dispute this. However they like most middle of the food chain predators are often attacked themselves and can use this Ro team strategy, they also protect their territory against Y lions.

In the same way this unstable O part of the economic food chain causes economic crimes to come in chaotic waves usually causing a recession. With extreme scarcity of resources perhaps from globalization and trade deficits these chaotic crime waves can cause something worse like the GFC.

This is again the energy time uncertainty, some animals might evolve to use a high energy strategy where they expend high amounts of energy in searching for and catching prey and so their R prey evolve to spend high amounts of energy in evading them. Others have a high time low energy strategy where they might sleep more often to conserve energy, live longer and have offspring that take longer to mature while protecting themselves in a team.

In the same way businesses as workers in an economy have a time or energy strategy, this related directly then to the amount of energy and velocity in an economy and gives rise to terms like bubble, heated, fast money, and so on.

In the GFC then there was a culmination of the Iv-B and Oy-R strategy to give up alliances with the I-O police and to instead make as much as they could, when the collapse happened though many people had to choose between continuing this strategy or going instead to a more stable system to rebuild and perhaps resume Iv-B strategies later. For example Iv-B desert plants would not usually evolve differently just because they flower quickly and then their seeds might have to wait for a long time, some parts of the economy then will remember their Iv-B strategies like weeds ready to spring up again whenever the I-O police like gardeners neglect to prune and uproot them.

The recovery phase then can be either like businesses that swung to an Iv-B strategy but now are either moving back to a V-Bi strategy or more balanced I-O approach. For example companies like Goldman Sachs after their reputations were damaged in the GFC and subsequent accusations from the press and the I-O SEC attempted to rebuild their image as more balanced in appearance if not in reality.

This would be moving back to a balanced Biv strategy of a long term business because they would have realized they were lucky to survive the GFC at all. For such an old company then it would be apparent that such short term profits at the expense of bankruptcy were not a viable strategy for survival or they would never lasted as long as they did.

So even in the lead up to the GFC parts of the company would have retained this older more stable outlook, even when Henry Paulsen was head this attitude was prevalent so the Iv-B phase was relatively short lived and perhaps not long enough to transform the company irrevocably as happened to Lehman. However it’s likely there would remain Iv-B parts in the company like seeds that might spring up again and change the company in another Iv-B boom and potential bust.

Other parts of companies are more V-Bi, for example they like to run a stable, sleepy, and transparent business based on secure lending rather than chaotic speculation. Many financial businesses would want to swing back to this strategy like the Ro herds of buffalo being attacked by the Y lions.

This kind of business would be based on larger and more normalized and standard loans where long negotiations are like a war of attrition on holding out against the other until they blink. For example V-Bi banks in the 1970s in the US and Europe were usually the only place to get housing loans and people had to measure up to their standards to be accepted.

On the other hand many people were in larger organizations such as Bi churches, social groups, and unions which could give their endorsement to a bank which could be quite valuable to them. In such a deal a bank might get many thousands of loans without much advertising taking market share from others, this then would make them more accommodating and giving concessions in this war of attrition.

In the GFC those with liquidity often dictated harsh terms designed to make punitive profits on others, they had then adapted to a Y-Ro strategy so that those with a chaotic business model often had to sell assets at fire sale prices or collapse. According to Richard Sauer in Selling America Short Goldman Sachs did this to their short selling company Copper River in dictating enormous terms in exchange for not taking over all their trades, they even suspected Goldman of having been naked short selling and attacking other short sellers to cover their own losses.

In the situation many companies then had no choice but to submit to Y-Ro strategies but this was still more economically inefficient because the rapid change from Iv-B to V-Bi or Oy-R to Y-Ro and back again wastes more money and causes more collapses. For example the Iv-B companies find in the GFC that their fragile state means they have to waste resources in getting support from V-Bi companies to stay afloat, this is like a tree where the Iv-B roots and branches are not able to get much more nutrients from the V-Bi parts.

So this causes more Iv-B companies to collapse and lose money than if they could have gone to a strongly I-O policed market, shown their financial situation and gotten financial aid as happened to some degree with the bailouts started by the Treasury Secretary Henry Paulsen. While these V-Bi companies could dictate terms and make profits this way they could not innovate and grow their way out the crisis, they were more like sleepy conservative banks in strategy and so when the economy crashed these Iv-B companies turned their assets over to stagnant holding companies trying to profit from them such as the Maiden lane investment vehicles with the Fed. This is like the V-Bi parts of a tree taking over when the Iv-B parts have grown too fast or shattered, then V-Bi provides the resources to rebuild them.

Once these Iv-B companies realized they needed to regrow they tried to rebuy some of these assets on credit to speculate out of this stagnation, they often collapsed though because the bubble bursting had scared away many investors. This then is like the Oy animals such as hyenas in a food crisis being attacked by Y lions that treat them as prey, this makes their numbers collapse even more and might drive them into an O role protecting some of their remaining prey.

## In finance this is where Iv and Oy agents work more with the I-O police to cut a deal and perhaps be bailed out, it can lead to some of the Y-V companies being prosecuted.

Once the Y lions attack the Oy hyenas though they might win and make hyenas scarce but then cannot follow them and take their food so they in effect lose a valuable scout or agent for finding food. For example it is common for lions to steal food caught by hyenas.

At the same time R and Ro animals can become more fragmented, sometimes Ro herds will defend each other on attacks or they might break up and leave the others to their fate. A team that breaks under moderate pressure can be even more dangerous than being loners and hiding because they attract attention to themselves, this is the problem ships had in WW2 when attacked by U-Boats.

If they stayed together as Ro and relied on destroyers like an O shepherd this is like pension funds and unions relying on I-O police to protect them from predatory financial companies. If the convoy broke up then they might have survived less often than if individual ships tried to cross on their own because some fleeing would go away from the destroyers while having already attracted the attention of the U-Boats.

In the same way the fragmentation of the Bi workers and communities into B is more dangerous in a financial crisis because companies hungry to restore their losses need to find people who can break with the team, for example workers willing to leave a union for lower wages, people willing to ignore consumer protection agencies, etc. This dithering then between Ro and R strategies or Oy and Y is economically damaging and is like varying between Iv-B and V-Bi except it can lead to more colors fighting with each other.

In the GFC then no one really knew what the best strategy was, some Bi and B people became predatory and robbed others and some V and Iv business people lost their businesses and got jobs. This then is far worse than the Iv-B and V-Bi disconnect where the economy charts an Iv-B course of chaotic deregulation and then moves into a more stable and stagnant path.

At this point the different colors are likely to be so dispirited by the experience of deregulation that the I-O police might grow strong quickly, the SEC for example has increased its budget and improved its procedures especially after being humiliated by ignoring tips about Bernie Madoff.

This then is like the Oy hyena who are attacked more by the Y lions and try to become more like Y predator teams themselves only to be attacked by stronger Y lion teams. Eventually they realize the older strategy of being more O and protecting their territory where they could from Y while regaining some kind of understanding with Ro-R prey in a stable food chain is better for them.

In the same way the chaos of the disintegrating food chain makes Ro and R prey realize that dithering between teams and breaking up when attacked is not working, they would then tend to adapt again to one or the other and so the food chain starts to restabilize as before. This is the recovery phase for the global economy though the problem was largely caused by uneven resources the effects of which were not anticipated and much of this still has not changed.

This process of I-O market correction was exacerbated by the mark to market problem, in a falling market companies tried to avoid selling assets so they could maintain a fiction on their books of what they were worth. If others for example sold a subprime bond at a low price they might be tempted to buy them up to support the price otherwise their lender might decide they need more collateral for their loans on these bonds.

This also happened in the art market prior to the GFC, when the market started to soften paintings that came up for sale were often bought by existing collectors to keep prices up as well as avoiding selling pieces they would prefer to get rid of. They might for example offer pieces for sale with finance or guarantees against loss to keep the fiction of the price high, this is like in the GFC where I-O market correction became a turbulent mix of chaos and randomness and so the market found that not only was there not a V-Bi Law of One Price operating but often there seemed to be no market at all for some bonds at any price.

Either that or the prices were so chaotic that no easy conclusion could be gotten as to what they were worth. Much of this was caused by the random pressure Iv-B hedge funds had applied to the markets with their algorithms, for example if in statistical arbitrage a share dipped below what people considered was the normal price than a wave of buying by hedge funds using the same algorithms would bring its price back up much like the collectors supporting painting prices.

Unfortunately the hedge funds were not doing this to support prices, they thought they were exploiting price discrepancies for profit and not trying to save a market from collapsing. In the same way art collectors before they were buying to support prices no doubt bought the occasional cheap painting like a kind of arbitrage to sell after at a profit.

This normalizing pressure on prices works the other way too, if a share happened to go too high for what was considered normal then a wave of shorting might bring it down. In the same way when paintings went too high in price collectors might ignore it because they thought they would lose money if they bought it and then had to resell, this normalized the painting prices onto more of a normal curve.

So prices might grow and collapse like Iv-B but horizontally from this vertical movement of prices in the boom relative pricing had to be normalized by the Law of the One Price. This is where a normal curve operates for sideways relative pricing and an exponential curve for overall rises and collapses.

The mark to market process in the art world then caused collectors and dealers to readjust the value of their collections after each sale, particularly if they had to report profits and losses to lenders and partners. This acted like a kind of I-O policing preventing many from artificially inflating the value of their collections, some however would have engaged in market manipulation such as buying paintings to boost the price.

For example if they had 100 paintings by Warhol then buying one more at 20% higher tended to make their 100 paintings appear to be all worth 20% more like a kind of leverage encouraging them to keep buying. So this tended to act against the arbitrage opportunities which depended on not having to disclose their collection value, each time they bought and sold one painting.

Those more Iv-B secretive dealers could use more V-Bi random arbitrage to make money, those more V-Bi transparent with mark to market sometimes used an Iv-B strategy to push painting prices ever higher. This then is the I-O market trying to connect between V-Bi and Iv-B strategies.

It also tends to tear the market apart unless policed in I-O, for example the secretive Iv-B collectors can use V-Bi arbitrage in buying cheap and selling dear, or shorting if they could, but with policing they would have to be honest about the value of their collections such as for tax reasons and this would moderate their arbitrage meddling in the price. For this reason Iv-B collectors might not hold much stock because of the effect on their arbitrage but this police scrutiny might make them moderate this and hold more paintings long term.

## The problem is also that these collectors and agents sell to the I-O public and defend the prices of their art. If they are also deceptively manipulating the market like a poker game in Iv-B or using arbitrage in V-Bi then this should be disclosed to the public or it may be price fixing.

The more transparent V-Bi collectors openly showed the value of their collections but the Iv-B trying to manipulate the prices by building a bubble would be seen by I-O police as deceptive and illegal in securities trading. For example after doing this the collector might have to pursue a pump and dump strategy of selling out his whole collection to avoid getting stuck with them after the prices dropped when the manipulations stopped working.

A similar process happened with mark to market with bonds, some hedge funds and investment banks were highly secretive and paid a lower tax rate. They also usually made money as an Iv commission on trades and so could pursue V-Bi arbitrage strategies against their clients to balance Iv-B commissions versus their V-Bi investments.

When the I-O police are strong such an investment bank can survive and prosper just like art dealers can sell paintings as well as invest. With weak I-O police both tend to tear themselves apart, for example the investment bank might defraud their clients with front running to help their own investments. V-Bi investments might then prosper while Iv-B agent based trading hits tipping points from a lost reputation and collapses. Instead Iv-B commission based trading might make more money with deception, then this creates a crisis that affects the banks own V-Bi investments causing them to become insolvent. This happened in the GFC with Bear Sterns and Lehman.

This then creates more economic waste in both cases because the I-O market is not discovering prices properly. These market disconnects gave rise to problems when the I-O market finally did try and price stocks and bonds accurately, so many companies were still manipulating the prices with algorithms from computer based trading that is became a war between the V-Bi part of the banks that tried to keep prices to their version of normal to avoid mark to market problems.

The Iv-B trading parts of the banks were meanwhile often deleveraging because of liquidity problems and trying to sell into each wave of buying which depleted the V-Bi side of the bank and eventually made them sell more of their own stocks and bonds, this caused the market to crash more chaotically and hurt the banks trying to deleverage.

This is like the V-B and V-Bi disconnect between economists in the GFC where each tried to give advice and follow policies that hurt the other because there was no I-O market moderation. In the same way the investment banks developed and Iv-B trader and V-Bi investment disconnect where each cost the other money.

This disconnect then is like Y and Ro animals fighting Oy and R animals without an O middle of the food chain to moderate their behavior. The Y funds were trying to support the prices by working against the Oy hedge funds trying to crash them whether in the same bank or in others, this is like the two kinds of predators fighting.

Consumers holding houses for investment had the same kind of battle, Bi communities tried to not sell to support the prices as a kind of team just like Bi pension funds tried to support prices by hanging onto their bonds because it would mean governments and companies would have to contribute more to the pension funds if their values fell. B investors however just wanted to get out with what profits they had because they had no team to be loyal to, they would then panic sell stocks as well as put their houses on the market in a glut making prices plummet.

This is like the team instinct of Ro animals fragmenting under a moderate attack from predators, as said earlier more dangerous and wasteful than staying together. This then made valuing houses difficult as the idea of normalizing house prices was impossible in a chaotic market, someone might be desperate and sell for less while another could afford to wait for more and so the desperate sales chaotically dictated the price rather than the normalizing people who could wait.

This in turn made valuing bonds at mark to market more difficult because with so many houses worth less than their mortgages people could be expected to walk away on reaching their financial tipping point. This then meant that that many would suddenly not make more payments so the pricing of lower tranche mortgage bonds would fluctuate chaotically and so there would not be a normal One Price.

The market after the GFC was a mixture of normalizing forces as well as chaotic ones trying to reconnect to each other after years of V-Bi only doing business with each other and Iv-B only trading with each other. Both then were not adapted to try and find a compromise between them and the I-O police were not strong enough to impose order.

Some of this reconnection was delayed by the relaxing of the mark to market rule by the Fed, companies could then avoid to some degree devaluing their stocks and bonds because of market fluctuations and so avoid margin calls and demands for more collateral. This then added a layer of Iv-B deception onto V-Bi fund holders and so reduced their need to support prices, this would then have increased the numbers of sales and reduced the supporting of prices and contributed to lower overall prices.

It also would have allowed Iv-B hedge funds to hold more assets without having to change their valuations, this then may have been a good I-O compromise between the V-Bi mark to market transparency and the Iv-B secret valuations of assets. If so then it is not a surprising decision by the Fed acting as I-O because they usually have to find a compromise between disconnected or opposing parties, this is how a market operates in general.

The process of an economic collapse usually involves the conversion of Biv areas to Roy, for example when money became scarce in the GFC traders were more likely to commit fraud to survive. When Iv salesmen need money desperately they can cross the line into fraud as well, this was shown in the movie Glengarry Glen Ross by a sales contest.

In Biv people tend to line up in roots and branches, this is like people queuing up at a bus stop or in a shop. When there is an abundance of resources people tend to act differently because they know there will probably be enough for them and destructive behavior such as people refusing to line up for a bus overall makes it harder for everyone to get on the bus. However if there are not enough buses and seats then this queuing can break down into predator and prey, people start shoving each other to get on the bus or they might lose their job.

So having abundant resources changes people’s actions dramatically, it makes more sense to do deals where both people win because the destruction of ripping people off is more likely to hurt the winner by a bad reputation and reduced business. In Roy getting ripped off may be so common that there is little penalty, this can become like a corrupt government where people expect to pay bribes to get anything done.

This can then be measured in how Biv parts of society are by how people line up to do various tasks, when these lines start to break down like the panic of people trying to get out of a burning theatre then it is becoming more Roy, the theatre for example has a scarce number of people who are likely to get out and some might die in there so this makes a Roy strategy better than queuing at the exit. However a strong O police presence might quell criminal behavior like attacking other people to get out of the theatre quicker.

As the economy becomes more Roy these roots and branches start to disintegrate so people instead of queuing up move competitively or gang up on each other in teams, this is like the Roy animal kingdom where animals might move as Oy-R loners or in Y-Ro herds but not in queues.

Even there sometimes there can be Biv behavior, for example animals might queue up for a turn at a drinking hole rather than push at each other because there might be an abundance of water. When Y predators make a kill they might tend to queue up for a piece of the carcass if it is obviously large enough for all.

Younger males in a Ro herd might be content to wait until they are older for females if they can see the older males will eventually be weak or die, this introduces some order even in herds. When salesmen turn to Roy because of scarce leads for sales they might still be Biv elsewhere, for example they might queue up at a restaurant or in cars waiting for petrol but then try to bilk each other out of sales by stealing each other’s customers because those are scarce.

Generally then it is Iv and B people who queue up as part of their competitive nature because they Gb own a place in the queue, V and Bi people tend to move as a team and will let each other queue jump if they are in a hurry. For example there might be a seniority system instead of a queue like with the younger males in a Ro buffalo herd, those at a company longer might get better jobs and higher pay and others accept this because they will expect the same when it is their turn.

People are rarely absolute in one color but usually shade between two, they may also occupy different colors in different aspects of their lives. For example a salesmen might be Iv but often plays the part of B when approached by other salesmen, this is like an Oy predator can sometimes be R prey when attacked by a stronger predator. If someone jumps a queue such as at a bus stop there is not an O criminal law broken but in some cases they might be fined, for example pushing too much in getting off a bus might be a Biv misdemeanor with a fine.

In an economic collapse then people start to act as Roy individuals rather than queuing up or respecting other’s place in a situation. For example in a burning theatre with a small fire and big exits people might queue up as in Biv and get out faster that way than if they all rushed the exits at once, this is how Biv society is usually more efficient for all with Gb natural resources. As the fire grew larger though more people might try to jump the queue and so if there were no O police there then they might commit a crime by shoving or punching to get out faster.

This would then develop into a Roy predator and prey situation where the stronger would get out first by hurting the weaker ones. It would then become more complicated, the R weaker people might then band together as a Ro team and hit back as a gang against any single Oy people who try to push their way through and so this Ro gang would then control getting out of the building.

The more team orientated people are in this situation then the better their chances of survival, even the original R people being victimized might get out before Y-Oy people. When the Oy people saw this they might form their own gang as Y to push back and then there could be a Y versus Ro battle to see who controls the exits, some might even charge money to get out faster if they won.

At another exit there might be Oy versus R battles because for some people a solitary strategy suits them more than a team strategy, for example some might manage to deceptively sneak out under the eyes of the battling teams or find a window they keep secret from others. These two deceptive colors of Oy and R then would tend to fight to be the quickest out of the building while the other two colors would battle as teams of Y and Ro.

Eventually the Oy and Ro people when they fight start to form an understanding and an alliance, Oy helps Ro against the Y gang and in return gets out faster. Ro gets warnings of attacks from Y from Oy who plays a double game, for example Oy people might pretend to be part of the Y gang to learn their strategy but also sometimes they get out of the building faster with Y than Bi. This partnership between Bi and Oy becomes a kind of O police who restore more order on the situation.

Consider now what happens if they find some fire extinguishers and slow the fire, now there is more of an abundance of time to get out and people start to revert to Biv behavior. There is still some inefficiency because some have become used to acting as Roy criminals but slowly people change to a more efficient system for getting out. The R people instead of deceptively tricking people to get out start to queue up as B owning their place in this queue as Gb, Oy people start to queue also as Iv.

The Ro gang who banded together to protect themselves now work more as a team in Bi probably with similar members and the Y gang forms a V team refining the ideas about escaping. For example there might be a group of V engineers trapped in the building, they could work with Bi union craftsmen to construct other exits.

The Oy and Ro alliance producing O policing becomes Iv and Bi producing I policing, for example those pushing might get fined or have to move further back in the queue rather than beaten up in the Roy situation. In the Biv situation there is more Gb private property because people tend to own their place in a queue or membership of a team, some might even start to sell their places in these assuming there is enough time and an I market forms.

## The poorer people as B might prefer to take some money in exchange for a higher chance of dying in the fire, this is accepting chaos and a tipping point of death for a gain in money. V people might have more money and buy their way out faster by looking for these B people and trying to exploit their poverty.

When the B people realize they are being ripped off they might try to form a Bi union to look at all offers openly and transparently rather than scheming against each other, this then counters the money of the V team by getting more money for their place in the exit queue. V then might get some Iv people to work on commission, if they find some queue positions they make some money and perhaps are able to afford to get out earlier themselves.

Iv then tries to scheme by going around the Bi team to isolated B people who they might rip off or B might rip them off in an Iv-B chaotic bidding war much like poker. For example B people might say they have other offers and Iv might say that also have other offers in bluff and counter bluff until there can be a boom in the price of a queue spot followed by a bust as the Bi team offer a lesser price but many more queue spots creating a glut on the market. The game theory of this situation is explained in the book Microaperiomics.

If the fire flares up again the situation might turn to Roy a second time, this is like G public property where no one really owns their queue spot unless they have the strength to defend it. In such a situation it is pointless for someone to claim that they own a queue spot because they might get beaten up and lose it, this is why Biv business does poorly in third world economies because crime pays better than business that can’t defend itself.

Imagine then if the theatre was more like a giant stadium with many exits, some people in one area might be Biv because there are fewer flammable materials and more exits while others are more Roy with cheaper wooden seats and smaller exits. This can then be like a global economy, there might then be some trading between the two areas where Roy people might sell a way out more cheaply but are not reliable because they could just take money and not let the Biv people out.

It also depends on whether the Roy and Biv areas of the stadiums are separated and allow immigration between them, as happens with many economies. For example the I police that formed in the Biv area might let some people in if they have enough money, the wealthiest Y mafia then might try to come to Biv and corrupt it.

This is like trying to do Biv business with a Roy third world economy. As the fire changed then this demarcation between Roy and Biv would change, trying to make the global economy all Biv as democracies is like trying to make all the people in the stadium queue up at the exits, those with a scarcity of time or exits will find that a Roy strategy works best and so Biv social mores will collapse over and over even with some aid from the Biv areas.

For example Biv might accept some Roy people into their area as charity like a kind of immigration because of violence, this is like how advanced economies might accept R people from third world economies if they are in danger.

When this is realized the Oy-R people might dishonestly claim to be in danger to get out quicker, this partially ruins the process of helping the Roy people out of the stadium unless the O police are strong so this can falter and resume chaotically. This is like people faking persecution to immigrate and hurting more genuine refugees.

In the same the GFC represented areas of the financial sector changing to Roy in some areas or alternating between Roy and Biv as traders tried to find the best strategy. In the previous Biv times companies respected queuing and seniority more, Wall Street for example used to be a more honest and gentlemanly place to work but this steadily collapsed into more fraud and backstabbing in the decade prior to the GFC so this indicated the system was turning into Roy there.

Sometimes this can occur because only some resources are scarce, for example New York traders might become more predatory to be able to afford a house in the Gb Hamptons. As these prices rise in an Iv-B boom with more deceptively acquired money flowing there then other Iv traders become more Oy or miss out. The area might then attract a higher percentage of unethical people with weak I-O regulations, those more honest might sell out to those less so.

Whereas before people’s V-Bi money was more respected such as with their retirement accounts and home equity as the system became more Roy then these were seen more as targets to rob people if the O police were not active enough. It resembled sometimes looters stealing from a store and then from each other rather than an orderly queuing up in a store to purchase goods even though that was a more efficient way to handle Gb resources.

The same then occurs in poor areas in a recession, as they turn more into Roy the queuing mentality breaks down into riots and stealing from others or even trying to addict them onto drugs to make money. This can then be seen spreading around an economy as Roy areas grow in a downturn and then shrink in the recovery, the situation does not occur evenly though because the conversion between Roy and Biv can also disrupt the relative strength of the colors.

For example when V people in Biv have to form a Y gang or criminal organization they might not be as good at this as a Y mafia evolved in a Roy environment would be, nor would Mafiosi adapt quickly to become talented artists, sportsmen, and CEOs. A Bi area might be stronger because they would be more fit and so perhaps as an area became more Roy and they turned to Ro gangs they might have some advantages in health but not in being violent.

Iv salesmen might be in a better position to trade on their earlier reputation and become Oy con men but they would also make rookie mistakes and would be more likely to be prosecuted by the O police. B workers might be more naïve and get more ripped off when R victims of petty crime, they might also be stronger and be better able to run or defend themselves.

I police such as civil lawyers might make poor O police when they have to carry a gun for example. So these changes affect the economy more profoundly than people just tightening their belt in a recession, it changes the relative power people have and whether they have the adaptability to cope which represents an enormous amount of economic waste.

It also depends on whether they can change from maximizing profits to minimizing costs or vice versa, their experience and abilities might favor one or the other. For example Biv tend to evolve to maximize profit and ignoring waste, if they don’t then they lose more often to those that do.

When the economy becomes Roy pessimistic people might do better because they are more used to minimizing costs, also naturally more paranoid people might survive better.

In other ways V people might do better as Y criminals, for example much of the increasing wealth inequality in the US came from rising corporate crime as part of the subprime fraud, lobbying to get taxes lowered and increasing access to tax havens, lobbying to get the IRS and SEC in the US reduced funding, more front running of shares on Wall Street, espousing free trade so the wealthy move their factories to Asian economies and then profit from imports while their former workers have to buy what they used to make, and so on.

All these aspects represent people queuing up less in Iv-B or owning their place in a V-Bi team, instead it became much more about wielding power and getting away with the lax criminal laws in some areas. Often however V companies are used to this because they make money from hiring Y people in third world economies to exploit. They may not be able to handle violence personally however.

This then is a major indicator of problems in a society when it is difficult to determine if Gb resources are becoming scarcer, it also explains why socially corrosive aspects of Roy like prostitution, drug selling, violent crime, etc tended to stay out of wealthy areas. This was because people in Biv areas recognize that Roy ways of making money don’t work well for them, also that the concept of owning a place in Biv society is not compatible with exploiting other people’s positions using Roy methods like violence and addiction.

People however tend to stay Biv for too long even when resources have become G scarce, in the great Depression for example people had more respect for property even when poor though the ideas of R communism threatened to change this in B and Bi people making them more R and Ro. For example the teachings of Marx made them more aware of their own scarce resources and the wealth of V people, in a Roy society people get more wealth from their strength with Y-Ro violence as gangs or as individual Oy-R criminals. Marx also said that power comes from the barrel of a gun.

Marx then was saying the only way for R people to get enough food and money in a poor society after Biv capitalism had collapsed was through Roy violence, by banding together as Ro mobs that would fight the Y capitalists and imperialists for control of the wealth of the economy. These ideas then tend to infiltrate into Biv societies in an economic collapse, people also however remember how the Biv society used to work and usually have faith that it will revive.

This then is why communism didn’t catch in in Biv societies as Marx thought, people were adapted to a Biv system and so it could not work as well for them initially as in a Roy poor economy like Russia. Biv people might be adapted to a Roy system through violence, for example the Khmer Rouge killing off Biv intellectuals and the Viet Cong assassinating them in the Tet massacre. However the idea of communism was supposed to be to create Biv wealth so adapting Biv people to Roy to make them Biv was not usually tried.

Others in poorer economies that also collapse in a recession might be more sympathetic to this message because their system never worked well as Biv before the collapse. For example many economies teeter on the edge between Roy and Biv system, often fragile democracies with large amounts of corruption that explodes as soon as resources become Gb.

To counter this then V capitalists try to give wealth to Bi and B people in the form of welfare and contributing to government work programs and stimulus, this was much more needed in the Great Depression to prevent widespread protests, for example the communist movement was much stronger in Britain and in some parts of Germany such as Munich where R communists openly tried to take over the city before World War Two.

In the same way the GFC has led to B and Bi people moving more to Roy methods of making money such as staging Ro protests with Occupy Wall Street and demonstrations all over Europe. In an economic recovery as unemployment drops these protests will subside as people revert to Biv methods of queuing up again, however if the economic stagnation continues these may become more violent and even revive the aims of R communism especially in countries that recently gave it up.

As part of these protests the concept of ownership of property and wealth as Gb private property is shifting to a more G attitude of whether they have the power to take money from the rich in higher taxes instead of whether the rich own this money as Gb. Banks can be nationalized, welfare for Ro-R can be increased from this for a time, and so on. So this is like a steady change to a Roy attitude in the burning theatre example.

To counter this the V and Iv people have their own Roy ideology to change to, this is usually called by various names such as Nazism, Fascism or Authoritarianism. This also has a G public property aspect where they might plan a coup or ballot box stuffing to protect their property from higher taxation or confiscation, they then start to act like the Y gangs in the burning theatre.

As they rely more on strength to protect their property instead of Gb private property ideas they also act more like this to each other, Y then becomes where the stronger people rule the teams like in a pride of lions while Oy becomes ruled by those most deceptive. The leadership struggles can become more bloody with political assassinations as with the rise of Y Hitler who thought of himself as a wolf.

Much of this then happened in the lead up to the GFC, Ponzi Schemes such as with Madoff and Stanford were often suspected by many people but were not outed because they were seen as a way of making more money by selling these investments to others or getting better returns while selling out before they imploded. These kinds of attitudes then also represent a change in the Iv queuing mentality and owning a place on the V team, this was summed up well in the movie Wall Street by Oliver Stone where greed became good and getting money through power came to be seen as more acceptable.

Other signs of this Roy mentality are seen with US banks in charging excess fees for when people overdraw their accounts by even a few dollars or they might rearrange deposits made during the day to create an opportunity to charge for this. For example someone might have payments for $90 coming out of an account with a zero balance and deposit $100 the same day, instead of treating this as a $10 bank balance they might make the payments first and then charge for a $90 overdraft.

In the same way punitive interest rates in credit cards might be designed to quickly escalate if people miss a payment by a day. Welfare systems in the US such as Social Security or food stamps might become a way for some groups to make more money by cutting them down even though people may have paid all the money in in taxes for it.

## These kinds of strategies then show Roy increasing in some areas as resources become scarcer, if a bank for example can make more money by ripping R people off on an overdraft then they might do it more now whereas in wealthier times they might value their customers more as having rights.

A Roy or Biv mentality can arise from a perceived scarcity or abundance of resources, but this can be relative to people’s expectations and experiences, or what they might think will happen. For example wealthier people in the US might act as Roy in a monetary situation that black people from a ghetto would see as a Biv situation, perhaps even appearing to be abundance beyond their wildest dreams.

Gb resources may be dwindling in Biv or there may be more people growing up who will create scarcity by their own expectations. This would be like in the example of the burning stadium where there were lower levels people were slowly coming up from and threatening to inundate Biv areas with extra people, this could also be uncontrolled or illegal immigration for example.

The changing of much of the US and Europe to a Roy mentality in business caught the mostly I regulators flat footed in imposing more O criminal penalties to deter it, this may have been a pervasive change in outlook by people who saw their children possibly having a less wealthy lifestyle than their own. This can be because of the baby boomers retiring and leaving younger people with a heavier tax burden, also the retirees might have stripped a lot of the assets out of the advanced economies for retirement.

Younger people then might find it much harder to accumulate resources to build a house or repay loans from retirees. It may also have been from growing trade deficits in advanced economies stripping out high paying jobs and making money more Roy scarce in various areas while making it more Biv abundant in others.

For example a loss of manufacturing jobs might make more areas Roy but other areas that don’t lose their jobs gain with cheaper imports. This changing wealth inequality can be chaotic and cause collapses in people’s finances leading to Roy behavior to make more money such as in property speculation, it can also cause Roy attitudes to become more socially acceptable for example if families have some members newly impoverished.

Biv attitudes can be strengthened by attitudes of austerity which in 2011 became more prevalent as a cure for the global economy. In this scenario instead of people resorting to economic crime they would resign themselves to increasing poverty without Ro demonstrations and violence.

This doesn’t work because as an area or an economy becomes poorer Roy strategies work better than Biv ones, to try to apply Biv economics to a Roy economy then is very inefficient just as it fails in third world economies. With austerity economies such as Italy, Greece, and Portugal had to cut down government services to balance their budgets, however with scarcity of resources they become more G which means that government services should be replacing collapsing Biv businesses.

This had the result of causing more economic problems because businesses continued to fail with scarce resources and governments failed to take up the slack. Another problem is chaos which when it collapses has a strongly deflationary effect because the Iv-B roots and branches are efficient at carrying a small amount of money to do a lot, this is why it is called leverage as it acts like a lever.

Deleveraging then is where there is less of a lever effect in the economy and so more money is needed to do the same job done previously with levered borrowing. Chaotic collapses cause economic waste which makes an economy more Roy or at least some areas become more efficient when they act as Roy and so need more O policing.

Austerity can include cutbacks that create more chaotic collapses, for example cutting police numbers cause more crime, cutting medical welfare creates epidemics and health problems that get worse and eventually cost more to fix, bus cutbacks can make it harder for people to get to work and create unemployment, less welfare can make businesses that partially depend on welfare customers close up, and so on. The increasing Roy lawlessness from austerity can also make more Y-Oy people avoid taxes and try to corruptly influence the government for this, this is seen in Greece and Italy for example where there is difficulty in getting wealthier people to pay more taxes to close the deficits in their budgets.

The result then is usually more G government debt that is harder to pay by raising taxes, if taxes go up on the poor then it creates more Ro demonstrations and if on the rich then they start acting more like Y criminals and perhaps spirit the money out into tax havens. The real problem is I-O policing and usually not profligate spending, indeed this spending is usually needed to keep people employed and having wages to spend on goods and services.

Because there was so many bailouts of dishonest companies this added to government debts in many countries and in their weakened state these Y-Oy criminals sometimes have more opportunities to make money dishonestly and this can then increase the economic stagnation. For example in 2011 European banks were often an unknown as to whether they were even solvent, this makes investors more fearful of putting money into areas of the economy that may still be sickened by the financial contagion since it has not been cleaned up properly. Because of this the money for investing in a recovery sits mainly on the sidelines speculating in more Iv-B booms and busts instead of a healthy economy.

As the Biv roots and branches break in a chaotic Iv-B collapse, from a V-Bi stagnation, or from a scarcity of resources then people reconnect with each other in Roy in different ways as said, but when resources become more abundant they also reconnect in Biv in different ways. For example when a Biv company collapses then people might lose their skills in unemployment or changing jobs, some skills particular to that company even if just knowing more about their stock and company layout is often not used again.

## In this recombination into a new tree this is different to some degree from life evolving in that like a zombie different parts can be stitched together into a whole. So an accountant might end up as a salesman in a new company, Bi union workers as B miners, and so on.

Often this new structure can be many smaller plants instead of the larger ones, for example a lot of large companies might have collapsed in the GFC like large trees but the people from them are humus and have to be recombined into new plants as businesses. If there were 100,000 people who lost their jobs from 100 companies then they might form 10,000 new companies averaging 10 people each and then there might be a series of takeovers, buyouts, and attrition like some growing plants and seeds don’t survive the initial sprouting.

People then tend to move and retrain as humus again into new trees and so the forest grows and evolves again with these new conditions. In Iv and B this process means some might grow for example to be supervisors in B pecking order and at other times chaotically collapse back to be a lower worker.

This is also like in Biv armies where there can be a complex hierarchy such as private, lieutenant, colonel, captain, etc which is like a chain of command. People can try to climb this chaotic system only to collapse by being demoted back down again in a court martial. Higher parts of the army would be more like branches, for example there can be different kinds of admirals and generals according to where they work and what responsibilities they have.

Besides this vertical Iv-B hierarchy there is a V-Bi horizontal normalization, for example in the lower B soldiers such as privates there might be some that bond as a Bi team more than others. This might extend further up, assuming captains were still B then some would be more team Bi players than others as well, this can help some to climb higher in these branches by alliances with teams of colonels or lieutenants for example. In higher Iv branches there are also V teams of generals and admirals that look after each other as well.

In the same way I-O police tend to form vertical and horizontal hierarches though usually as Iv-Bi or Oy-Ro. For example O police might form hierarches of their own but staying more separate from most other colors. There can be a Ro kinship between police similar to the vigilante like origins of people protecting their neighborhoods, police then tend to look after each other and not snitch even when sometimes committing crimes.

This is like Ro gangs to some degree and also like in an army where B privates or Iv colonels might have a Bi or V team spirit and look after each other while also competing to get higher in the organization. O police also have a vertical hierarchy based on Oy which come partially from the honor among thieves and their pecking order that became domesticated and worked with Ro gangs.

For example a policeman might go up the hierarchy to try to become a detective, captain, lieutenant, etc in the US and so there is some infighting to get promotions and sabotage another’s chances but also a strong Ro team spirit. This contradiction between Ro teams and Oy competitors in O police is also how they resolve problems with other colors by identifying with them. For example their team aspect helps them to understand Ro gangs as well as Y mafias and have the team strength to wage a war of attrition against them. Their Oy competiveness helps them to engage in a divide and conquer strategy, to bring down criminals and collapse their hierarches but also to do the same among R criminals as well.

In Biv there is more of an I civil law structure such as with the SEC in the US. This also has organizational infighting with SEC Iv workers trying to get promotions but also to get experience useful in leaving and the working against the regulators. This helps them to see hierarches they can expose and collapse with Iv fraud, for example in Enron there were Iv people who often also turned Oy as criminals and these tended to turn each other in in exchange for reduced fines and prison terms.

Their Bi team structure arises from their attachment to the community and protection of Bi investors, and also teams of V investors. There can then be a war of attrition where large V companies or Bi pension funds are investigated in long and expensive cases where they eventually give in and pay fines or change their behavior.

When the Biv system collapses into Roy there can be smaller groups of each color, for example Ro neighborhoods might build by smaller teams of people like neighbors or old friends keeping in touch and looking after each other. These might then build into larger organizations, for example leftist organizations such as Social Democrats and Socialists or even Communists tended to have these Ro groups coalesce into larger teams much as a Ro neighborhood watch might grow from isolated groups to a national organization with many chapters.

In the same way Ro gangs might evolve in an Ro-R neighborhood by protecting the weaker members and then as the gangs grow they might make alliances with other gangs like the Bloods or Crips in the US. As the Y mafia grew in the US small groups of thugs or gangs began to form understandings with others about their territories, sometimes these would erupt into turf wars like rival prides of lions and killings. Eventually though these became more team orientated like the Cosa Nostra forming in the US as a whole and strengthening ties with Italy.

Another example was like in the 1930s in Europe where under the threat of growing teams of Ro communists and R terrorists there grew bands of Y thugs fighting them in street battles which coalesced into strong and larger Y teams such as the Nazis and the Fascists to match the size and organization of Ro communism in Russia. Alongside these Y-Ro teams would grow Oy-R where people are more loners and competing with secrecy and deception, these can have small numbers isolated from each other after a Biv economic collapse but then also start to form a Roy food chain along with Y-Ro people, these chains might then be more in predator prey relationships rather than in queues as in Biv.

For example there might be isolated Oy hyenas who gradually come together into groups and have more offspring interbreeding, this forms hierarches where some can attack and dominate others like predator and prey but without eating each other.

In R prey the same organizations tend to form where some males become dominant and have the most females while there is also a pecking order among other makes according to battles between them. Some will form into cooperative teams while others will form the equivalent of roots and branches in status, those higher in status will pick on or feed on those more lowly.

Females might also fight for dominance between them. So there is always this process of organization in Roy though this can also be fragmented by color changes, for example Y thugs might join into gangs and a mafia but the Oy turf wars sometimes destroyed these gangs and many were never able to truly bond together into national alliances.

Ro gangs such as the Bloods might have the same problem, they might have different chapters but fights between gangs might cause fractures in this unity. Ro communists tried to maintain a global alliance but some countries became alienated such as Yugoslavia from the Soviet Union, also China and Russia never formed a strong bond.

Oy people are by nature competitive and secretive so this works against forming more extensive hierarches, for example with hyenas a wounded animal might reach a tipping point and lose its place in the pecking order. In Nazism there were always people scheming against each other in Oy to hurt each other’s positions like predator and prey in reality.

For example the brown shirts under Ernst Rohm were seen as a threat to others such as the SS under Himmler, eventually this led to the Night of the Long Knives and the chaotic collapse of the SA’s influence as well as Rohm being killed. In R communism there were also many killed in show trials as this pecking order changed, for example Trotsky lost his place in the hierarchy and eventually fled to Mexico where he was murdered.

Changes from Roy to Biv or vice versa can also come through conflicts between systems, for example there can be a trade war between Biv economies or actual conflicts between Roy ones. As said earlier these are like rival ecosystems attacking each other such as with a plant or animal trying to get into a forest and causing damage to the various hierarchies such as Roy food chains or the Biv relationship of plants to each other, this could also be the different parts of a plant. These can also cause parts of each to change into another system, for example part of a Biv forest might become a Roy like grasslands clearing in it because animals get to a water hole there and steadily knock down trees. A contagion such as a fungus on trees might weaken them in a marginal environment so they eventually collapse and get replaced by grassland, later when the fungus starves trees might grow back only to repeat the cycle. Acacia trees are always trying to grow into a forest but are attacked by elephants and giraffes to prevent this, instead they are kept as an isolated tree to provide food. Biv banks can be particularly vulnerable to these changes because they loan out Biv nutrients to other parts of the tree, if there is a contagion then eventually these resources can be exhausted much like a person can become exhausted in fighting off a disease. When V-Bi banks loan money to Iv and B parts of the economy they can be vulnerable to an Iv-B economic contagion such as the subprime crisis, this is like a contagion in a person that the I-O immune system cannot control or somehow it has not alerted the immune system to its presence. A new kind of flu for example might not be recognized by the immune system quickly and so a person gets much sicker before the virus is brought under control. The GFC was like this, the I-O immune system did not recognize the Iv-B derivatives contagion because it has specifically been exempted from regulation. Because of this derivatives acted like a safe area for the contagion as it wreaked havoc on the global economy. This eventually exhausted the banks just as when they loan money into a bubble, the exponential rise in prices takes more and more loan money and it appears to the banks to be like new roots and branches growing normally because they in effect depend on the I-O immune system of police to protect them and from having to check for much fraud themselves.

So when Biv starts to break up into a Roy system this occurs in some colors first, for example the erosion of Bi pension funds and Bi union wages represented an exhaustion of savings and insurance against chaos, this would then tend to make these kinds of workers break apart into B competitors. Because they were not used to this role and perhaps were not as deceptive and fast as they needed to be many floundered in this role, the winners would then be those more deceptive as R in the absence of strong I-O policing. This would then lead to more liar loans because in a Bi community people would know each other too well not to notice that some were buying homes they could not possibly pay off. This would then alert the I-O police that in this transparent Bi community there was a contagion of unsustainable loans. That this did not happen meant that those getting liar loans either let others in on the deception to do it themselves, were able to convince others that the prices of real estate would rise and that is was not dangerous, or were able to maintain this fiction to other B people. In any case the I-O regulators should have been much more aware that people were buying houses they could not pay off if prices did not continue to rise. V-Bi transparency then would have punctured the Iv-B bubble at an earlier time.

V people also should have been able to see the financial contagion if they were truly acting as a team, a more competitive Iv system seems to have replaced this transparency perhaps because many became wealthy as Iv agents of imported goods instead of as manufacturers or used Iv investment agents for rent seeking returns on steadily increasing wealth inequality. It’s likely then that V was also becoming exhausted of capital in this changing economy and that the Iv section of hedge funds and derivatives traders were making far more money than the older more transparent businesses of manufacturing. So these Iv agents were borrowing more money from the Bi and V people in Japan with the carry trade and also drawing in more V investment money from aristocratic and more conservative sources who did not want to miss out. The V money then was being loaned into this opaque black box of trading and gave good returns, for example agents who collected money for Bernie Madoff sometimes suspected it was a Ponzi scheme but did not have any better venue to attract clients. Nonetheless the V team should have been able to piece together what was going on with discussions, that they could not implies they were becoming increasingly fragmented and secretive with each other. This is like losing the leaves and fruits of a tree to overseas manufacturing and so they became more dependent on Iv growth to get them out of economic problems, like a tree growing to avoid being overshadowed and perhaps get its manufacturing back later.

There were then signs of exhaustion of capital in V-Bi which is perhaps why the Japanese carry trade provided such a lift, previous loan sources such as oil producing economies’ Sovereign Wealth Funds had recycled petrodollars but this was relatively well understood by V who could also apply financial pressure on such as Saudi Arabia to reinvest this money. After this it’s likely the B roots started to get a contagion of R conmen getting liar loans from V lenders, this is more natural to them as they have little sympathy for the wealthy and also R grazing animals are used to feeding on V leaves. Marx also envisaged the communist state feeding on the benefits of a well developed capitalist economy, this was in many ways like grazing animals wanting a well developed supply of plant food. So as the system turned to Roy the initial part was probably R as the Gb resources B workers would use had been decimated by losing the manufacturing base. Next this rise of R deceptive borrowers probably caused an erosion of Iv salesmen into Oy conmen as they in effect found borrowers who would take on loans that more honest people would be too prudent to try. When people did not care as much about paying them back then this scruple was reduce, for example many book advocated how to trade in real estate and pointed out that if a loan was not successful then people usually would not have to pay money out of their other assets. The erosion of the Bi working community into B probably affected the I-O police as well, because there was less pressure from the Bi community to regulate these housing loans they probably did not monitor it as well. For example in a transparent Bi community people taking liar loans they could not pay back to speculate on a market that could not rise forever would create angry teams of Bi people to put a stop to it if only to make homes more affordable for themselves. This did happen though only much later when the system was ready to collapse, by that time I-O police were so Iv because of lobbyists and such as SEC enforcers wanting jobs on Wall Street that they either could not or would not do much about it. This rage in the Bi community should have occurred much earlier and more strongly, Occupy Wall Street for example took years after the GFC to get off the ground rather than having been ongoing for the previous decade of rising wealth inequality and disappearing manufacturing jobs.

A lack of Bi complaints and more Iv complaints from agents who wanted a freer hand and less red tape then caused the I-O police to weaken and allow Iv-Oy self policing which turned quickly into deception. V lenders also did not seem to realize this Iv black box they were putting money into could not possibly repay them because B people could not earn the money to pay the loans back. This losing control of Iv agents had increased since computerization had grown on Wall Street, for example Salomon Brothers as described in the book by Michael Lewis called Liar’s Poker did not understand what their salesmen were doing and it eventually brought the company down. Others would lose money from traders making huge losses, sometimes deceiving the parent company about what they were doing. This then was a pervasive atmosphere of perhaps older management trying to rely on younger and smarter quants and traders to make them money but not really understanding what Iv was doing. Consequently with weak I-O policing these Iv agents often rigged the system to suit themselves and make large bonuses or cash in stock options on deals that had to turn sour. Bi pension funds were also taken in by this new opaque Iv-B system that seemed to be making profits from a financial alchemy.

Banks through history as well as wealthy people have always been vulnerable to fraud or even having their assets confiscated, banks often for example made loans to French Kings that were sometimes not repaid causing financial crises. This is like so many loans made by US and European banks to South America and more recently Greece that were usually made by those who also knew they either would not or could not repay them. Some money for example was spirited out by corrupt politicians or there was a manipulation to put countries in debt to control them politically. Greece seemed to have an understanding it could not easily work within the stricter monetary policy in the EU and so worked with Goldman Sachs to obscure its financial state on entry. In the Roman Empire budget shortfalls were sometimes covered by robbing or killing some of the wealthiest V citizens, Holland had a financial boom which led to the Tulip Bubble after it threw out the Spanish army wanting tribute for King Philip, this allowed the Bi middle class to keep more of its wealth which it then in some cases invested and lost in the Iv-B Tulip Bubble.

The French Revolution was caused by the working class in France becoming poor from excessive taxation, this would have been the Bi community becoming poor with the King trying to finance the American Revolution, then they became more like a Ro demonstrating mob which attacked and deposed the Y-V aristocracy in revenge. It’s likely the same happened in causing the Russian Communist revolution with the Bi community losing wealth and people in WW1 and then becoming a Ro mob against the Y czar. The loss of wealth in the Bi German community with hyperinflation after WW1 and the punitive war payments combined with the Great Depression. This would have created more Ro sentiment in Germany including it electing Communists to the government. This also made the V wealthy in Germany such as Krupp and Thyssen afraid of Ro communism and losing their money, and then to support the Y Nazis. England’s Edward the Third borrowed money from Florentine bankers which would have been V money and then didn’t repay it, this would have caused Iv chaotic collapses. From this perspective then the instability of the global banking system in the GFC has a lot of precedent with an Iv-B contagion draining its reserves, it also had to finance growing deficits in the US from 2 wars as well as with much of Europe. Much of the problem then arose from the V-Bi banks seeing good prospects for lending money, some with poorer prospects for repayment combined with higher interest rates, a false sense of security from the new Credit Default Swaps which were in any event acceptable in the Basel 2 banking accords, and a competitive market for lending where loans were hard to make with the competition of trade surplus money flooding into the advanced economies. This situation then was similar to the petrodollars in the 1970s from oil producing economies that had to be loaned out, this gave rise to some bad investment decision in South America for example. When there is money available for banks to borrow, whether more conventional banks from customers or the shadow banking system borrowing from trade surplus countries then there is an Iv pressure to lend it out because money not taken and loaned is in a sense an opportunity lost for profit. A bank can also grow large quickly in a market like this as seen with the shadow banking system, those not taking Iv-B risks could quickly be overshadowed and lose market share and even be bought out. When banks became large enough as V there also entered moral hazard of being more likely to be bailed out by the government though as with the FDIC in the US shareholders would normally expect to lose most of their equity. However Iv people in control of these banks might expect to earn larger bonuses and cash in more stock options even when being bailed out as happened with the Bank of America, Citibank, Morgan Stanley, and Goldman Sachs. The V-B pressure then was to grow at all costs when there was money to lend out, this is like plants in a forest that are reluctant to avoid growing when there are abundant nutrients and sunshine even when the competition might make them exhaust the soil or even overshadow other trees which then collapse and knock them down. The alternative is to just evolve as a small bush under these trees, in fact many companies did this prior to the GFC with many small banks in the US also failing. There then seemed to be little downside in riding the Iv-B boom and trying to convert to a more stable tree at some stage as even collapsing like a desert plant usually still paid well to the V management.

Sometimes banks are also made Roy with nationalization or lose assets they have loaned on with Roy nationalization. For example few of the banks in the GFC consciously did something wrong, they just competed in an opaque system few saw was heading for collapse yet some such as British banks were nationalized. Even US banks were in some cases de facto nationalized with the government taking a stake for injecting capital. When Russia became R communist many Biv European banks lost the money they had loaned to it, this also occurred with the R French Revolution which is why the French under Ro Napoleon had more trouble raising funds for war than the Biv British.

Since this loss of reserves in V-Bi can cause the Biv economy to eventually fragment and become Roy it does not necessarily follow that the solution is to bail out the banks and make them very liquid as was done by Ben Bernanke after the GFC. There is a reason why this liquidity was used up in the global economy and replenishing reserves in it might just cause those reserves to be used up as well, this is like loaning money to Greece for example that may just use that up as well. One part of the I-O solution has been put into place because derivatives in the US are more I-O regulated on exchanges, also the SEC and many other regulators have been shamed into greater efforts as well as receiving more funding. However a stronger I-O policing may have prevented much of the GFC and the early regulation of derivatives may have prevented some of its excesses but there is an underlying problem that is still not being addressed. This is the lack of sustainable Biv tree businesses that can provide jobs that pay off the trade deficits of the advanced economies, because of this most of the money given to the banks has been used on Iv-B speculating once again, also US corporations are doing the same in many cases because they see few opportunities for investment. The problem with the economy was not so much that companies and banks as V-Bi loaned too much to the Iv-B parts of the economy and then there was a collapse when it could not be paid back, the problem was this weakly I-O policed Iv-B growth. If there is not a better alternative to it then the global economy will either continue to stagnate as V-Bi or eventually try to regrow another Iv-B boom because that is the only thing that will grow unregulated on such scarce resources. The problem then is that desert plants are not desirable and so are now being policed more against, but nothing else seems to want to grow in its place and so eventually this will weaken the I-O policing once again to allow another wasteful boom and bust.

Probably the only alternative that can work sustainably is a form of I-O protectionism where some industries are either protected with tariffs or subsidies to reduce the trade deficits of advanced economies and provide higher paying jobs. This would need to be combined with the appreciation of currencies of economies holding down their exchange rates by keeping money outside their economies. This amounts to a Negative Sum Game where damage to advanced economies is a strategy to eventually take over more manufacturing and cash in later, because of this it should be able to be defined in I-O law as illegal in restricted ways. By approaching these problems from the point of view of justice the minimum amount of interference to Biv markets can be accomplished and an Iv-B trade deficit that must end in collapse can be resolved. Of course this requires a kind of I-O policing internationally such as with the World Trade organization that does not really exist, this then causes a kind of trade war and a disconnect of V-Bi and Iv-B. it may then be that at some point the situation will become dire enough to allow a strong I-O policing of the problem, it seemed that this was necessary for the New Deal and the creation of regulatory bodies such as the FDIC and SEC in the Great Depression for example. Some strengthening of I-O policing has occurred from the GFC with derivatives traded on exchanges and some restrictions on speculation in commodities for example. However this primary problem of trade imbalances has not resulted in policing perhaps because it must lead to a crisis before people will demand it. The problem is that while free trade can move money in an economy, for example manufacturing jobs are destroyed which takes money from some workers while others profit from cheap imports. Tariffs can produce the opposite effect used indiscriminately where Bi workers might preserve higher wages while others pay more for imports and V companies make less from importing from overseas factories. To moderate the problem with these 2 extremes there needs to be a deeper analysis of who is hurt by free trade and where this entitles them to compensation or protection. If there is no plausible way for an advanced economy to manage a large trade deficit from it then they might have no choice but to try to police it more fairly. For example this can be the underlying problem in Europe as well, there is a trade imbalance in Europe which has shielded economies such as Germany, France and Great Britain at the expanse of Greece, Italy, Portugal, and Spain. If Europe had no overall trade deficit however this problem might not have occurred, it may be that this drain of money out of Europe made the poorer economies hit this chaotic wall first and the others may not be so far behind it. The US has a similar problem, some parts have been devastated by competition from Asian economies by the loss of their manufacturing jobs. Some states may be analogous to these poorer European economies but internally they cannot easily blame the wealthier states for their predicament. However the Iv-B contagion resulting from international loans masks the more serious problem that people defaulted on loans because they could not find jobs that could repay them. If there had been no such loans it is not clear whether many more jobs would have been available anyway, the US might just have had an economic stagnation instead of the GFC.

This is a major problem because Germany is blamed by many in Europe for the problems of other economies because of its increased productivity and not passing on these increases to its workers. It may also be that some economies in Europe also profited by moving their manufacturing offshore to some degree and then made their money by putting a mark up on imports and distributing these goods as Iv agents to poorer European economies. This then is the same problem that occurs with free trade, some people lose because their jobs become uncompetitive while others benefit from cheaper imports but also from being the importers. For example Apple arguably makes a lot of its money as an importer because iPhones and iPads are made overseas and then Apple makes a large profit importing them. Some European economies became internationally uncompetitive because with a common currency they could not devalue to lower their wages, this caused some of their jobs to be lost to Germany but others to be lost overseas. However it may be the profits from importing replacement goods no longer made in those economies accrue elsewhere now.

The problem then is highly chaotic because there is high leverage here. For example if there was no overall trade deficit then the poorer economies would still have a problem with the internal European trade deficit. However with a large external trade deficit they also have this external problem that effects these poorer economies far more than Germany and France for example because the wealthier economies have a smaller overall deficit or even a surplus when the external and internal trade balance is taken as a whole. To resolve this problem then Europe has to come up with a solution to this internal trade imbalance or its free trade situation of the Eurozone will collapse as economies have to leave it so they can devalue their currencies. For example some poorer economies might have to be allowed to have a kind of tariff on imports so they can compete better, this then would necessitate how in Europe to work out a fair formulation of this tariff, how to apply it, how to fairly determine who wins and loses from its application, and so on. Europe has a good chance of working this out because they have a record of I-O policing internally such as the World Court and the whole system that created the Eurozone. Trying to police each other’s budgets won’t resolve this problem however because this will just force austerity which will create more Iv-B collapses in the poorer economies and more debt along with being even more uncompetitive. This is because Iv-B creates winners and losers from its competitions whether fair or deceptive, pursuing Iv-B solutions then will just lead to growth for some, more collapses for others and the breaking of the V-Bi concept of the Eurozone itself. Another way for example is the trade deficits of some economies might be calculated and those with a surplus might have to pay a tax like payment to those with a deficit to act like a currency devaluation. This is less satisfactory though because it doesn’t tackle the problem of what is a fair kind of protection for the poorer economies, some industries for example might have to appeal for a protection and tariff while others would not be eligible. Only then can this imbalance be resolved with creating economic inefficiency by protecting those who either don’t need it or who should go bankrupt and allow the cheaper imports.

This is the same problem as in economies devaluing their currencies, for example Japan has a problem with exporting industries creating a trade surplus and so it needs to keep money offshore to maintain its low exchange rate. This creates winners and losers, the exporters make more money and other businesses that might prosper with this offshore money are the losers. When an economy devalues its currency, for example if Greece left the Eurozone, then its exporters do better until they can help to repair the trade deficit but importers suffer because imports become more expensive. This then is like how in free trade export jobs can be lost but imports can give profits to other consumers. When this becomes unsustainable there is usually a chaotic collapse in the value of the currency and in this devaluation imports become more expensive for consumers and the exporters tend to get their manufacturing jobs back. So this indicates that much of the problem was caused by currencies held too low by keeping money outside their economies. If so then this is a situation that requires I-O policing, for example exchange rates might be determined by a court to be too high or low and cause economic harm that requires a remedy. The offending economy for example might have to pay a fine which is the equivalent of tariffs in some way. The problem is deeper than just a devaluation though, it is about the relative justice of people receiving cheaper imports and profiting from this while others might lose exporting jobs and lose from this. If then there is a fair exchange rate along with a fairly negotiated range of tariffs then this could resolve much of the trade imbalances based on I-O law. In practice though I-O policing like this is difficult to impose because especially in internal affairs countries can get used to there being no I-O police, however increasingly the US and Europe act as global police along with the World Court, the UN, the WTO, etc. It may be possible then at some point to regulate international trade like this though probably not without extreme Iv-B crises to show the need for it.

As parts of the world change from Roy to Biv or vice versa this can cause friction between the two, for example wars are usually Roy because either one country gains and another loses or more usually both lose but one loses less than the other. For example the Allies won WW 1 and 2 but in both cases they had far less assets and population than when the wars began. It is usually rare for a country to profit overall in Roy in the long run because of the nature of conflicts without O police, often they degenerate into a Y-R interaction where Y troops try to maintain control with team actions while R terrorists try to disrupt them and make it too expensive to occupy them. Reprisals don’t work so well because R usually have their own agenda such as with communist insurgents in WW2 in the Russia campaign. They can however make the Oy parts of a town try to uncover the R terrorists in effect as agents of Y, whether willingly as quislings or simply to avoid reprisals. This happened for example in Vichy France where the government was sympathetic to Nazism to some degree and so were to a large degree trusted to maintain order and prevent attacks on Nazi troops in exchange for a great deal of freedom. The Roman Empire as Y expanded this way, often they had Y rulers in occupied countries who would collect taxes for them to avoid massive reprisals such as the destruction of Carthage and the expulsion of the Jews from Palestine. However there were in both places some R resistance who often brought the wrath of the Romans onto the Bi population who sometimes hid them unless the pressure was too great. In such an occupation then there are 2 wars, there is the Ro population resisting the Y dictatorship just as in many dictatorships in the Middle East. Then there is an Oy-R war where Oy is either a part of the occupying force such as an intelligence service or the Gestapo in Nazism or local quislings. In this situation there is often also a local O police who try to maintain order and punish criminals unrelated to the war.

Wars then generally drain the resources of all involved, also it can affect the trade of other Biv nations. For example the US was attacked and also lost trade because of WW 1 and 2, eventually it seemed more effective to join in and end it rather than suffering more losses or facing a hostile Y victor. In the same way the wars against Islamic R terrorists have cost the Biv countries a lot of money such as with 9/11 and also with the financial burden of the Iraq and Afghanistan occupations. These may then have caused some cracks in the economy which contributed to the GFC, for example with higher oil prices, a larger budget deficit may have crowded out private investment needs in the subprime bubble leading to capital shortages and a collapse, the heightened security created fear and panic among Iv-B people who may have invested less in sustainable businesses, the extra costs of security such as the Department of Homeland Security in the US and the delays in getting on planes because of security acted as a drain on the economy, and so on. This is a common cause of economic problems, for example the European economies after WW1 were so damaged and Roy that they might not have been able to revive themselves enough to pay back loans from the US in international trade contributing to the Great Depression, the cost of Vietnam probably contributed to US stagflation in the 1970s, communist insurgency and the cold war was enormously expensive to advanced economies, and so on. There is a tendency for Roy wars to break out when Biv economies are becoming more wealthy, this is like their fighting back against Roy encroachment like large animals trying to break down a forest. These Biv forests then might adapt over time to have poisonous leaves, thorns, thick vines making them impassible, and so on. This then is like the advanced economies building up a large military industrial complex to protect themselves in effect like V leaves and fruits developing thorns to keep away R grazing animals like the communists were in effect.

Part of this process is also trying to make Roy countries Biv so they are less of a threat, this was the aim of the PNAC with Iv neocons who wanted to spread democracy in the Middle East and break up V-Bi cartels in favor of Iv-B competition. This was described in Greg Palast’s book Armed Madhouse where there was a V-Bi and Iv-B disconnect in US policy towards the Iraq war which made it much more economically wasteful. According to him the Iv neocons wanted to spread more competition in the area and break up OPEC leading to cheap oil prices and a lot more drilling. Other interests were V and their objective was to preserve OPEC because it kept oil prices high and so profits high for oil companies. This struggle between the 2 was similar to how these disconnects cause economic problems, for example the Iv-B neocons tried to set up a system of no protectionism in Iraq as well as a free market where any foreign oil company could own all of an oil field. This led to the collapse of many Iraq industries that had never faced this competition. The V-Bi factions however wanted to stop this process and so applied pressure to remove Bremer from running things, the idea was to find a Y dictator much like Saddam was who could be relied upon to stay inside his OPEC quotas. This also led to a military disconnect on how to fight the war, the V-Bi method was a large Y army to batter the country’s Ro population into submission and the leave after new elections. The Iv-B method became a shadow war between R terrorists attacking Y army patrols making their forces ineffective while Oy special forces tried to be equally secretive and deceptive in bribing people to find the R terrorists. This then led to confusion in how the war was being fought, Bi people for example might get roused in the middle of the night and searched. This often caused so much resentment that they would join the R terrorists in revenge leading to an increased contagion. The war also created a revolutionary new Oy-R conflict of using Oy predator drones to secretly track R people and target them directly, this increased in use in Afghanistan alongside this Y-Ro war of the US forces against the Taliban. The idea in both cases though is a Negative Sum Game where each tries to win by making the other lose so much they give up, so far it seems more likely that the US will lose in this way in Afghanistan as the cost becomes too great.

These kinds of wars then can grow with this disconnect and consume Biv resources, in nature this would be like outcrops of forests in Roy areas trying to establish themselves with poisons and thorns form being uprooted. This process then is always going on where Roy areas try to expand as do Biv ones, in evolution much of the reason for growing in the first place to have Roy offspring or Biv seeds. Biv economies then tend to save up and launch into wars such as increasing the sizes of Empires like the British, Ottoman, French, German, Austrian, and Russian Empires that collided in WW1 trying to take resources from each other. Biv then is always trying to expand and if it cannot then it develops other economic problems where seeds of new businesses have no room to sprout. This problems was foreseen by Karl Marx and it was his explanation for why capitalism would eventually collapse with infighting unless it always had more room to expand by colonizing other countries. However forests do not collapse because they can no longer expand, there are some processes though where growing plants try to sabotage others to get a chance to grow to the V canopy. For example plants can grow more flammable as an evolutionary advantage because in a fire the established plants can be destroyed giving a chance to whatever plants can grow the fastest. So smaller trees for example would gain by being more flammable and larger trees by resisting fires and being able to resprout from the I trunk after it has gone.

Economic collapses then can also be caused by the Biv businesses themselves as well as by workers as they also represent times of economic opportunity, Morgan Stanley and Goldman Sachs for example got rid of Lehman and Bear Sterns as competitors in the Iv-B boom and bust by all pursuing risky strategies that were highly contagious. This is also like in a poker game where the Iv-B bluffs and raising bets can create a devastating situation where many players lose everything. Marx then said the capitalist system would destroy itself completely in this way, some forests have probably managed to do this where they used flammability as a competitive advantage and ended up destroying the forest so much it never achieved its previous thickness or regained its Roy supporting animals. Plants have more of an advantage though because when they burn they form good fertilizer, however in the GFC many Iv-B companies formed toxic waste as they collapsed. This can also be a competitive advantage, for example if a company type such as finance makes a toxic humus in a general collapse but other companies make more useful wreckage then a fast growing Iv-B financial sector can regrow while other parts of the economy are still trying to digest the toxic derivatives. Plants also have other strategies to cause collapses in others, for example they can have an Iv-B competition where plants try to outgrow each other to get to the canopy and overshadow the others. In this contest some will exhaust all their Gb resources and V-Bi reservoirs of nutrients and collapse while others while survive well enough to repay these reserves and then balance out as a fully grown tree. This is the kind of competition that happened in the shadow banking system, growth was the only way to get big enough to not get overshadowed and with so many Gb resources available if they were not used it was like giving up. Some companies no doubt did not win this competition or adapted to be small in a niche business like smaller hedge funds and stock brokers, the ideal outcome in this kind of competition is that a company barely survives the Iv-B growth as it then gains the most market share as others collapse. The problem with this strategy though is it is vulnerable to external events, for example a large storm with this Iv-B growth might make nearly all the trees collapse and perhaps the forest might not recover for a long time as smaller shrubs under the trees also die from the lack of protection from the elements. For example plants might adapt to the shade and like putting indoor plants outside the extra sun can kill them. In the same way many companies adapt to being small niche players such as fast food outlets and cafes in a business district, if the big businesses collapse then they have nothing to support them and so they will also collapse as also might laundry services, hotels for executives, restaurants, parking stations, nightclubs, car dealerships, real estate agents, and so on.

There are many other ways for Biv businesses to sabotage an economy for regrowth, for example a plant might encourage a certain kind of R contagion on its bark so that this will spread to and collapse its competitors even more. This was similar to the way the large investment banks too on each risky kind of derivative knowing no doubt that some would not be sophisticated enough to handle them, when they became weakened then they could be profited off by shorting their stocks or using Credit Default Swaps. Companies might expand into more dangerous Roy areas so that some competitors might get robbed and not be able to withstand the economic losses, they would then lose market share. This would happen in many third world economies where mining and oil companies go into politically unstable areas knowing that some will get burned by the experience and lose money, however the winners will profit much more. This was part of the Iraq war, that some oil companies would become more favored by Iraq though they also ran the risk of being associated with the occupation and boycotted. The mineral wealth in Afghanistan will cause companies to try to get rights to them, they need to balance who will lose out from supporting Karzai and then being thrown out by the Taliban or supporting Karzai and winning. These situations are then like high stakes poker or often like Russian Roulette where some will be out of the game, in the same way the banks try to get market share and usually in a boom lend too much and suffer enormous losses. However the stakes are high in this economic collapse because the survivors usually get more market share such as bank of America with Countrywide and Merrill Lynch, Wells Fargo with Wachovia, Morgan Stanley with Bear Sterns, Barclays taking over much of Lehman, and so on. Strategies like this can be good for Iv-B plants but not so good for more stable large trees, for example there are plenty of healthy forests resistant to fire and contagion because of strong I-O immune systems against contagion as well as strong I-O trunks which means small plants cannot use fire as a strategy to collapse large trees. If there had been strong I-O policing then these tactics could not have been used in the lead up to the GFC to destabilize each other, there would instead have been some skirmishes among V companies for market share and so innovative growth in these businesses or small companies that would be bought out by larger ones instead. This is how it works in the internet and computer businesses because they are still expanding into new markets, they have not yet then reached saturation where trying to bring down other companies or sabotaging the whole computer industry are profitable ways to evolve.

Computer companies are however acting more as Marx said in that they need to look for new markets to prevent infighting causing contagion in their own business, usually they do this by creative destruction or as they called it disruptive innovation. This is similar to the process outline by Perkins in Confessions of an Economic Hit man where countries might be deliberately loaned money to make them get into difficulties so more advantageous deals could be done with their assets or raw materials, also to influence them politically such as at the time to keep them allied with Y-V and away from R-B communism. In the same way internet companies might introduce a new product cheaply or even software given away for free with the aim of getting market share and collapsing other companies. For example Microsoft runs the Bing search engine to try to damage Google who respond with making a free Android operating system to hurt Microsoft in mobile phones. They have also tried with less success to undermine Microsoft Office with a free service called Google Docs and an operating system for computers and tablets called Honeycomb. Much of this Iv-B innovation can be good, it can also create economic waste as people change to different fads that ultimately do little to improve their lives. The intention behind it is usually for these large companies to expand their economic Empires and is similar in some ways to the different Empires in Europe rubbing up against each other and with little way to expand but at the expense of each other. In this situation WW1 was an opportunity for most of the countries involved in it, for example the Austrian Hapsburg Empire saw the assassination as a chance to grab Serbia, the British saw the war as a way to break up the Ottoman Empire and get access to Middle East oil as well as to take over the German colonies, the Germans saw if they won then they would get parts of the Russian Empire as well as on its border with France, and so on. WW2 was a similar grab for resources, Germany sought to get extra living space for Germans to the East while Russia sought to take over part of Poland with the Germans. These however are Roy situations, the kinds of economic Empires clashing in these economies are Biv and so they do this with Positive Sum Games where they and the consumer wins. For example mobile phone owners gained by the Android operating system as did Google, Microsoft lost because it could not offer a competitive Iv-B product. At the same time Apple released the iPad with a dramatic increase in market share which was also a Positive Sum Game benefitting the consumer and Apple while hurting Microsoft who had a less competitive tablet.

This creative destruction then is a combination of creation where companies and consumers win in a Positive Sum Game and destruction in Roy where both lose as well in a Negative Sum Game. For example people who owned laptops before the iPad or mobile phones before Android might have had their resale values plummet. Companies that lose market share often have a competitive product but consumers will often select the one that is even marginally better so the company being destroyed still has a good product. For example Yahoo is likely to be broken up under this intense Iv-B competition but it is not known whether this is more destructive because they will be unable to innovate in the future. The economic waste then is masked deceptively in Iv-B, because people seem to be profiting on each transaction such as a better phone it seems the process must be good but as this becomes more destructive these small Iv-B profits can lead to a V-Bi loss. For example the GFC arose because of enormous losses in the financial sector almost created another Great Depression and has ruined countless lives with unemployment, finishing school with crippling student loans and no prospects for jobs, record numbers of houses where the mortgage exceeds the value of the house, and so on. However all this occurred where each buyer and seller made a profit on the transaction, the borrower thought he was doing a good deal as did the lender. All through the real estate bubble and bust each sale was where the buyer and seller each thought it was the best deal. Where individuals in Iv-B profit however the people as a whole in V-Bi can lose, for example the infatuation with new innovations in computers and other electronic equipment has led to an unsustainable trade deficit with Asian economies manufacturing them which caused in part the GFC because they loaned the money they made back to the US cheaply to invest in housing loans. This also caused their currencies to stay low which made these electronic goods even cheaper, this again should have been good for the consumer as each made a free choice to buy something they thought was worth more than their money. The problem is in Iv-B there is so much secrecy and deception that people make bad decisions even when they think they are good, this is like in poker where mutual bluffing causes people to misjudge the situation. Iv-B then is good for those who are fastest and most deceptive, for example getting in early on an opportunity like an investment but getting out before it crashes onto someone else.

These problems are more obvious in Roy because they are associated with crimes and wars but Biv colors are overtones of Roy which means that every Roy situation repeats itself in Biv but with abundant resources. This disruptive innovation in Biv looks beneficial at this point but with expanding economic Empires there is a cost to other Empires, such as between Google and Microsoft, but also for the consumer who are in effect the country being colonized. The history of colonized people is a mixed one, some were treated well and received benefits such as India getting a railroad for example and education, others such as the Congo were brutally exploited by the Belgian Empire for rubber and more recently by others for the alloy Coltan for mobile phones. The consumer then who previously bought from one company such as Microsoft with phones is in effect colonized by others with new phones, this is a Positive Sum Game because they as well as the phone makers benefit but it introduces a new relationship with a contract, expectations of future warranty repairs and upgrades, etc. because of the exponential rise of Iv-B computerization people expect each phone to be better than the one before but this is because of the technology not because of the economic factors, for example with car manufacturers a new model until recently was usually very similar to the old model with only cosmetic changes. A new product might be introduced that at first looks much better than the old one with disruptive innovation, the old company loses market share and is so damaged it becomes overshadowed and is no longer a major business. Even if it could regrow this would involve massive amounts of new capital because so much was written off when its market share collapsed. This might be seen for example with Microsoft and its old operating system also with companies like Nokia and its Symbian operating system, this disruptive innovation then leads to a loss of capital with both companies.

If instead of the new phones being high quality they might have been used for a while and then rising dissatisfaction might have made people think they were better off before, for example they might have trouble working so many new features on these phones. Many then could be worse off because they were in effect deceived by an innovation that made the older phones obsolete but the newer phones had features they could not use, the disruption then might continue as new updates to these phones steadily become more complex and hard to use. This is not to pick on Android in any way but to illustrate that when there is a Positive Sum Game sometimes one side gets far more out of it than the other, though both sides gain the consumer might for a large percentage not get much use out of the new product for the expense while the manufacturer makes far more. Overall then the economy might be saddled with an Iv-B trade deficit that grows from disruptive innovations like this until it collapses with the GFC. A similar example might be with drugs such as cigarettes or alcohol, a person might think he benefits each time he buys them because he makes a choice and would feel worse off if he didn’t buy them. However eventually they wreck his health or bank balance.

In effect then disruptive innovation is not so different from trees being flammable to burn down a forest so they can regrow faster or becoming infected with a contagion that will hurt other trees as well. For example imagine if the markets for software products became saturated with no new places to expand then each software Empire could only grow by either sabotaging the others or by crashing the whole system and regrowing faster in the aftermath as happened in the GFC. For example many software companies now try to sabotage each other’s products with patents and to buy up other patents to continue this economic war. This can hurt innovation from smaller businesses who cannot afford to accumulate patents, this then is like Roy warfare where smaller countries get absorbed into the larger Empires. If these kinds of battles escalate then some innovative products might be taken off the market, for example Steve Jobs with Apple wanted to destroy the Android system with a patent war even if it severely hurt their own company. At the same time Microsoft according to some was getting as much money off Android phones from patent royalties as if it had sold the operating system on it. These conflicts have been largely beneficial to the consumer so far because I-O policing in these kinds of industries is strong, by contrast the deregulation in finance caused these same kinds of economic conflicts to escalate into systemically risk behavior because if any company baulked they would lose market share. Just as a Y Empire experiences opposition from R terrorists who can hide in the general population and disrupt or steal resources so too in Biv these economic Empires encounter opposition from B people, for example they might pirate software made by them, share music and movies these companies might distribute online, have pirated apps for mobile phones, change the software on phones such as unlocking them, and so on. Just as Ro demonstrations might build against Y Empires, similar to how the Indians resisted the British and persuaded them to leave, the Bi community can be roused to anger against V economic Empires. For example there have been many complaints about privacy concerns on Facebook, Google had a similar problem in 2011 by exposing people’s personal information in a social service called Buzz, Microsoft at one time encountered anger from the community over browser market share, in 2011 Apple was accused of poor worker conditions in making the iPhone similar to sweatshop accusation in a Roy Empire, and so on. In an Roy Empire there are Oy intelligence agencies that monitor the people looking for dissent, this can then be negotiated with, there can be a Y show of force to make them back down, or there can be a secretive capturing or killing of the R dissidents such as the US using rendition or drone strikes on R terrorists in 2011. In the same way there is extensive tracking of people in these software economic Empires with tracking cookies for example, this information is usually sold to advertising companies to better target advertisements instead of Roy reprisals or reeducation.

Policing of these economic Empires has the same problems as with Y dictators, their money and power can be used to lobby against regulating them. Usually problems are dealt with by I fines, for example Microsoft was fined for monopolistic practices in Europe with internet explorer. In Roy offenses are usually handled by the O police but Y dictators are also rarely found to be at fault or capable of being prosecuted because of their power without an outside O police such as the World Court with Milosevic from Serbia and the attempted capture of Gadaffi from Libya to stand trial.

This illustrates why I-O policing is so important as it holds together some very tough infighting from damaging the economy, by contrast the wave of takeovers in the US economy were more deregulated and caused many good companies to be dismembered for profit. Arguably this infighting happened more and more in the US economy approximately from the 1980s onwards with takeovers, greenmail, Leveraged Buy outs, junk bonds promoted by Michael Milken for financing these takeovers, the growth in taking companies private such as the private owners of Chrysler that needed bailing out. Many of these probably were where the Biv businesses had no easy way to expand overseas because free trade was outcompeting them with cheap wages, to make money then they had to take down established companies and take their place hopefully in a sustainable US economy. This kind of economic infighting and sabotage was implicated in the subprime crisis where US homes were in effect raided by lenders, the raising prices made money for some but made others unable to afford a home or if they bought one left them with little chance of paying it off. This then would eventually lead to an economic crisis where some would be winners, for example those with more money when the real estate market collapsed would be able to buy up properties cheaply and often cheap enough to immediately resell at a profit. Those who originally financed many loans lost money when the shadow banking system succeeded in refinancing them at lower interest rates even when people borrowed so much that their payments went up. This led to the opportunity for the shadow banking system to bring down the conventional banks and keep taking more market share, if the banks collapsed then they might be able to buy them out and become part of the V canopy overshadowing others.

The same process extended to hedge funds which in many ways personified this strategy of being flammable and taking on contagion to infect others more, for example in the GFC many hedge funds shorted other businesses or took out Credit Default Swaps they hoped would pay off with company bankruptcies, some companies may also have been deliberately hurt to make these pay off. The subprime bond market led to an explosive growth which then led to enormous opportunities for shorting the market as it collapsed, those who made the most money would be better placed in the recovery because they would have capital to buy up assets at fire sale prices. Hedge funds that collapsed were likely to have highly illiquid bonds that were like toxic waste to other buyers, so in a mutual collapse those with the most toxic assets had a competitive advantage in being able to get cleaner humus from others. Credit Default Swaps that were composed of subprime bonds selected to be most likely to collapse in effect tried to spread contagion into other businesses, if these bonds collapsed then their stocks could be shorted from the damage as well as the Credit Default Swaps paying off. Speculators investing in food commodities can cause severe damage to emerging economies as people have to pay more to eat, this has a contractionary effect on other businesses because people cannot afford to buy as much of other things. These economies might get into economic trouble with this, much of the Arab spring has been blamed on this. This would allow then some investors to raise the price of food until businesses can be bought more cheaply in these countries, pressure might also be brought to bear by the IMF to sell off government owned and profitable enterprises such as electricity and water supplies. After these assets are bought up the price of food could come down by shorting it and making another profit and then the assets in these other economies rise in value in a recovery. This might also have been done with the oil bubble for example, a relatively small amount of money can affect the price of oil in the futures market also spreading rumors of war in the Middle East might also spike the price and make other companies cheaper to buy. Then when the bubble is timed to collapse the other assets bought should rise in value and be sold off.

Companies might also manipulate threats of war to get more US contacts for weapons, also to sell more to belligerent countries and then their adversaries. This can spread to a general conflagration if war breaks out, in that case even more weapons are sold and defense stocks go up in value. Stories like this can be effectively micromanaged, for example news stories of potential war can make the stock market move around so that those who know the stories are coming can go long and short as needed. Usually in a forest this process is short and sharp, for example a fire might produce growing trees with little bark that do not easily burn until fully groan. However when there is nowhere for companies to expand to then this infighting can continue as there is now other way to profit, for example much of the lingering effects of the GFC may be because it is still so profitable for some people as well as because others are still trying to sabotage companies to position themselves for the recovery. Like political infighting that causes a party to lose an election then this constant attempt to short the market and find and manipulate bonds to default with credit default swaps may continue for a long time to come.

The European crisis in 2011 may also be caused by financial businesses trying to collapse some economies, if they default on debts then credit default swaps on the loans may pay off with big profits but if banks voluntarily accept a haircut then the swaps don’t pay off. So Greece for example would pay more to some if it collapsed completely while other banks more I-O policed will benefit if their economy recovers even if the original loans receive a haircut. In a more extreme example if the global economy collapsed into another Great Depression some would profit from this by being positioned for the eventual regrowth. Some companies might be poised to profit from a breakup of the Eurozone, for example if some economies left the EU and their currencies devalued then their export industries might thrive and so buying these businesses now and pushing the interest rates of their debts up might make an overall profit.

In Confessions of an Economic Hitman Perkins describes this willingness to collapse various economies for political ends, for example loaning money for projects that will fail and leave a country indebted. This is similar to in Roy where for example Lenin tried to destabilize India with strikes to make it become communist. Arguably also the West has avoided democratic elections in third world nations with plenty of Gb resources in case the government was less pliable, this also amounts to damaging the global economy in a Negative Sum Game. It is also like economic Biv Empires such as large corporations trying to damage the business of companies they want to take over, for example they might launch a competing product and sell it at a loss until the smaller company is hurt so much it is cheap to take over.

The same kind of infighting can occur in politics, for example in the US the Republicans and Democrats for many years have had gridlock in legislation, when a new party gets in it spends most of its time reversing the accomplishments of the old as a way for them to make their mark. This then is like trees engaged in bringing each other down to then grow in their place. This occurs in addition to the Iv-B and V-Bi disconnects, for example there is a libertarian aspect to Iv and B with the right or left in politics. Then there is a team aspect to V and Bi in the kinds of politicians that get elected. As mentioned earlier this can cause an Iv-B versus V-Bi disconnect where the 2 seem to form against each other and politics zig zags in this way instead of moving to the left or right because of a weak I-O centrist group of politicians. In nature this would be like Iv-B fast growing and dying plants and V-Bi much slower and stunted ones, weeds competing with grass for example instead of growing larger trees with strong I-O trunks. However even weeds and grass can have destructive infighting, for example if there is nowhere for them to spread to then a plant can only prosper by another one failing, when grass dies out in an area weeds may suddenly sprout up but then slowly get strangled by the grass. In the same way the Iv-B libertarian ideas might quickly sprout up in an economic crisis advocating collapse as the path to growth as it is for them and businesses with their philosophy. Then they are slowly beaten back by the team V-Bi politicians who restore the system to evolving slowly rather than the Iv-B revolutionary ideas.

This can be a zig zagging from one to another, also there can be a movement from left to right and back again. For example V-Iv might win and election and move a country slowly to the right by giving more tax cuts to the wealthy and reducing welfare, then later Bi-B people win an elections and raise taxes on the wealthy and increase pensions for example. However when I-O is particularly weak the centrist politicians have little power, the government can then be consumed by tearing each other down not as Roy predator and prey but as a way for new politicians to prevail over older ones. For example some might want to rewrite the tax code not because it needs it but because they want to make their mark on history. This might cause a lot of economic damage if companies have adapted to the old tax system, for example a company might be viable under one set of tax rules and then go bankrupt if it is even slightly disadvantaged in the new rules. This kind of infighting can also be policed against, for example many older houses might have protection orders because of their historical architecture and cannot be substantially altered. A city like London for example would protect itself from being torn down to build new office buildings. Trees can be protected as well in suburbs, often even on properties people cannot cut them down or drain wetlands. In politics too much destructive infighting and gridlock can be frowned on by many politicians, this is like most trees in a forest that have evolved to grow normally and then become relatively dormant if their seeds cannot find anywhere to sprout rather than trying to damage the forest. This is also an evolutionary strategy and a kind of policing, for example if a group of politicians of the left and right refuse to engage in politics of destruction then they can act as a swing vote against those looking to bring politicians or legislation down to make room for other agendas. In the same way parts of a forest might not try to sabotage others or burn down the forest by being flammable, of there are enough of these then it reduces the competitive advantage of those that want to burn down the forest for example as there may not then be enough of them flammable enough to do this. In the same way there can be disruptive innovation between computer companies but if enough of them refuse to engage in this then this strategy can fail, for example Microsoft might have many partners who would not support it losing much market share even though it gave more opportunities for some to grow larger. Usually the ones who would succeed in grabbing the market share are limited in number, there is then little incentive in Iv-B to pursue this strategy of wrecking the economy if they are unlikely to be in a position to benefit from it. For example investment and commercial banks, insurance companies like AIG, and large hedge funds hedge funds such as Pimco or Citadel might in some cases be so large as to be systemically dangerous of they fail. This then gives them an advantage of being supported by other companies or the government, however smaller competitors to these might benefit from a crash in the market because it might bring down or hurt the dominant players and allow another to grow quickly. Lehman then while perhaps not intentionally had a lot to gain by being systemically dangerous in its situation, there was a rumor for example that Dick Fuld had said his aim was to be too big to fail. If Lehman had collapsed and been bailed out, this seems the wiser course now in retrospect, this might have been good for it overall as many of its competitors would have been wiped out and it would have been in a position in the recovery to buy many assets cheap. In the same way these larger businesses would profit sometimes from a financial contagion infecting them as this would spread it to its competitors and perhaps hurt them even more. V-Bi stagnation can also be a tool for evolutionary dominance, for example the slow and steady growth of grass has been a good strategy as it would in general be the most common plant on Earth. It doesn’t compete with larger trees in most cases, however it does make it much more difficult for their seeds to get to the Gb soil and germinate and this stagnation can also prevent Iv-B weeds from sprouting.

After the GFC then there can be a domination of V-Bi business that prevents Iv-B bubbles from forming but also more balanced color trees from growing because there are not enough available resources. For example the banks can become very risk averse and highly normalized not liking any idea that is too deviant from the current stagnant situation and this makes it difficult for sustainable businesses to get funding. People also can be very conventional in their tastes, a new and revolutionary fast food might have a potential to be a big industry and employ many people but it may seem to abnormal to the standard diet to get any growth. It may however like McDonalds become very popular if it caught the public’s imagination, music can be like this as well when a new style might be treated with caution and then spur a revolution such as rock and roll from blues. This music might also be Iv-B, for example a variation of rock and roll like grunge or punk might quickly grow but then fade to a large degree as it fails to mature into a mainstream more normalized style.

In the same way the Iv-B growth from a bubble can make people risk averse to another abnormal and lead to V-Bi stagnation, this suits the V-Bi businesses like grass because they are appreciated so much by the normal population and then can afford to ignore the more deviant ones. For example mainstream rock and roll might have to hide the more outrageous drug taking and sexuality to be acceptable to families. More conventional fast food might have to avoid highly spiced variations that families don’t like. Sometimes to overcome this stagnation it seems a bubble is necessary to interest people by the chances for profit, for example the conventional V-Bi wisdom before the real estate bubble was to buy and pay off a house to live in and not really to make money from. This made the real estate market very conventional and staid, banks were also very conservative and risk averse. The subprime Iv-B revolution developed by mutating in so many ways that eventually it found products that people would take a chance on such as refinancing their homes and withdrawing money from the equity. Also poor people would take on loans that normally would be frowned on in V-Bi because they were unlikely to be able to afford them, this was overcome by teaser rates and a system that was destined to grow quickly, pay off the V upper management and then collapse. This shows then the V-Bi and Iv-B disconnect, often an economy can become so risk averse and safe that it cannot resolve its unemployment problems. Even when there is economic pain instead of spurring growth this can push people to be even more V-Bi risk averse as the Iv-B growth they see like weeds in grass quickly wilts under the lack of interest in its goods and services or a lack of venture capital.

The zig sagging between Iv-B and V-Bi then does not usually occur smoothly, it tend to stick to one for too long until it causes economic problems and then there can be an abrupt change to other which again stays for too long. This is like V-Bi grass and Iv-B weeds, for example a lawn might be V-Bi in some areas with few weeds and very difficult for any abnormal plants such as trees to grow there. In a nearby area that grass might encounter problems and so Iv-B weeds take over and instead of grass there can be an instable mix of Iv-B plants competing with each other. In between there might be more stable color plants where for example bushes might grow. In the same way an Iv-B bubble goes for too long because it appears to many to be the ideal economy, this goes on until the defects of chaos become apparent when it keeps collapsing and the competition causes so much misery and economic waste. Then there can be a distancing from this towards more normal ideas and people become risk averse for far too long and there can be a period of stagnation such as the 1930s in the US and Europe. Roosevelt pushed companies to increase wages and the purchasing power of the Bi community with unions, a distrust of the wealthy and memories of the pain of crash made many Iv entrepreneurs afraid to start ambitious businesses. Communist propaganda based on Ro demonstrations and Bi unions such as Workers of the World Unite made people believe the boom and bust Iv-B capitalism was no longer to be trusted. The situation is similar to this as of 2011 where the old Iv-B ways scare voters now and who mainly want an end to the economic pain that it wrought rather than to embark on a new Iv-B bubble even when industries from it might mature into sustainable businesses if they have proper I-O policing.

Some areas then become V-Bi and remain so even when the economy overall is well balanced in colors, for example much of Britain in the 1970s became Bi with high wages from unionism and high amounts of welfare. When companies collapsed from this stagnation they were sometimes nationalized such as with the car company British Leyland and many coal mines. In this situation Iv entrepreneurs were viewed with suspicion much as they would have been in Russia and China at the time, they also had gone from R revolutionary communism to a more normalized and stagnant Ro variation of it. Margaret Thatcher managed to break up some of this stagnation by selling off state owned enterprises and property as well as some deregulation, Ronald Reagan allowed more Iv-B innovation to begin but both did this by reducing I-O policing too much. The result was then that economic growth consisted in some areas of Iv-B weeds disrupting the V-Bi economy of grass instead of building larger businesses. For example the Savings and Loans crisis in the US came from weak I-O policing allowing massive fraud instead of an economic revival leading to more houses being bought. A similar situation happened with the fall of the Soviet Union where Ro assets were deregulated as the O police state weakened, this allowed Oy thieves to steal and privatize many businesses and become wealthy including some oligarchs. This then was the effect of weak I-O policing again, instead of deregulation causing more sustainable growth it just let more weeds grow among the V-Bi grass businesses. Later though Russia became more stable as the I-O police state under Putin became much stronger and many frauds such as bank runs and the default of Russia on bonds that brought down Long term Capital Management came under control.

This situation is similar to what Keynes described as a lack of animal spirits where despondency and fear became the new normal and to be optimistic or energetic was deviant.

Such a V-Bi economy can slowly fall apart for lack of growth and an inability to service its debts, it can also have its industries become overshadowed by Iv-B economies that grow faster and sometimes collapse such as the Asian exporters to Europe and the US. If in this situation the V-Bi economies import too much then they can develop a dangerous trade deficit and there is then a disconnect between the Iv-B exporters and V-Bi importers. It can be a problem for both sides because if the V-Bi economy cannot keep importing then the exporting industries can chaotically collapse as well as much of the infrastructure devoted to exports. This is the desert plant problem again, these Iv-B industries find fleeting Gb resources with their low wages compared to the higher Bi union wages and also the high V profits for management in the advanced economies. This window of opportunity along with weak I-O regulation causes a chaotic growth of export industries usually based on local V-Bi credit, if the source of these resources is in effect the accumulated humus of the advanced economies then the Iv-B economies need to have a plan to mature into a more sustainable model. Japan tried this and has largely failed, the consequence of this Iv-B Mercantilism was 2 decades of lost growth after there were no more Gb resources for exports. Much of this was because Japan was pressured into raising its exchange rate until this exponential growth faltered and then they were left with an infrastructure based on Iv-B growth but no extra markets.

As these V-Bi economies falter fraction builds up in the economy because efforts to do projects cause fights between different unions and groups such as the NIMBY or Not In My Back Yard problem. For example to revive an economy for growth factories have to go somewhere but this causes friction in the Bi community because no one wants to live near a factory that might affect their housing prices. In the same way friction also builds up in V with so much teamwork and cronyism in company management that new growth upsets some by making others potentially benefit more. For example closing a factory might make powerful members of a board of directors have less clout and so this is resisted. A new project might be seen as abnormal and untried, instead the tendency is to treat the situation as normal and continue in the same ways to try and evolve out of difficulties rather than doing something Iv revolutionary. The banks in the US were like this prior to the Savings and Loans crisis and the attempt to increase Iv competition by reducing regulations just made them continue as before but losing money instead. When they did have to change they often got taken over by Iv crooks or managers who lined their own pockets like a financial contagion. US steel companies had a similar problem, their business was relatively stable but innovative and cheap Iv-B competition from Asian and other economies caught them unable to change and so most went bankrupt. This problem was exacerbated by the Bi unions who demanded high wages and pensions that ultimately could not be afforded.

This friction then can also produce shortages of goods that can make them more expensive, for example in the 1970s getting a phone connected was dominated by various Bi unions and so there was no easy way to just sell phones and let people hook them up themselves. To change this system was difficult because a union would have to lose some work or let another union take over some jobs, for example a manufacturing plant for phones might have to retrain or fire workers to make phones with different materials unless the workers could adapt. This made some goods expensive because of the friction involved in producing them, it could make getting goods and services take much longer because V-Bi are long on time and short of energy. For example there might be shortages at supermarkets which were less likely to put up prices because this was seen as exploiting people instead of setting a price where they could be procured quickly except through corruption. The same occurred in the Bi-Ro Soviet Union which had become from originally a revolutionary R society an evolutionary Ro one, and then to some degree a Bi society with some private property and choice though other such as Yugoslavia took this much further. However the system was stagnant because products and services took so long to get giving shortages in shops, Iv-B business flourished in a black market where R-B Communist Party officials received extra benefits and Iv-Oy black marketers often exploited people. This can happen in modern nations as well, for example Russia and Pakistan are arguably stagnant economies in many areas with a black market and corrupt payoffs accounting for some growth. In effect then as the V-Bi economy strengthens the Iv-B aspect is suppressed except for a black market and often otherwise it has no way to grow the economy out of its malaise. For example the cash economy might produce construction, repairs, etc much cheaper than buying them in shops that have to pay high wages and rent, high insurance costs and taxes, etc. Some of this disconnect can occur because of weak I-O policing as well, for example if the black market was adequately policed then the V-Bi shops would make more money and perhaps be able to afford to innovate. This problem was seen in Italy and Greece in 2011 where the Iv-B black market was in some ways a major engine of their economies but it was so secretive and deceptive it could not easily be taxed to repay Sovereign debts. In the same way corruption and bribes are from a lack of strong I-O policing, often it is the police as Iv who take the bribes. By reducing this it is like letting money flow faster through the economy, for example corrupt officials might deliberately slow down some goods and services to get people to pay bribes. If they were too efficient then the bribes would not be necessary and they would lose money. This inefficiency can cause V price rises as innovation causes so much friction and waste that prices need to adjust, this can cause Bi unions to demand higher wages as compensation and the stagnation can become stagflation. This is of 2 kinds, the first is where changes create waste that must be paid for with higher prices. The second is where prices and wages chase each other higher in a war of attrition creating more economic waste because Bi unions might strike or V management close factories to make more money. If it continues it can become a Negative Sum Game with Roy scarcity, for example a Bi union and V management might be set to bankrupt each other losing more than if they came to an agreement. This can bring in O policing where Oy strikebreakers confront angry Ro strikers often in bloody confrontations. This scenario was more common in the early parts of the 20th century because the Iv-B effects of computerization had not yet created growth and innovation to offer a way out of this stagnation.

Associated with this stagnation there can be rival V and Bi teams with normalized political slogans and plans, for example the Soviet Union used Ro 5 year plans to try and make the country act as a large team to create products with little Iv differentiation such as styles and color. A design might become normal to an extreme so people found it difficult to get a different colored coat for example and would be seen as a deviate or standing out too much perhaps if they bought one. This might leave them vulnerable to the R secret police looking for Oy capitalists or Oy wolves in sheep’s clothing. To counter the Iv-B Great Depression Roosevelt created many V-Bi plans to soak up unemployment which also produced a stagnant economy in some ways. As areas became poorer a single project such as a ship contract in an British ship building town might make or break a Bi union there and potentially stop people ending up on Bi welfare. This was a major problem in the Great Depression in Great Britain where these unions were hotbeds of Ro anger along with communist demands or sowing chaos from R secret agents from Russia. The US had the same problem, it was necessary to help the Bi working class to prevent R communists from turning them into angry Ro mobs, this led to the paranoia about secretive and deceptive communist agents such as in the movie The Manchurian Candidate. It also led to invasive trials with McCarthyism trying to find these R agents. Communism was discredited to a large degree with the fall of the Soviet Union and many exposes before this of life there, however if the economic stagnation continues from the GFC there may be some R manipulation of Ro mobs especially if some people come to believe Marx was right after all. This anger can be increased by the Iv-B and V-Bi disconnect, for example Iv-B people can be seen as secretive and deceptive and if they make a lot of money they can be seen as cheats and that the system is rotten. This is behind the anger of Occupy Wall Street where the deception of Iv agents is seen as a plague on the US, V Tea party people though complain about the deceptive B worker who took out so many liar loans that he crashed the economy, they now claim he is often living well on unemployment insurance instead of looking for work or even working in the Iv-B black market. This then creates a great deal of animosity between V-Bi and Iv-B people because they see parts of the economy turning to Roy and realize something has to be done to stop the deterioration. Blaming each other is what V-Bi and Iv-B do, otherwise they sometimes take turns by zig zagging from V-Bi to Iv-B over and over. The strength of these protests can make it even harder for I-O police to try and heal this rift and grow a sustainable economy, for example the cost for policing the various Occupy movements is hard to afford for many US local governments.

When economies are strongly V-Bi this usually reaches into the government which forms part of the teams, for example V Republicans might be mainly preoccupied with getting campaign fund in exchange for helping out their V team and often retired politicians work for these companies or become lobbyists. The same occurs with Bi Democrats who have retired politicians with well paid jobs as lobbyists, their plan can be to keep unions strong in exchange for campaign contributions so elections can be like a war of attrition with Iv and B deception on each side. For example Richard Nixon used secretive Oy wiretappers to break into the Democratic Convention at the Watergate Hotel to spy on them, the Democrats had their B such as Deep throat in exposing Nixon’s involvement.

The line between Biv government and Biv business can become blurred in V-Bi stagnation, if this continues scarcity of resources can make the economy Roy and this political process can become Y-Ro. This happened for example in the 1970s in Europe where angry Ro Euro-socialists confronted Y such as in Spain under Franco. In this case V-Bi business can become Roy and nationalized, for example businesses such as banks and car manufacturers were taken over and Bi unions became angry Ro government employees. The resulting friction became worse and often the goods and services provided were of low quality. This friction can lead to a sense of frustration, in the 1970s for example there were R subversive movements in Europe such as the Baader Meinhof gang, the R Brigade, the PLO, etc assassinating perceived Y officials and often hijacking planes. The problem is there doesn’t seem to be a way out of the stagnation because Iv-B is so secretive and deceptive people in this situation dismiss it as corruption, the black market, the sinister side of capitalism, etc. It can be in the case, it might be even more unregulated because of this secrecy and because it provides a way to get things done when V-Bi businesses are so slow and inefficient. Marx was also the problem because he foresaw this kind of situation as the end of capitalism, somehow it would be replaced by worker’s cooperatives and the collapses of Iv and B businesses was occurring because the economies were too stagnant to let them grow. This then appeared to be heralding the next stage of economic development where these V-Bi systems would be efficient enough so people had security, the same vision however was espoused in Y authoritarianism though often also with Roy state owned enterprises. In their version this end of history would entail the crushing of Ro communism and socialism and forcing Ro people to work. This situation then was not much different from WW2 with the Y Nazis and Ro communists trying to destroy each other in a war of attrition, now a similar process was happening economically.

Escaping from this V-Bi stagnation probably occurred with Margaret Thatcher and Ronald Reagan espousing the virtues of innovation and personal freedom and comparing it to the problems of the Soviet Union and government owned businesses in Great Britain. By promoting Iv-B business as more respectable they may have taken it from just being corruption and the black market in many areas and allowed it to grow again. They were also lucky because the Iv-B exponential rise of computerization was getting under way and which is still revolutionizing for good or ill economies today. The problem was the V-Bi and Iv-B disconnect, they in effect promoted a zig zag again, V-Bi stagnation hadn’t worked out so the answer became competition and risk instead of too much social insurance and unionism. This then led to more innovation or at least allowed computerization unfettered exponential growth but also led to a different kind of corruption. In effect the laissez faire Iv-B black market became the legitimate market and the V-Bi market was denounced as the problem. This then led to the rise of chaos similar to the early 20th century with increasing economic crises such as the Panic of 1907, the recession in 1920, culminating in the Great Depression in 1929. This zig zagging from V-Bi to Iv-B and back is similar to long term economic cycles such as Kondratieff Waves, however this does not tend to show up clearly in economic data because the colors change their ratios from left to right and back such as R to Oy or B to Iv, from Roy to Biv and back again, and from V-Bi to Iv-B and back again. At each stage there are different mixes of chaos and randomness, also these changes represent fluctuations in tree shapes and the food chains. For example a change from V-Bi to Iv-B allows more Biv plants to sprout up like weeds in a Biv society and Oy-R crime in Roy. These tend to grow chaotically, usually R or B grow first and then Oy or Iv afterwards. This is like Oy predators feeding on R prey or Iv branches which have to wait for the B roots to grow to provide nutrients. Trying then to map this to the stock market or unemployment then is difficult, this is made even harder by the secretive and deceptive nature of Iv-B business which may make statistics nearly impossible to be obtained. Also there can be a long period of flat growth in an exponential curve that suddenly grows noticeably that we interpret as a bubble at the end.

In the same way a V-Bi cycle shows up poorly on economic graphs because it is innately random and so when plotted on a normal curve just looks normal, like nothing is going on. The best way to tell when there is a change from one to another is from the way politicians, economists, and other leaders discuss issues. If there is a suspicion of deceptive capitalism and a collapse then it is likely to be a change to V-Bi. If there is excessive stagnation giving the desire to try something new such as privatization and more competition then it is likely to be a change to Iv-B. Once there is a change from Iv-B to V-Bi or vice versa there is usually a period of increasing economic improvement unless the change was abrupt. For example the Iv-B Great Depression and Great Recession or GFC culminated in almost a global collapse, smaller changes though can precede this such as smaller collapses and recession leading up to this. These often lead to a small reversal to V-Bi as people react against the effects of the chaos and prefer more security. For example the GFC was preceded by a crisis in Asian with many collapses, this led to fears of many people and some extra I-O policing of the markets as well as bolstering V-Bi bank reserves. After the Iv-B crisis in Russia that led to their defaulting on some debt which brought Long Term Capital Management down a stronger I-O policing under Putin reduced much of this corruption and also banks were better protected. However breaking this momentum is difficult because it is composed of millions of Iv-B transactions each day all over the world, usually by people with high amounts of debt who need to keep going doing deals or go bankrupt. To stop this process is usually impossible for them, in the absence of strong I-O policing if some baulk at fraud then others tend to take their place because of the necessity of paying their bills and feeding their families. For example competing companies might be fighting for market share and any slowdown just allows the other to take profits from them, the secretive and deceptive nature of this process ensures that each business does not realize the global impact of these many small decisions otherwise they could all moderate their behavior. This is why I-O policing is needed, they have the ability to randomly look into this secretive world and domesticate the fraud and misrepresentation down to manageable levels. In the same way as V-Bi grows the stagnation is hard to police because of the team nature of these colors, it is like 2 rival armies fighting such as in WW1 where each has inertia hard to reverse. It is also like Bi unions moving towards a strike, the whole team usually votes for this with few dissenters and because the situation is transparent and each team member can see the situation to oppose this movement is to seem abnormal on the normal curve. Sometimes though this can be altered by more obvious V-Bi problems, for example a strike sit in might be broken up by the I-O police and the crowd dispersed. Sometimes also the leaders can be B loners just as the Ro communist movement was team based but often had an elite and secretive R. From this B leadership then can come decretive and deceptive instructions, for example they might make a secret corrupt deal with Iv agents for bribes to avoid a strike and over time this can reduce the wages and conditions of unionists. The pension funds can also be corrupted this way such as by mafia control of it through these B elements in the union. Also the pension funds might be Bi and relatively transparent but they might hire B people to manage some parts who can be corrupted with bonuses and performance benefits. Gradually then the lack of I-O policing can weaken the union, this is like in Roy where a Ro herd of buffalo might be infiltrated by Oy hyenas trying to sneak in and grab their young when a Y frontal assault by lions might fail. In a Roy society Ro communism might have the R elite who lived much better than the average person such as in the Soviet Union, they are in effect doing secret deals with Oy agents from Western countries for money and imports of luxury goods in exchange for changing foreign policy.

In WW1 Germany was a Y aggressor in attacking France but always thought they were undermined by secretive and deceptive elements making them lose the war. This would be like Oy people making secret deals with the Allies to act as spies for them, also some who wanted the war to end before it became disastrous for Germany. The same occurred in WW2 where Rudolph Hess for example as Iv flew to Great Britain to try and negotiate a peace deal, later Himmler also tried this with the Allies and was sentenced to death by Hitler for this. In the same way V management in companies can sometimes be undermined by Iv agents working for them that break up this V-Bi stagnation by secretly doing business based on bonuses and stock options that make the company grow exponentially and collapse. This can be with B people as well, for example Iv negotiators with a Bi union might make a secret deal with the B leaders because the strike is hurting their stock options or they just take a bribe. These Iv-B tendencies in V-Bi stagnation or V-Bi tendencies in Iv-B growth and collapse are like turbulence or eddies in the general move from one extreme to another in search of balance, the same occurs in the Roy animal kingdom when the O middle of the food chain is weak. For example in an ecosystem with just R gazelles, Ro buffalo, Oy hyenas, and Y lions the system would tend to be very unstable. The Y lions would be trying to catch the R gazelles who would either be decimated causing a general collapse in the Roy food chain or have a revolution in speed and deception so the Y lions starved. This would then cause the lions to attack the Ro buffalo more but these then evolve each other into a war of attrition. The Oy predators have a secretive and deceptive battle with the R gazelles but this leads to a series of collapses in their numbers as they often overeat R and starve themselves.

So when the Oy and R animals collapse their numbers sometimes the Y lions need to focus on Ro buffalo and this is like a period of V-Bi stagnation. Eventually the R gazelles might have a revolution in their speed and camouflage because of the slower and more easily seen prey being eaten, this leads to many more of them and allows for the Oy predator numbers to rise but they cannot catch many of them. This then causes Ro buffalo to come under more pressure as there are many R prey that are uneaten and become like a contagion while Ro is attacked by Oy and Y and their numbers decline. This then causes Y and Oy to decline as well leading to a dominance of R animals, this might be like for example where rats and mice, even locusts might have no natural predators in an environment and grow to be a nuisance. Eventually Oy animals have their own counter revolution and grow fast enough to catch the R animals but Y predators are still too slow, this leads to an Iv-B ecosystem where both explode in numbers like a bubble. The percentage then of Ro and Y animals becomes low in the ecosystem until eventually the instability of this Iv-B predator prey relationship means that Oy becomes too fast for R and overeats sending their numbers plummeting and then Oy starves again like the bust after a bubble. This means that Ro and Y become the main predator and prey relationship again, the increased amount of V leaves and grass for them to eat means that Ro numbers grow and Y predators are doing well again. In evolutionary terms this is a stagnant situation because Ro and Y animals don’t need to change much, they have a war of attrition rather than having to have a revolution to survive. This imbalance continues until more O animals evolve, in some cases this is man where he becomes a shepherd of Ro herd animals and protects them from some predators in exchange for eating some of them. He domesticates Oy wolves into dogs which help him to defend the Ro herd, they act like double agents or snitches on their own kind just like O police use Oy petty thieves to snitch on more dangerous criminals. In this scenario Y predators to get around the O shepherds try to eat more R prey and so there evolves this imbalance where random Y tactics like hunting in teams tries to catch R prey that use speed and deception, this is how for example the Y tactic in war of team based attempts to catch secretive and deceptive terrorists and insurgents evolves.

In the same way the evolution of O animals moderates the food chain, for example the Y-Oy predators in Africa also evolved cheetahs, crocodiles, leopards, foxes, wild dogs, and civets. These can also attack and eat each other in some cases. With Ro-R prey there are gazelles, impalas, buffalo, ibex, birds such as flamingoes attacked by hyenas, monkeys, zebras, Wildebeest, warthogs, etc. This complicates the Roy food chain and moderates the swings from V-Bi and to Iv-B and vice versa, for example Y lions might sometimes eat other predators but also a lion might sometimes be cornered by the other predators. A civet might prey on smaller animals and be attacked by larger ones, when there is a shortage of R gazelle for example because of drought Oy hyena might attack these O civet which could tide them over until the R gazelle numbers rebound. Some chimpanzees can feed on other monkeys or small animals but in turn can be eaten by predators, this could be how humans evolved as O shepherds to defend their food and avoid being eaten themselves.

The same V-Bi and Iv-B swings occur in Roy societies, for example an economy might evolve a strong Y dictatorship which confronts a Ro angry population such as the demonstrations in Egypt and other countries in the Arab Spring. This can be because Oy and R relationships have become less important, for example the Oy secret police are run by the Y dictators and keep the R terrorists in check like Oy predators and R prey in the animal kingdom. If there is widespread discontent such as from rising food prices caused by Iv-B speculation then R people team up as Ro protestors and the Oy secret police become less effective and Y measures such as the army breaking up demonstrations becomes more important. Much of this also stems from corruption because of a weak I-O police who are usually corrupt Oy people and Ro mobs who form an unstable alliance. When these demonstration from Ro subside either because of a Y crackdown succeeding or Ro getting changes in a war of attrition then the system might move back to an Oy-R secret war because the Oy secret police can now control the country better. The Y army is less effective in this situation and gets less funding, this is also like the increase in funding for secretive Oy policing against terrorists in the US and Europe in the Global War on terror after invading Iraq and Afghanistan as Y largely failed. The Oy secret police make Ro people realize they are too exposed as a mob because some of them get captured and tortured or killed, they then become more like R terrorists in cells hiding and still plotting. This is like after 9/11 when Al Qaeda started off as an angry Ro association through Moslem countries but as they realized they were exposed to Oy Drone attacks and US special forces they became more R and restricted their communications to ones that could not be intercepted electronically.

These Oy-R and Y-Ro changes from randomness to chaos and back again occur in global economies in waves of different kinds of crime and corruption when I-O policing is weak, this is why there was so much Oy-R fraud in the lead up to the GFC whereas at other times and places there are wars of attrition such as between unions and management in the 1970s causing wage price inflation and stagnation. However the relationship between Roy and Biv in this way is more complicated than this, the fluctuations between the 2 was described in my first Aperiomics book. Basically these fluctuations in Roy can be caused by changes in Biv, and also vice versa. For example the R animals in Roy might expand in numbers because rains make V leaves grow so this links the fluctuations in the Roy change to the changes in Biv plants. With the rains there are more Gb resources and so the B roots of plants can use more nutrients, also new B roots of seeds sprouting have their chance to grow.

These can be Iv-B plants that quickly grow and seed like weeds, V-Bi plants like grass that are stunted but very resilient and more balance plants such as trees and bushes with stronger I trunks. As was mentioned earlier there can be battles between the Iv-B weeds and V-Bi grass, most people would have seen this in their own lawns along with balanced I trees and shrubs growing. As these plants grow then the R animals increase in numbers looking for food, they might tend to look for V-Bi grass which balances their chaotic Oy-R nature with the random growth of V-Bi. This mix of chaos and randomness is unstable because there is no I-O policing in this interaction and so R animal numbers can sometimes grow too much or decline leading to grass sometimes being overeaten and overgrowing. Grass overcomes this problem by growing from the bottom of its I trunk where the Bi reserves are and so overeating rarely kills it. Also when it overgrows it just stops growing rather than evolving into a tree. So this moderates the fluctuations of R animals and stops them damaging their feed supply too much. This is like the modern welfare state where payments allow R people to become domesticated by not having too many offspring and taxing the system because then benefits are reduced, it also means that in good times for Biv when R people are decimated by crime or war or even become B having jobs the welfare systems is less used and can accumulate reserves such as with old age pensions when people die more from war and disease.

The Iv-B plants are more difficult for R animals because they also grow chaotically and so they might find some and easily overeat them causing their numbers to collapse chaotically leaving them starving. This however also makes it easier for V-Bi grass to overcome the weeds as they collapse, growing in their place. Iv-B businesses are like this, efficient at getting to fleeting resources but vulnerable to Roy crime as it can quickly make businesses like this collapse because they are always competing with high leverage and slim profit margins. Getting hit by a small crime wave then can collapse many businesses like this on the edge. So R animals can make these Iv-B plants grow more chaotically, for example they might have a revolution where they create a poison or thorns which makes R animals shun them and they might then grow while grass gets eaten more and loses ground to the weeds. Over time the R animals might have a revolution in being able to handle this poison such as by eating clay to neutralize it or developing tougher skin to handle the thorns and so the plant revolution is neutralized by another revolution. This is like Iv-B businesses who respond to R thieves by hiding their money which is periodically found as these countermeasures are overcome leading to a continuing process of deception between them.

With this rain then the B roots grow forming different kinds of plants, next these nutrients are concentrated together in the Bi part of the plant where the roots connect to each other like a team. This part is weaker in Iv-B plants like weeds as they don’t want to store nutrients but rather grow quickly, seeds, and collapse. V-Bi plants like grass want more reserves here to be resilient and balanced I plants like trees and shrubs want somewhere in between the 2 extremes. This is like the Bi community forming from isolated B farmers as they start to trade with each other and act as a team to defend themselves against R predators like secretive thieves stealing horses or raiding grain reserves. They might form vigilante like patrols to randomly check on these so their random nature acts as a balance with the chaotic deception of these thieves because randomness will eventually intersect any deterministic strategy. This is like how randomness on a Roulette wheel will eventually defeat any betting system. As these Bi communities evolve then R predatory thieves tend to form into Ro gangs to have a war of attrition between them though more usually there develops a symbiotic relationship where the Bi community tries to give them food in exchange for protection and peace while the Ro community tries to dominate them with threats of crime and war. This then is a conflict over which system dominates, wither one based on crime and scarcity of resources like Roy or one based on transactions and abundance of resources like Biv. This ultimately can depend on the amount of Gb resources, if the area has poor soil and rain then Ro animals like buffalo might attack these Bi strong plants like grass and occasionally overeat them leaving a dust bowl. In an area with better soil and more rain the Ro buffalo might rarely overeat the grass and so it evolves with little effect for giving this food freely. Also the plants get something back because the Ro animals deposit the nutrients they eat as manure which becomes humus again. The plants then lose little but time and energy, time to regrow after being eaten and the energy they captured from the sun which enabled them to grow and which then powers the Roy food chain as predators eat prey. Plants then generally lose little unless they are eaten to extinction, in the same way a Biv system if wealthy enough loses little from crime because Roy tends to fertilize the system. For example Roy criminals might steal some goods but these usually get sold back into Biv, money from Roy criminals ends up back in banks and is reloaned while people hurt in Roy attacks get usually healed in the Biv health industry and have insurance just as plants regrow after being eaten. So far then as the rains have increased they have caused chaotic growth in R animals which has the effects on the food chain described earlier and also increases in the numbers of Ro animals like buffalo who might also be causing Y predators to increase in numbers.

In a growing economy then the Bi communities forming from B miners and farmers teaming up is causing R thieves and Ro gangs to attack them and they are then either paid off with supplies and domesticated or these Bi communities are sometimes robbed too much such as of seeds and cannot replant causing them to collapse. These R and Ro thieves then start to create their own food chain where other criminals prefer to attack them as a better target than the farmers, this moderates the numbers of Ro-R thieves and allows the Bi-B communities to have some breathing space. It will also eventually evolve O police who sit between Ro-R and Y-Oy moderating some of the crimes between them and preventing some wars. The situation so far might be like colonists in the US soon after it was discovered, the Ro-R can be Indian tribes or sometimes other groups of colonists who found it easier to prey on farmers and miners than to work themselves. In some cases the Bi-B community develops a stronger I marketplace, this happens less with B farmers and miners who survive against the Ro-R thieves by hiding their location but this also restricts their trading opportunities and chances for long term growth. They might then like Iv-B plants find small deposits of minerals and mine them before leaving and exposing where they are, also they might make secret farms and accumulate grain before leaving. So in response to Ro-R interactions some farmers and miners become secretive and deceptive as B by hiding what they do, others become Bi communities by being very open about it and trying to negotiate with Ro-R while others adopt a middle strategy with some secretive B farmers trading with B communities. This third version is more balanced likely to succeed because the Bi community can protect B against the effects of R thieves by allowing them to store and sell the proceeds from their hidden farms and mines. This allows them to have random stability against their chaotic situation and still allows them to grow and collapse exponentially. The Bi communities also benefit because if they get attacked too much like being overeaten by Ro-R animals they can disperse and become more secretive until the Ro-R thieves moderate their behavior. So this allows Biv communities to grow by either being deceptive and fast as Iv-B, slow and stagnant but resilient as Bi or combining the 2 strategies as balanced I.

This third option then is most likely to develop an I marketplace where at first B and Bi farmers and miners might buy and sell, if there are abundant resources the Ro-R thieves might get paid off in exchange for not destroying the market by taking too much. If the resources are scarce then the Ro-R might periodically raid and destroy the market, this is like Ro-R animals sometimes overeating the I stalks of plants and so only allowing R weeds and Ro grass to survive. This then is why some areas are only grassland because animals eat those that stick up too much like the saying about tall poppies being brought down. If the resources are abundant then these I markets will attract the attention of the developing O police who might try to protect them, for example if Ro-R thieves attack them then they might contact the O police who negotiate that they don’t take too much in exchange for the I market paying the police. So this evolves a relationship between the O police and I markets, when resources are abundant then O tends to get enough out of this but if they are too scarce then the combination of paying off the O police and still getting raided too much by Ro-R thieves can destroy the market and they can revert to Bi and B communities. This then is why some economies become Roy and others Biv with a strong I market economy, it also shows why it often futile as Bremer discovered to try and make a market economy in an area with scarce resources like Iraq. When this makes the I market too hard to grow this area might become fixed in a relatively wealthy Bi-B economy which is left wing in philosophy, this can be why some economies naturally tend to be socialistic or even communistic. Their people evolve under this system and since there has been little I market influence in their evolution the markets tends not to flourish there later even if resources become more abundant. This is the problem in bringing a market economy to places like Russia and Afghanistan.

So far this is like new Gb resources found in an economy that has some Roy and some Biv areas, for example parts of South America with minerals. In some cases such as with gold this can create too much Ro-R predation and so these Bi-B economies collapse and people can be driven into hiding as B or more stagnant Bi communities periodically raided for the gold they have or more likely they don’t try and accumulate minerals at all. Then the Ro-R thieves might just directly mine it themselves and form their own Bi-B communities which are dealt with more moderately by overseas countries perhaps because of racial ties and investments. This is like countries such as the Congo being exploited so much for rubber that people often retreated in to stagnant Bi communities being raided for slave workers or hid in secretive farms, however the Belgian invaders often formed their own Bi-B communities and so were not attacked by their own race. The same also occurred later in the late 20th and early 21st century in the Congo with mineral supplies such as Coltan and Uranium. This picture becomes more complex though because as will be seen these Roy raiders are often Y-Oy on Bi-B communities as will be seen.

So some areas develop I markets and form alliances with O police, then the economy is developing a Ro-R sector of thieves held down by O police as well as Y-Oy stronger and faster criminals who prey on Ro-R criminals. If the economy is very wealthy then most Ro-R thieves would just become Bi-B farmers and miners because it would be easier to do this than to steal and rob. Then O police would be less needed to protect the growing I markets and the economy is less crime ridden, this is like plants evolving where there are few animals and gradually growing into taller plants such as tall V-Bi grass and shrubs, fast growing Iv-B shrubs like large weeds, and balanced I plants as trees. If the resources are scarce then the forest evolves into grassland, but this situation can also change if resources themselves change chaotically or randomly. For example if the rainfall changes randomly but has a normal distribution then Bi-B communities might become more Bi as they use stores of grain to compensate for lean years, B farmers would do less well in this situation because they would keep collapsing for the lack of grain reserves caused by their competing with each other and keeping grain prices low. R thieves would also do less well here because they might starve in a drought unless they joined a Ro gang and used their team spirit to share food to get them through these deviations in the weather.

If the weather changes chaotically such as from an El Nino then this favors the B farmers because they might have lots of children and make secretive farms doing well in good times and then starving in a drought. The Bi communities would try to normalize these droughts and eventually run out of stored grain, then they might have to abandon their communities and use the B model. In the same way the Ro gangs would find that their teamwork would fall apart as they would be better off hunting for these secretive B farmers and miners because there might not be enough to steal for the whole Ro gang. They then fall apart, in the same way in a drought Ro herds are at a disadvantage because they might overeat and destroy the V-Bi grass wherever they go and so starve compared to the more versatile R grazing animals. This also causes the Y predators to decline in numbers because they cannot easily catch R prey and so they also decline, in the same way as the Ro gangs break down then the Y gangs that try to steal from them also get less and so they in turn break down into Oy thieves who try and steal from the R thieves who try to find the secretive B farmers. So this again becomes an Oy-R and Y-Ro zig zag in numbers in the Roy animal kingdom but also in this developing Roy society, with these changes the O police often become weak because they formed as an uneasy alliance between Ro gangs and Oy predatory thieves. With the changing numbers of each the laws they develop can become skewed to Oy or Ro depending on who is doing well and so this weakens the alliance, this then can be caused by the chaotic or random nature of the weather or other natural resources.

As these I markets grow then they start to differentiate themselves from other communities who cannot seem to develop their own markets and so they might start to trade in the established markets causing them to become larger towns. This is like in Roy where areas that cannot form a stable O police force tend to become allied with places that do so they can ask for help, for example in Wild West movies an outbreak of crime might cause them to send for Federal Marshals, etc. This is also like before the GFC where there were many different I regulators some who could manage the civil law infractions of the Biv market and others who lost control of the process, for example the SEC did a poor job of this while derivatives were completely unregulated like a Wild West town without any sheriff. In many cases though this did not result in actual criminal activity but trades that would usually have resulted in I civil litigation such as insider trading, front running, pump and dump schemes, issuing Credit Default Swaps while being careless about whether they could be covered in a crisis, etc. The amount of natural resources still determines the continuing evolution of the Roy and Biv systems though here the chaotic and random nature of the rains is mixed because I and O both try to balance chaos and randomness. For example in Biv the evolution and revolutions of the I marketplace cause Iv agents to work there, initially they can work between groups of Bi communities like nomadic traders secretly exploiting the price differentials between products in different areas. This is how the Spice Trail formed from China to Europe for example, it is also the concept of arbitrage where small price difference on different I exchanges are exploited electronically. For example if the price of gold was higher on one exchange then a trader might short gold on that exchange and buy long on the cheaper exchange because the 2 would have to come to the same price. This is where Bi communities tend to normalize prices through transparency, because the secretive Iv agents can see in these open markets the price differences they can make money from moving goods from one market to another. They however are vulnerable to chaotic collapse, for example they do this secretively and deceptively so other Iv traders don’t take their profits but they might arrive at a market to find the prices are suddenly lower because another Iv trader created a glut on the market. This is like slower Iv agents doing arbitrage and missing out on price differences between exchanges or even losing if the price changed too quickly. For example they might short the gold price on one exchange that is too high but before they can go long on the cheap exchange the gold prices go up from other Iv agents. This leaves them with a short position that might not make money now because the pressure on gold prices to go up might make the short position lose money.

In the Roy areas the Oy thieves have grown in revolutionary ways because they find new, faster, and more deceptive ways to avoid the O police and target the R thieves. They might then become petty thieves in the I market like pickpockets or shoplifters causing the alliance between I and O to have police stationed at the market, to show up randomly to defeat the Oy chaos, or even have Oy parts of the O police wait there disguised to catch them in the act. This is how Oy works against itself competitively such as how an O shepherd might domesticate wolves to act as guard dogs, O police have some petty thieves act as snitches on worse criminals, and how the O middle of the food chain evolves in the animal kingdom where some animals are both predator and prey. As the amount of resources varies chaotically and randomly, for example the rain in some areas might vary randomly while another as an El Nino with chaotic floods followed by drought, then this relationship between Oy thieves and Iv traders can change where one might become a thief when resources are scarce and a trader when times are easier. So this breeds secrecy and deception into the Iv agent as well as some moderation and business sense into Oy thieves helping them to do more deals with O police such as plea bargains.

As the market continues to grow then the Iv agents start to have families and because they have the genes of good business as well as occasional additions from different color codes of towns they visit then they become more V talented. For example an Iv agent might marry an I market worker and their children might work in the markets, as a trader or connect the 2 together so nomadic traders have relations in each market they can trust. They might marry into Bi families and so have access to the security these families have with stable random wealth, in exchange the Bi family gets the occasional monetary windfall from the trader as well as supporting his sometimes. In effect then the family forms its own I market with the trader as well as dealing in the larger I markets. The Iv trader might marry into the B farmer or miner family where they both have a rags or riches existence from chaos, this might give the trader secret knowledge of some resources and the B family might have secret knowledge of prices in other towns. They would then form an Iv-B family that could grow like weeds exploiting transient economic opportunities.

Depending on economic abundance or scarcity the Iv trader might marry into an Oy family and so they can exploit criminal or civil ways to make money. He might marry into an O police family and develop a more balanced approach to the law, he would know the civil I market laws and his relatives the O criminal laws and so the family might evolve into becoming lawyers or even judges. The Iv agent might marry into a Ro gang and give them information on where to raid Bi communities or to punish Iv rivals of his in exchange for this information. He might even marry into an R family and use their criminal knowledge of B farmers and miners to instead visit them and buy cheaply rather than robbing them. The different kinds of families can be complex, the mixes can depend on the scarcity of Roy resources and abundance of Biv resources, for example if the resources are scarce the Iv trader might be rare and his marrying into a Roy family more common diluting his more trade based genetic heritage and knowledge. If the resources are abundant then the Iv traders might be more common and their genetic material moves more Roy people into Biv societies. There are many other interactions to be explored at depth, these will be covered better in an upcoming book.

The main interaction in this case though is where V families tend to evolve from the revolutionary successes of Iv traders, for example if they are the few that succeed this concentrates their good genes and knowledge to form a more stable V family, also there can be a Y component to this family like developing a kind of mafia or gang from Oy relations. These V people for example might have looked at goods the Iv agent was trading and saw ways to improve them, they might have purified some spices on the Spice trail, found ways to refine the flour the trader moved between the Bi communities or learned to make a better kind of bread. The trader might get salt from one Bi community and bread from another, then he might take these to his V relations and make bread that tastes better while withholding this recipe from both and this making more money more stably as long as the secret is kept. If Roy thieves try to take this recipe his Y relations get money from this as protection and also chase away the Oy thieves or pay them off. In this way the top of the Biv tree evolves as well as the Y apex predators. When this happens the R thieves learn to try and steal from these V families and in return like Biv plants develop leaves the V families would tend to give them some food as charity in exchange for domesticating them rather than being robbed. If resources are scarce then R thieves might demand so much the V families lose all their wealth, this is like the V leaves of Biv plants being overeaten by R grazing animals in a drought. If resources are abundant then these R people become like a welfare society paid off to stop causing trouble and often then robbed by other criminals in the Roy society though moderated in this by the O police. These R people then can be seen as a contagion in some situations in Biv, for example when resources are scarce they are seen like a plague such as R locusts that wipes out the most talented resources of their community. When resources are more abundant they are seen as manageable but they still try to convert them to be B farmers and miners instead to be more useful, R however can get direct employment from V and become semi nomadic such as spreading in effect seeds like R grazing animals do with eating V fruit. For example R people on this kind of welfare like beggars might attend religious teaching centers like churches and either convert to Biv workers or spread the word for others to come in exchange for food. They then can provide a valuable service for V because B workers are usually on their farms or in their mines and others in Biv have no time or energy for this because of their own work. This is like how R animals usually cost little to Biv plants because they spread seeds and manure or their bodies are recycled into compost when they die. There is also a Y-Bi interaction where Y mafia like criminals are often battling with Ro gangs and instead find Bi communities easier to do business with. If resources are scarce then Y might be like a gang terrorizing these Bi communities, the subject of many Western movies and so the O police try to moderate this by getting a Ro posse to attack them or making a deal with Oy cronies of the Y gang to betray them. If resources are more abundant the Bi communities can afford these raids and often might allow the Y criminals to bank their stolen money and buy property in their communities, these resources are then recycled into Biv society like Roy drug money from cocaine sales in South America finds its way into US and European banks. Y might then want to invest this money by using an Oy petty thief they trust or an Iv agent, these then act like tax havens that launder this stolen and criminally earned money through secrecy and deception so it looks like money made through legitimate Iv trading. To moderate this and get the money back from Y to return to their victims the O police work with the I market lawyers and courts to track this money through Iv and Oy snitches, also tax havens might often be more Iv than Oy and not seek this criminal money for the trouble it causes as Iv tax avoidance involves the O police less often.

All these interactions can be far more complex and random than these examples indicate, they do allow a model for showing how various economic problems such as the subprime crisis grew into the GFC. Usually an imbalance starts from a change in resources available but it can also occur because of a revolution in Oy-R or Iv-B, even when V develops a new way of refining a product or the Y mafia a new criminal enterprise. The changes in resources then usually cause changes in R or B that then propagate themselves up the Roy and Biv colors, but new changes in Y or V can propagate downwards. For example V talent may improve from a mix of revolutionary genetic material from R people and some revolutionary genetics from Iv. Depending on the mix of Roy and Biv in society this can be frowned on or applauded, for example if R people are thought of as a contagion prone to deception and stealing from Biv communities then their intermarrying with V talented people might produce some with revolutionary talents but if they live in the R community they can be persecuted. If they live in the Biv community then their talents and ideas might be traded for profits far more easily. When in Biv then these new ideas in V might be scientific advances, in keeping with the basic model of an evolving society this might be a new way to refine iron. Living in the Roy society this scientist might be seen as a subversive because his talent might be used to be a better thief or to concoct more grandiose schemes such as in finance or swindles though in Roy there might be no easy opportunities to make Biv business with talent except through crime. When this new V invention such as smelting iron ore into iron is created in V, this might be the V family that evolved earlier with R relatives. They then keep this invention secret and so the Iv relatives might buy coal and iron ore secretly to experiment with, then they set up a smelter and sell off the iron without disclosing how it is made. Their Y relatives might see the potential for this for weapons, they start making superior spears and shields and form a more powerful gang and becomes kings. The V people become wealthy and use this for more experimentation on different kinds of iron and the business that flows through their Iv agents causes the I markets that they use to also become more wealthy and so corrupted by the Iv money to favor them in their laws. This is like a modern stock market that might favor those with more Iv money from their V clients and turn a blind eye to some insider trading and front running for example otherwise they might move to do business elsewhere. The Oy thieves that work for the Y mafia provide money from their crimes to Y in exchange for protection, now that Y is stronger with the new weapons they need to snitch on them less to the O police and so O becomes weakened and more like Oy themselves. The result then is that instead of the I market evolving to be biased towards the Bi communities because of the Gb resources it was built on here it becomes biased to the Iv traders because of the refining of V. This is also like in plants where V leaves might evolve to produce much more energy and so these plants grow faster, they might then be biased in their shape to favor more nutrients onto the leaves to maximize this energy collection. So a tree might grow to be large on top with leaves and smaller roots and I trunk though this has the danger of making it top heavy and easier to collapse. This is in contrast to the small bushes and V-Bi grass where the bias is on the Gb resources the roots collect rather than trying to get more energy with more leaves as the R animals would just knock them back down to size. So this is an unstable situation between R animals and V leaves, if the V leaves do well then a plant can become a tree that only R birds can graze on. If it evolves less efficiently in V then it becomes downtrodden and at the mercy of R animals as grass or weeds.

Next then this evolution in V affects the Bi community which is more beholden to its V elite now because without the iron they cannot make good ploughs, pots and pans, etc and instead would have to rely on weaker alloys like bronze. In Roy the Ro gangs now have a problem because the Y gangs can defeat them more easily with their iron shields and spears, their anger impels the O police to try to get their Oy snitches to steal some shields and spears to try to work out how the iron is made or how to make weapons to defend against them. They might then have some brilliant scientists in the R community who are treated very badly but might be protected more by working on this problem. If Oy is well treated the secret of the iron would remain but more likely some clues will be traded for money or forgiveness for some crimes and the R scientists with Ro resources might end up rebalancing the power between Ro and Y. In the same way the Bi community realizes it has to pay too much for the iron ploughs and cookware and tries to pay some Iv traders to betray the secret or to spy on the process of making them and report back as snitches. Then Bi people might have some clues and use their B miners to experiment with the iron ore and coal they collect to see if they can duplicate the process. The Biv process then is always similar to that in Roy because the Biv colors are overtones of Roy.

Changes in society can also be generated by Iv, O, or Bi people, for example Iv traders might come up with a revolutionary way to trade between communities as they did in creating the Spice trail from Asia to Europe. In the lead up to the GFC they also came up with the idea of arbitrage to make money, securitization to break mortgages up into tranches with different kinds of risk for different customers, and Morgan Stanley with the idea of Credit Default Swaps all of which made trading more profitable. In the Roy areas Oy thieves can also be revolutionary just like Oy predators might develop more speed to hunt R prey, for example in the subprime crisis Oy salesmen used the new financial innovations made possible by securitization of loans and Credit Default Swaps to make lots of money from poorer R people though many probably knew the loans could not be paid back. This is like Oy predators decimating R prey even though they might realize at some point it was at the expense of less food being available later when this food bubble crashed. In the same way the idea of arbitrage mainly pioneered by Edward Thorp must have made many realize that this boom in profits could not continue forever and so there had to be a correction and leaner times later at some point. In Roy and Biv though the secrecy and deception made anyone with doubts keep it to themselves, in the primitive society however there may have been families intermarried with each other where information was passed and which kept the Roy and Biv economies more stable. For example royal families evolved this way as Y and V to dominate European countries in the middle ages while in other areas Bi and Ro communities of people evolved to give a continent wide resistance to this Y-V rule. Ov and Oy traders moving around Europe at the time would have had families throughout and passed on news like an underground to protect them, the same would have occurred with R and B people who also evolved more socialistic ideas later developed in the French Revolution and by Karl Marx.

The I market also produced innovations that changed society, for example improving the civil laws under which people could sue for misrepresentation in goods and services would have made commerce more profitable and secure. In the same way the evolution more complex O criminal laws would also have stabilized society by making the punishment fit the crime better and so being more of a deterrent. For example if someone made a deal to sell tulips for a certain price in the Tulip Bubble and then prices collapsed then they might try and sue the buyer to complete the contract even though they might lose money on it. The buyer would want to get out of it, in turn he might have on sold the tulips himself and pocketed profits he didn’t want to give up. At the time the I markets decided this contracts were all null and void because these trades had already been ruled illegal, the I market was then very dubious that it would come out well. Many trades then were done in Iv-B where people tricked each other into higher prices with more outrageous claims like bluffs in poker until it collapsed. In Roy many of these trades would have been deceptive and predatory, for example Iv traders in one town might try to buy them at fire sale prices there and then sell tulips to a distant town that thought the boom was continuing. This then might be fraud and the O police would become involved. As I-O policing evolved then this allowed more honest business and reduced crime to advance civilization in many areas, even in Roy areas with a Ro or Y dictatorship some crimes were still forbidden and policed even though the government itself might have in effect been a criminal enterprise.

The Bi community by its evolution has also affected society by its improved teamwork and transparency allowing knowledge to be shared and towns to be planned more effectively. For example debating town plans would allow factories to be separated from residential areas as ore popular on the NIMBY or Not In My Back Yard principle. Sharing information about wages and prices would expose Iv companies charging too much, tricking their customers with defective products, or paying low wages for the same work. They could then use boycotts whether formally or buy a community disapproving or an Iv company to make it change its behavior and also to enshrine some of these ideas into I civil law. In the same way Ro communities helped society to evolve by acting as vigilantes, posses, and neighborhood watches where catching criminals and imposing their own justice would cause O police to do their job better. It would also have allowed the O criminal code to evolve in a way that satisfied the community.

Other changes can be wrought by Gb and G, for example finding more Gb resources would help B farmers and miners to build wealth that grows upward in Biv societies like it does with Biv plants. G resources are not economical for a Biv society such as low grade ore and poor land for farming, this would have been worked in a Roy system such as feudalism where people had to be worked by coercion to build the society. For example criminals might have been used as workers on these public resources like building roads, slaves from wars might have been seen as prey to be worked on jobs that no one would do willingly for the pay involved. Some might do community service because of a crime such as by cleaning up trash around roads, a job that a community might not be able to afford to pay for. In Ro communism people had to work on state owned farms and refusing would subject them to prison or a Gulag. The Y Nazi regime used people from Bi unions they disbanded and replaced with a Roy version of these as well as persecuted minorities virtually for slave labor and built a society initially that outperformed Biv mired in the Great Depression. The problem was that when the Biv societies around the world crashed their Gb resources were worth much less because the infrastructure to process them no longer worked, this meant that a Roy solution of treating resources as publicly owned and to be used by government workers to soak up unemployment was the best way forward such as under Roosevelt in the New Deal.

In these systems then imbalances in the colors can develop for many reasons such as war or crime, invention, arbitrage, evolution, revolution, team actions or actions by loners. For example WW1 was caused by one man assassinating another, Lee Harvey Oswald assassinated John F. Kennedy, and the failure to assassinate Hitler meant WW2 continued longer than it might. In the same way the world has changed because of revolutionary Biv ideas such as inventions and scientific discoveries in Biv or such political ideas as R communism by Karl Marx and Mein Kampf explaining Hitler’s ideology. Chaotic events then can have huge effects that alter the course of civilizations, they are like the butterfly in chaos theory that is said to be able to create a hurricane by flapping its wings in the right circumstance. Because the GFC was mainly Iv-B it was probably produced by the exponential growth from various discoveries that either matured into healthy Biv industries or in this case created chaotic bubbles and collapse, sometimes it can be both. For example arguably the GFC was created by the invention of Boolean Algebra that led to the idea of a computer, the Babbidge attempt to build a computer, and then the integrated circuit whose effects changed society so much and by leading to software trading created an environment where such a collapse could occur in electronic markets. From this came other Iv-B innovations that also led to chaos in this way, for example Richard Noyce’s work on computers, Bill Gates on creating a world wide system of personal computers, the Black Scholes formula to calculating derivatives as well as many other algorithms that made up computer driven trading systems, the innovation of Credit Default Swaps, the creation of junk bonds that led to subprime mortgage bonds, the concept of tranches in these bonds, the use of the Gaussian Copula mistakenly believing that an algorithm meant to measure randomness could predict the chaos of pricing bonds, the many kinds of derivatives and Collaterized Debt Obligations, and so on. Tracing these innovation then shows that collapses like the GFC arise by the exponential nature of scientific discovery itself which forms a pattern of Iv branches of different related inventions and B roots of how these ideas came together into new products. Such a process has been occurring over centuries since for example in the 12th century in Spain where Aristotle’s book on Logic were rediscovered and translated for the people in Europe. This growth of logical thought let science start an exponential growth the momentum of which propels humanity through a competitive process usually based on secretive and often deceptive scientists and businesses trying to beat each other to a Journal paper or the market. The changes it is causing are creating fractures in society, this was first outlined by Alvin Toffler in the book Future Shock where as society increased this speed of change people would become increasingly disorientated by it. In the 1970s these changes were already causing serious problems in society, in the first decade of the 21st century they are arguably tearing societies apart in real time and the resulting Iv-B chaos is impossible to predict. To attempt to solve the economic problems of the GFC then this growth has to be examined, in an upcoming book the impact of new technologies will be examined to try and give some clues as to where this growth is heading. However Artificial Intelligence is improving so quickly that it is now possible that there will be no complete recovery from the GFC before computers in effect match the intelligence of humans in which case perhaps our ability to shape Iv-B events will be gone for good as machines pursue their own revolutions despite our attempts to I-O police them.

The V-Bi view of history is of evolution rather than revolution where concepts of normality and teamwork prevail and deviates are suspected and often persecuted. For example the Catholic Church in the Middle Ages set standards of behavior that punished those who deviated from it, polygamy and divorce were arguably sins along with homosexuality because few people did them rather than following the consensus of the normal majority. In this version of history there are periods of stagnation and growth that follow a fairly constant path and so recessions and bubbles along with inflation and deflation, employment and unemployment, wealth equality and inequality, etc are just deviations from this. So far these have tended to reverse themselves over time, the problem is though that both these views of history are right from their own viewpoint and so they both leads to separate schools of thought that conflict with each other. Sometimes this normal view of the V-Bi world is used to be against deviant behavior whether in individuals, companies or economic data while at other times this normality is something to be against. For example Karl Marx wrote about the Industrial Revolution which was Iv-B, Iv innovative companies and B workers constantly slashed each other’s profits and wages to collapse or regrow in a way that seemed unsustainable. To Marx this system was deviant behavior to a normal society, however Schumpeter took the opposite view that this process of creative destruction was necessary for a society to grow and that it would tend to return to normal after periods of change like this. Both tend to be right in their own way because history is a mix of chaotic and random events because these events are either independent from each other and thus random, dependent from each other and thus chaotic, a mix of each other and so I-O, or some unknown variation of these and so uncertain.

In many cases this history is of the growth and collapse of different Empires, the Roman Empire for example created a strong Biv civilization based on predatory Roy invasion and tributes from other countries. This flow of wealth into the Empire then created an abundance of resources that relied on a strong Y military to continue. In the primitive society analyzed earlier this can be like where the V talented people work out how to make iron and then help to create a Y dictatorship, with their domination over other colors in Roy strength and Biv commerce they carve out an Empire dominating the other colors, then invade and dominate neighboring economies militarily in Roy and commercially by offering a superior iron for them to buy. However because they might only sell a small amount of it they can get a high price and also not let their potential enemies have enough to equip an army with. This is like the US and Europe today selling arms to other countries but not sophisticated enough to threaten them with. In this process then the primitive economy is now Y-V dominated from this discovery, however a neighboring area might be Bi-Ro dominated because they made few V discoveries of inventions or of Y new ways to fight wars. So they might still have I markets and O police and the Iv traders might trade between the two, as Y-V and Bi-Ro because of their dominating colors. To extend the analogy we can add 2 other areas as being like separate economies, Iv-Oy where these 2 colors dominate and R-B. Then there are neutral countries as I-O.

The Bi-Ro economy does not know how to make iron but might for example not be so easy for Y-V to conquer perhaps because they are much larger. In wars between the 2 then Y-V tends to win more battles with its superior iron spears and shields but then loses the war of attrition because enough of its soldiers get killed for it to run out of men. Fortunately Bi-Ro is a defensively based country because it is more prey than predator, while it is not as sophisticated was Y-V it is some ways more wealthy because their Y-V upper class has no products for them to get rich off and impoverish the lower classes. This then is more like the Soviet Union that has rejected being dominated by Y-V capitalists and imperialists but is threatened by the Y-V Empire near it much like the US and Europe. In Y-V then there is a problem because they also fear that the larger Bi-Ro might invade them one day because they have come to believe that the Y-V upper class should not have so much power and wealth, they also believe that the Y-V Empire is holding back its iron to profit from greed and should hand it over for the cost of the iron ore and coal ingredients in it. This is like the Soviet Union believing from Marx that capitalism should serve the working class with its ingenuity, V scientists and doctors for example were not paid much higher wages in the Soviet Union despite their extra talent. Between the 2 then there might be a war of attrition if they fought, this could also be Y-V as Nazi Germany and Bi-Ro as Russia under Stalin. At the beginning though they are uncertain of each other’s strength but just as Y is a predator and Ro prey their Roy sides believe there can never be peace. Y thinks of their territory as belonging to them as the stronger ones much like Y predators think of Ro buffalo as being on their territory. Whether there is war will usually depend on whether resources are scarce as G or abundant as Gb, if they are abundant in both countries then they will tend to do more trade and their Roy people will be much smaller and less influential. For example the Y military would not profit much from invading other countries compared to acting like a military industrial complex at home, it being more profitable to sell some weapons than to use them. If both countries have scarce resources then their Roy areas will be more influential and their Biv businesses much more vulnerable to internal crime as well. This would make it more likely for Y-V to have a Y dictator like Hitler and for Bi-Ro to have a Ro dictator like Stalin. War then would be a continuation of the predator and prey system of getting resources like in the animal kingdom. If Bi-Ro is wealthy and Y-V is poor then Bi-Ro might have plenty of weapons but would prefer to trade with Y-V or even to give it aid and tribute rather than fighting, this would be like some countries on the edge of the Roman Empire paying tribute in exchange for either a light handed Roman government or freedom. Libya for example had abundant food and could have a favored place in the Empire for providing it to Rome, Germany for example was much poorer and fought the Romans rather than pay tribute.

If Y-V is wealthy and Bi-Ro is poor like the more wealthy US and Europe compared to poorer Warsaw Pact countries then Y-V can afford to defend itself easily and tries to entice Bi-Ro into more commerce to try and encourage the Biv parts of its governments to open up their economy. However because of the lack of resources the Roy dominated Bi-Ro government doesn’t want to lose its control over the economy and become an impoverished Biv democracy like for example Italy or Spain at the time, Italy had a strong Ro communist party and was in danger of becoming Roy dominated while Spain had had a strong Y fascist dictator in Franco and was struggling to maintain a Biv democracy. Much of this situation then depends on the resources of the different countries, arguably the shift to Biv and democracy in most of these occurred because of improved Iv-B technology from science but this was not known at the time that such discoveries lay in the future.

There would then be 2 other countries, Iv-Oy and R-B which are both dominated by chaotic colors. Iv-Oy is dominated by a right wing secret police and can sometimes act as an agent for Y-V, for example client states of the US and Europe against communism in the cold war such as Somoza in Nicaragua or Pinochet in Chile, or countries sympathetic to German Nazism in WW2 such as Hungary, Croatia, Spain, and Vichy France to some degree. The differences between Y-V and Iv-Oy can be slight in some cases and at different times, I am using these mainly as examples though for example each Iv-Oy country might have acted more aggressively as Y-V at times to its own people or weaker neighbors. These countries were not as powerful militarily as Y-V but with a strong secret police or death squads as Oy they could keep order while Iv agents made money with secrecy and deception. For example when Germany dominated Europe in WW2 Oy and Iv agents in each occupied country would act as allies in their government helping to get resources from there to Germany and to keep fighting the war. In the book Confessions of an Economic Hit Man Perkins describes how these client countries of the US were looted in some ways for the Y-V Empire while the CIA and local intelligence agencies as Oy watched for R communist insurgents in the B workers.

If Iv-Oy has an abundance of resources then the government might be more dominated by Iv agents rather than by Oy secret police and criminals, its relation to other countries will usually be determined as to how much in resources they have. For example if Y-V is wealthy like the US and Europe then this Iv trade will dominate rather than military occupation or Oy criminal meddling in their economy for profit. For example Britain might be Iv-Oy like this will mainly a trade based relationship with the US and Europe and having had earlier its own Y-V British Empire. Now it might also act as Oy militarily such as joining the US in Iraq and Afghanistan and being a part of NATO. If Iv-Oy is poor such as Chile in the 1970s then it might become dominated by someone like Pinochet more like a kleptocracy to expropriate wealth for US corporation and the previous government having been overthrown by the Oy CIA. Iv-Oy would also have a relationship to Bi-Ro, if Iv-Oy is rich and Bi-Ro is poor then Bi-Ro might try an R communist insurgency there without much luck because B workers already do well enough. Iv-Oy might also do some trade with Bi-Ro to try and dissuade it from supporting this insurgency, for example Hong Kong was like a client state of the West and much wealthier than Bi-Ro China. Instead of trying to fight they helped China with loans and gave it a useful agent in its dealings with the West and ultimately reunited with China. If Iv-Oy is poor and Bi-Ro is rich such as in Yugoslavia after the death of Tito where Serbia was Iv-Oy and Bosnia was Bi-Ro, then Iv-Oy might try and get resources by a secretive and deceptive attack and then there can be a stalemate or an ultimate loss after Bi-Ro manages to defend itself with superior resources as happened with Bosnia. There are many other combinations which must be explored more thoroughly in an upcoming book.

Then there is another country R-B which is chaotic and more based on mining and farming its natural resources. It has few defenses and so like Iv-Oy must maneuver between larger countries such as Y-V and Bi-Ro. This can be like the Congo when exploited by Belgium or like most Empire colonies as Y-V like to try and dominate R-B countries just as Y lions for example might try to catch R gazelles. This is one of the most unstable color interactions and is responsible for most protracted wars as well as economic exploitation and misadventures. If R-B is wealthy then it might be more secure because its resources can fund a small army but also because it can form economic ties to other Biv nations that would probably be defended in war. For example the countries of the British Empire were often like this and were defended again the invasion by the Y-V Japanese such as New Guinea. If they are rich and the Empire is rich then the interactions will not be too exploitive, they will be like B workers in a balanced economy that receive low wages but sometimes bonuses and growth. If they are poor and the Y-V Empire is rich then they would probably have an R communist or similar government such as El Salvador at some point, the US as Y-V tried then to use economic incentives to woo them back to Biv capitalism as well as a secret Oy army in the Contras formed from nearby Iv-Oy client countries. Their relationship to Bi-Ro countries can be varied, if they are poor and Bi-Ro is more wealthy then they might receive regular handouts like the Soviet Union to Cuba. If they are rich and Bi-Ro is poor such as R-B being Vietnam and Bi-Ro being China then they might be invaded and have to defend themselves like R North Vietnam did in taking over the South with deception and terrorism.

Then there are I-O countries which are usually neutral and often act as brokers and buffers between other countries such as Switzerland, Lichtenstein, Sweden, and some tax haven countries. When they are wealthy then they can act as I markets especially for finance though countries such as Singapore and Hong Kong can be major points of trade as well. Often they are relatively weak and so try to take the middle position between their neighbors, Cambodia for example tried to do this in the Vietnam war between the communists in North Vietnam and the US in South Vietnam. Often this can be a difficult tightrope to walk as Norodom Sihanouk found in Cambodia. If they are rich then usually they will be defended by both sides as valuable such as Switzerland in WW2 and Hong Kong being well treated by the Bi-Ro Chinese and the Iv-Oy British trying to balance China’s demands with a way to exit from running it.

The same can also occur inside economies where some areas have political and economic differences, for example the R and B states in the US. In terms of Aperiomics the actual colors would be B for the Democrats and V, close to R, for the Republicans. This creates a dynamic between states, suburbs, even neighborhoods according to how people vote. For example in election the coverage often shows small areas might go for the Republicans as V or V and other areas as Democrats being B or B. Even families might have some left and some right wing people in them, this is because with mixed genetic histories some become Iv and V businessmen while others become B and Bi workers. This can also be because of family businesses that evolved and so some had to be workers and others to run the business, if they did not evolve different abilities then the business would probably not survive. In the example of the primitive economy earlier the Bi communities developed I markets in some areas, this would be because some of them evolved genetic combinations either through their genealogy or other factors such as epigenetics to work as Iv traders and V talented people. However this is not so hard to do in some ways because some people are chaotic as they tend to be loners and others random as team players, a Bi team player then might be able to form a V team with other members if they happen to have some extra ability or even if they happen to discover a new idea like making iron. Once they do this then the money they make will tend to draw other people with ideas to them and so they will interbreed and start forming a talented community. For example once they started making iron ore then this might attract people who could make artistically shaped pots and pans or even ornate shields and spears. Then others might be attracted to paint them, develop thinner varieties of these, how to handle the iron rusting such as rubbing it with oil, and so on. The Iv traders can take the cunning of B prospectors for minerals for example and use this to prospect for business between markets as the principle is similar as is the competitive situation and the need for secrecy and deception. V-Bi then is composed of 2 groups of people who have a lot of similarities though they sit on different sides of this I-O political fence as are Iv-B.

So these different color codes can arise in families just by people taking on different roles in a business, also a B or Bi family might have aspirations to be wealthy one day and so might train their children to be doctors or in another profession. This can allow them to rise in a Biv tree as specialists in different branches of medicine, as they work at this they are more likely to intermarry with other families with the same ambition and aptitudes and so families with medical talents might form. Over time then these different families have different political and economic theories based on their color code and so vote in elections in these intricate patterns in an electorate. This relates to the Iv-B GFC and the previous V-Bi stagflation in the 1970s because the ideas of these people drive who is elected and thus the laws that are made, also they pressure the I-O police to bend to the Iv right or Bi left on some issues either by interpreting the law or in some cases turning a blind eye. So for example a V district evolves from these working class B and Bi families and then tends to vote their interests for lower taxes, at the same time Bi unionists settle in another area and tend to vote for higher taxes on the rich and more union protections for them. B workers settle in a different area and are more libertarian to avoid the smothering effect of this Bi team domination and vote for candidates who leave them alone more. Iv agents do the same, they want more laissez faire capitalism to get at B workers for business because they hope to make more money this way instead of being impeded by too much I-O policing which they see as red tape and too many protections to get people out of profitable sales. Other areas might have independent voters, police, lawyers, etc who sometimes want centrist policies to prevail and their votes might swing the overall election.

When an Iv-B boom is going on then this affects the different Iv-B people in various electorates who want to keep it going, the Iv people are voting for candidates that will deregulate more and the B workers were also benefitting from these revolutions in finance to give more subprime loans to the poor. So these extra votes as well as complaints from voters to their politicians would tend to swing the governments away from I-O policing and allowing this deceptive business of Iv misrepresented loans to B workers lying about their income. Since the independents in the US were much weaker in their voting impact at this time then this led to allowing more Iv-B extremism but also in some areas more V-Bi team laws such as letting more V companies off with antitrust prosecutions and George W. Bush increasing the Medicare drug benefit for Bi people. Some of this may have been caused by Karl Rove’s calculation that inspiring the V-Iv base of Republicans could allow them to ignore the centrists more, this led to them being disenfranchised to some degree because the Bi-B left was also highly polarized and not inclined for compromise either. The result was Iv-B and V-Bi areas trying to grab what they could and fracturing the economy into these 2 forces rather than concentrating on I-O policing of the financial industry and compromising on budget problems.

To try to fix a situation like this may well be impossible because the different pressure groups in the absence of strong I-O policing just get politicians to give them what they want or elect other politicians who will give it to them. In the 2000 and 2004 elections in the US for example no one was really clamoring for more I-O policing of the financial industry because of Iv-B and V-Bi issues that were economically wasteful when pursued this way. A good example of this was the rise of the Oy-R war against terrorism by secretive surveillance of internet and phone communications along with drone attacks, rendition, and secret prisons. Then there was the Y-Ro war against armies in Iraq and Afghanistan but as said earlier this war produced more angry R people to act as terrorists feeding the Oy CIA and Department of Homeland Security budgets and then inspiring larger Y-Ro wars with more troops. This had already grown in the US to the largest military force in the world with no substantial enemies to fight, this also was separated into a Y-Ro force built to fight Ro communism and an Oy-R with many branches of secretive intelligence services to fight R communist insurgents in many countries. When the cold war ended the disconnect between these 2 strategies generated more enemies such as V-Bi Empire polices created discounted freedom fighters perceived as terrorists causing an exponential growth in Oy intelligence agencies. Then there was the perceived threat of Y forces around the world such as US aircraft carriers that caused some countries to become more belligerent in response such as Ro Iraq, Iran, Syria, Venezuela, and so on. This military disconnect has grown so large, as it must without I-O policing, that most of the world’s poverty which fuels R terrorism could be fixed by the money spent on arms. This is not to suggest any changes to this, the situation is just what happens with an Iv-B and V-Bi disconnect economically paying for an Oy-R and Y-Ro disconnect in trying to protect Biv countries from Roy ones.

In the same way the growing Iv-B and V-Bi disconnects grew in the US economy and no doubt also in Europe, in this book though the US is mainly analyzed because of available information not because it is necessarily more at fault. For example in the Clinton years his attempt to triangulate these V-Bi and Iv-B pressures in politics led to trying to give each what they wanted, the economy was deregulated more in Iv-B such as by making derivatives completely free from I-O policing. This growth in the financial bubble led to more government tax revenues from the economy being hollowed out with leverage and a short time of balanced budgets followed by a bust and sharply higher deficits again. Also the welfare state became more Iv-B with a more limited time people could receive this support, this was intended to make workers more B and to compete for lower wages with each other and to look for work in more innovative ways. The competition with Canada and Mexico also increased in Iv-B with the NAFTA agreement, at the same time Iv-B free trade also grew and this process caused many Bi union jobs and V management positions to be cut in favor of Iv-B related profits. For example while the more staid V managements did not make much more money or were even fired when companies were taken over and stripped of their reserves the CEOs and a few others at the top of this competitive and deceptive process made astronomical amounts of money.

At the same time though V-Bi politicians got much of what they wanted, for example earmarks in the Congress increased as like a form of team cooperation with groups in the community politicians paid for all kinds of pork spending to buy them off. Defense contractors got large increases in Y-Ro kinds of weapons for large scale team based wars even in the absence of an enemy for them such as more bombers and aircraft carrier groups. V groups pushed for an end to the estate tax so these aristocratic wealthy elite could pass more money on to their families for rent seeking. Fannie Mae and Freddie Mac received more permissions to grow and control more of the mortgage market, in return they showered campaign donations on Bi-B Democratic politicians. Many state and local governments flush with tax money from the Iv-B boom gave extra rises to their Bi worker pension funds and then in the tech bubble crash found they were underfunded. Large V oil companies were favored with tax breaks and often support from the Y-Ro aircraft carrier groups to intimidate other economies into providing better deals for them, this then fuelled more R terrorism there and led to the growth of more Oy-R intelligence agencies to stop them.

The same occurred at a state and city level in all kinds of businesses as well as government, for example Iv-B computer and software businesses boomed from the exponential growth of computer innovations, this usually led to more B workers as software programmers acting secretly trying to come up with new code, inventions, internet startups, etc and also working on contracts or in companies where bonuses and stock options could be large and mediocre performance punished by getting fired. Iv bosses tried to build small computer sales businesses and software development in companies that either grew spectacularly and where bought out or crashed for lack of sales, this process was financed by angel investors and venture capitalists looking for the next big thing to grow huge and make them a fortune while many smaller investments would make a loss. At the same time other businesses were trying to consolidate their Bi union rights with higher wages and pensions while their V management was trying to featherbed more layers of bureaucracy. For example companies like GM and steel producers were caught between the Iv-B innovations making more money, Iv-B free trade undercutting their markets with cheap imports, and the V-Bi influence they had with the government allowing them to protect these union gains and often get V subsidies from states to build car factories there because it led to more money in their local economies. V-Bi Companies with a strategic aspect were given more support such as aircraft manufacturers like Boeing getting military contracts to keep them afloat. Often they were also subsidized because a V-Bi politician might have factories in their electorate and so would lose votes if these factories close or didn’t get enough government orders. They would also try and get as much V-Bi pork as possible for these districts and so create uncompetitive and wasteful allocations of resources leading to economic stagnation in some areas.

The same disconnect also continued to grow with social issues, for example abortion became a more polarized issue as the I-O police and courts lost ground to politicians in the US trying to legislate for various interest groups. In Aperiomics abortion tend to be favored by Bi-B and abhorred by V-Iv because Bi-B people tend to evolve by not having offspring that are unsuitable to them, for example if they were attacked by Roy gangs and when were raped then the community would get the expense of raising children for the invaders. Because Bi-B people are like Ro-R in Roy they tend to be preyed on sexually as well as economically and so just as they avoid getting eaten or being the victim of a crime in Roy they avoid a bad business deal which can include having a child they see as bad for them. V-Iv has the opposite view because these children in Roy can come from crimes such as rape, for example in wars it was common for Y-Oy soldiers to rape women and occupy countries spreading their genes in it. The evidence for this is extremely common in the world such as for example those with Viking genes in Great Britain from the many invasions and raids. Once these offspring become more common in an occupied or raided country then this is like in effect taking it over to become more like the invaders, for example Northern Ireland became more English this way as well as by immigration and led to some voting there to remain part of the United Kingdom and others to want to become part of Southern Republic of Ireland. Because Biv colors are overtones of Roy ones this same dynamic is repeated there but with more consensual sexual relationships rather than Roy crimes, sometimes for example V-Iv people might have children because of their extra money and position such as aristocrats and businessmen having mistresses and so this created a conflict where the Bi-B women might want to have an abortion because they were not married while the fathers wanted their seed to grow into new V-Iv families even if sometimes illegitimately. In many situations like this then there developed a tendency for V-Iv people to want to see these Bi-B babies grow up because some of them might become talented and successful. Bi-B people having to bear the expense of perhaps being raped or pressured economically into sex often then did not want to or could not afford to pay for this. This then created a strong V-Bi and Iv-B disconnect where some Bi communities would angrily defend their rights to abortion while V groups would openly and angrily be against it. B people would tend to be deceptive about it, having secret abortions whether they were legal or nor throughout history while the V opponents to this tried to uncover this and stamp it out much as Y armies try to uncover and stamp out secretive terrorist activities. More of this is covered in the first Aperiomics book but the situation gave rise to more V-Bi and Iv-B political disconnects, for example the Republicans would elect representatives that were often socially conservative rather than economically conservative and so this acted to make economic policy more unbalanced or at least not cared about as much as it should. For example the famous tactic by Karl Rove in the early 2000s was to use the issues of God, Guns, and Gays for votes and to try to have referendums on related issues so people would turn up to vote in them and so vote in the election as well. This caused the Bi community to turn up more for candidates promising to protect abortion and homosexuality rather than for sound economic policies, in this process trying to work out I-O laws that dealt with these problems in a neutral and fair way was weakened and this in turn weakened the I-O votes for all kind of centrist ideas like regulating the financial industry.

Some issues then become more disconnected as V-Bi and Iv-B than others, social issues such as gun control, homosexuality, abortion, drug use and punishment, illegal immigration, the death penalty, pollution, etc then tended to dominate more than other issues which were more strongly I-O policed with a consensus such as sentences for most crimes, speeding and drink driving enforcement, deporting illegal aliens when caught, auctioning government land rights for mineral prospecting, and so on. In effect then much of the GFC was caused by electing politicians who then appointed advisors more interested in these issues than in making sure the economy was sustainable. Historians of the Great Depression may have found a similar situation, for example the recent end to WW1 and the tension after this would have tended to elect politicians in Europe because of those issues rather than economic ones. For example the US was polarized by the Prohibition issue in the 1920s which may have elected politicians more on their attitudes about alcohol leaving the economy largely unattended. Bi Labor problems were a major issue as was the Iv Teapot Dome corruption scandal. Racial relations such as the rise of an general acceptance of the Klu Klux Klan, immigration was restricted in 1924 with quotas on many races from Europe and Asia, these were also major issues skewing the election of politicians on their basis. R communism was widely feared and this tended to elect V politicians to expose and stamp it out like a contagion, the same would then want more deregulation of the economy under Calvin Coolidge as their best idea for solving the Bi union protests and communist ideas that many Bi-B people sympathized with. In Europe this problem was much more severe with Mussolini being invited by the King of Italy to form a government to fight these R communists and anarchists while Hitler continued his rise to power by fighting R communist insurgents in Germany.

In this environment as well as in the 2000s then I-O policing of fraud in the economy would either have been ignored as not being an issue voters were interested in, or the benefits of weak I-O policing were being promoted then as now for economic prosperity for all. Creationism was also a big issue for voters with the 1925 Scopes trial involved in prohibiting teaching evolution in schools, in the 2000s believing in Intelligent Design instead of Evolution was often a major factor in deciding politicians rather than managing the economy. People were also wearied by war and turned off from many economic issues, the rise of Jazz and the Charleston dance led to people more interested in enjoying themselves in what was called the Age of Wonderful Nonsense perhaps also like the 2000s. These V-Bi and Iv-B disconnects depend on the amount of I-O policing, but this depends on many factors such as whether the law has covered the issues such as with downloading music in the early stages of the internet, whether the issue is too difficult or expensive to police such as abortion clinics being targeted by protestors in conservative V-Iv states, whether the I-O police are being weakened by other colors such as the pressure to deregulate the financial industry under Clinton, whether I-O policing is even believed to be beneficial with some economic theories such as the panics of 1819 1837 1866 1893 and 1906 from no I-O policing such as the Fed being considered cleansing the economy, whether some issues are not believed to apply to policing such as dancing and music though even this has been banned at times, whether the amount of prejudice makes policing too unpopular to attempt against racial hatred and sexual preferences, and so on.

The Iv-B and V-Bi pressures in the US economy then contradicted each other in fundamental ways just as being a V-Bi team player and an Iv-B solitary is difficult to reconcile as are the concepts of random independent variables and chaotic dependent variables. This is why I-O policing and compromise is needed to try and steer a middle course between these 2 or else they both grow wastefully at the same time. Eventually they must reconcile partially in the I-O markets and law courts to avoid the Biv economy becoming Roy, as happened in many areas with the GFC. When economic problems do occur then the politicians and advisors available may not be the best to do the job, for example the head of FEMA in the US was not skilled in this role and has criticized for the subsequent performance of the aid agency in Hurricane Katrina. In the same way politicians elected for their views on abortion, evolution, and gays in the military as well as their marital history might not be the best available when economic problems occur. The same can be said for any issue that reaches an Iv-B crisis or V-Bi stagnation, for example the issue of gays in the military might not have been one that President Obama had thought about as much as economic issues.

This then can lead to politicians incompetent or unwilling to handle an Iv-B crisis or V-Bi stagnation effectively, for example the Republicans under George W. Bush may have been more focused and educated on foreign policy and left economic matters to a weak I-O deregulated laissez fair market policy. When this resulted in an Iv-B crisis and collapse they in many cases did not have the experts on hand who could deal with it. In the same way European countries in their own economic boom would have had many politicians unable to handle the subsequent collapse.

This is the same process as in the markets themselves where Iv salesmen and agents for example built up their market share and assets from competing against each other in this unsustainable niche, when this collapsed they often didn’t know how to make money any other way. This was covered in Nassim Taleb’s book Fooled by Randomness with the example of a trader who did well when the market was random but lost everything when the fat tails or events far from normal chance occurred. In the same way B workers had built up an unsustainable and chaotic lifestyle with liar loans and speculating, when they needed money they often renegotiated their loan to get more from their house’s equity. When this collapsed many did not know what to do next, the situation is like when a plant starts collapsing the B roots might not be able to handle the lack of nutrients they find and the Iv branches the weather causing damage to them. In this situation then the decisions of the plant are crucial in whether to try and keep growing to make seeds or to become more dormant and survive the situation on stored reserves, as they might do in winter for example after shedding their V leaves. In the same way the US and later European governments seemed paralyzed by the return of I-O uncertainty as to whether to try and let parts of the economy collapse and liquidate or to try and support them. Treasury Secretary Henry Paulsen for example was an able person for the job but had no expectation of having to rescue the economy and likely had not thought much about it. Only Ben Bernanke it seems had some specialist knowledge of the Great Depression and was only there by chance in the GFC. In Great Britain Gordon Brown carried on mainly as Tony Blair had with their chaotic Iv-B expansion and was unprepared to handle the collapse, labor was however elected more on an economic record than the Republicans in the US had been though. The same occurred throughout the Eurozone where the GFC caught nearly everyone by surprise, it became apparent that the Euro had been conceived in good times and there were no good plans for what to do in a crisis of this magnitude. This can be a problem for Iv-B organizations because people in them compete with each other secretively and deceptively, often backstabbing and bluffing so when there is a crisis there is little trust between people and often they have deceived each other so much that their belief system doesn’t conform to reality any more. The same problem happened with R communism where the Marxist dogma originally conceived by Karl Marx had many valid points, the GFC in many ways was a phenomenon predicted by Marx though not leading to a communism. However once the R Bolsheviks and Mensheviks started intriguing with each other after taking over Russia they had no real I-O police to keep them honest. The result was show trials where R victims had to recite lies about themselves instead of O police trials. Economic policy often resulted in the starvation of millions and yet there was so much deception in the policies no one could tell what the others really thought or what was the right way any more. An example of this was Stalin’s devotion to Lysenko and his secretive experiments which supposedly showed improvements in crop yields, later shown to be fake. Many died from starvation in these experiments but no one could contradict Stalin and therefore Stalin could not find out the mistakes he was making. This is like the terror R animals endure in their fear of Oy predators invading their territory, much like Stalin being paranoid about Oy Imperialist spies, people were then tortured looking for the proverbial Oy wolf in R sheep’s clothing.

The same phenomenon however occurred in Oy Nazism where the generals under Hitler were usually afraid to tell him the truth about what was happening in the war, only a few such as the famous Stuka pilot Hans Rudel would tell Hitler the truth. From this web of lies the Oy Nazis became more disconnected from reality and because the Y Nazis were advised by their agents they made steadily more and more bad decisions much as V companies in the GFC had been misled by their Iv agents. V politicians and management then like Y dictators can be in a kind of bubble of deception that grows with Iv-B around it like a company surrounded by deception salesmen it has working for it. Eventually these salesmen might with deception run the company into trouble to get their commissions and bonuses, then the bubble bursts and the Iv remaining don’t know what is true any more. He same might have happened to Enron where the deceptive traders, such as their Oy predatory profits from Californian consumers. May have led the company to believe they were more profitable than they were. In the same the Republicans with George W. Bush may have been deceived by Iv-Oy Neocons looking to create more competition in the oil market by breaking up OPEC, creating more oil exploration in Iraq would cause their quotas to collapse along with the price of oil. They also wanted to open up the Iraqi economy to free trade much like the US which caused many Iraqi companies to chaotically collapse from the sudden competition. Lobbyists would have been another area of Iv deception where they worked on commissions according to how successful they were, at least those more successful in influencing politicians such as Abramoff would expect to make more money in secretive and often deniable ways. Often too secretive bribes were made this way, the result was the V politicians in the center of this heard mainly what made commissions to these Iv agents around them or furthered their agendas in various ways.

The same however would tend to occur in a Bi left wing government, for example Bill Clinton also had Iv lobbyists and advisors which is why with Robert Rubin he allowed so much deregulation to create the Iv-B boom. He also however had B supporters who often had deceptive agendas such as exaggerating climate change, animals in danger of extinction, pollution, etc. A Bi government should have the I-O police to protect them from this Iv deceptive advice as in the marketplace but V politicians are more separated from I-O and so more vulnerable from being in this bubble of deception, they also fear R terrorists and formerly communists taking their wealth and influence much as R grazing animals can overeat the V leaves of plants. With weak policing then the chaotic colors of Iv-B and Oy-R then can develop ideas far from reality, in effect they bluff and deceive each other so much for a competitive advantage that they end up hearing their own lies fed back to them and believe them. This is how bubbles grow like a viral contagion of lies about real estate or something traded on a market, then when it collapses people panic too much because their confidence is shattered by so much of what they knew turning out to be wrong. This is the environment then where decision have to be made for V politicians, George W. bush to his credit realized that his advisors were often Iv sycophants and so had to find realistic solutions to the GFC. However this is often not easy for politicians, for example Greece had built up an unsustainable situation from so much Iv deception such as Goldman Sachs in effect hiding its real financial state to enter the European Union. When the bubble burst for Greece the politicians didn’t know the real state of the economy because the system was so poorly organized, also there was so much deceptive tax avoidance even among its politicians that finding extra revenues was very difficult. Less is known about the situation prior to the Great Depression but Calvin Coolidge and later Hebert Hoover would have had many businessmen telling them deceptively that laissez faire capitalism would be good for the economy, when the crash happened no one seemed to understand how the economy worked which is a sign of Iv-B opacity. Much of the fraud uncovered by Roosevelt in the Pecora Hearings in Congress was unknown previously to politicians as it grew in the 1920s, this was reduced greatly as Roosevelt increased I-O policing such as in establishing the SEC.

A similar problem can happen with a V-Bi stagnation where the situation eventually becomes dire enough that something must be done, the problem is the team nature of these colors means there are so many connections between government, business, social life such as clubs, religious organizations such as consulting the clergy, etc that any initiative seems abnormal to enough so that they oppose it causing nothing to be done. In effect the political process becomes stagnant as well as in the economy, the problem is usually solved by an outsider being elected or appointed as Iv-B. For example Margaret Thatcher created many innovations getting Great Britain out of its low growth, Ronal Reagan did the same for the US. In the aftermath of the GFC then the problem is to I-O police this deceptive advice from agents and lobbyists and to follow sustainable economic plans based on policing economic corruption and fraud, enough must be punished so that others are deterred. More usually though in this situation few Iv agents are punished for what they wrought, some may encounter anger from Bi communities and being ostracized from government or industries for a time later. For example the neocons for their role in Iraq, Robert Rubin for deregulation under Clinton, Alan Greenspan, Jack Abramoff as a rare convicted lobbyist, Phil Gramm, and many others were vilified for their roles often unjustly. The problem is in Iv-B that there is so much secrecy and deception that just because some were winners in this doesn’t mean they saw much more in the opaque situation or were better able to discern fact from fiction in this environment. It is especially difficult when Iv-B is growing to claim this growth should be moderated, usually in this case those who say so lose influence and others take their place. This is why I-O policing is so important, just as R communism led to show trials and Gulags instead of neutral O justice so too does depending on Iv agents to police themselves lead to little justice for the victims of the chaos that ensues.

Trying to merge Iv-B and V-Bi without I-O policing also causes problems, for example V-Bi commercial banks were the most common in the US for loans to houses, etc and Iv-B investment banks which were separated in the New Deal in the Great Depression tried to make money speculating. By making these separate banks this helped I-O policing because they could have separate kinds of laws, for example V-Bi banks had a more Bi kind of legal system with red tape that slowed business down enough so that problems could be seen. This is like policing on roads where speed limits prevent too much chaotic driving and random speed checks also stop this chaos building up because anyone with a deterministic pattern of driving like this will eventually lose their license. In the absence then of knowing how to stop these banking crashes the answer was to slow everything down and make it safer, this however was at the cost of banking sometimes taking too long to do business from approval of loans, the times taken for auditing, long queues at the bank to deposit or withdraw money, and so on. The investment banks were Iv-B and tend to speculate much more but even these were hamstrung by some V-Bi regulations such as stock brokers having to be licensed, the longer settlement times for share transactions, a crony system on Wall Street where V management knew each other, and so on. This disconnect was recognized as a problem to some degree, it was easy to look at the more nimble Iv-B investment banks and compare them to the more stodgy and slow V-Bi commercial banks and imagine a kind of hybrid as more efficient. The blend of these 2 would be faster and more efficient while having more stability in speculation, but this is already accomplished in the I-O market where Bi consumers and Iv agents do transactions. So even though these 2 kinds of banks were separated they could still do any kind of business in this I-O market, for example a client of a V-Bi commercial bank could simply be referred to an Iv-B investment banks and vice versa. Trying to make a hybrid Iv-Bi bank fails because the internal policing of such a business would not be as strong, for example they might try to erect so called Chinese Walls between the 2 so that the Iv agents could misrepresent to make deals while the Bi banks would try to be honest and transparent but the potential for abuse is too strong like an I-O market without any laws. It would end up with Oy shoplifters or Iv con men taking the Bi goods without paying, this would eventually destroy the reputation of the market. Also the Bi sections would keep exposing where Iv agents bought their goods so they could not be secretive enough compared to other purer Iv companies, for example a hybrid commercial investment bank might have to have more disclosures to satisfy safe investors but then the moves the bank makes would be anticipated by others. If they instead maintained this opacity as they mainly did prior to the GFC then investors end up investing in a kind of black box and don’t know what is going on with their money. The result was that even safe investments were found to be riddled with fraud and vulnerable to reverses because of high leverage. The same reconnections of V-Bi and Iv-B also don’t work in other parts of the market, for example in real estate sales there is a conflict between a real estate agent having to be Iv-B and make sales of their own houses, as they buy and sell, and having to take moneys in a trust account which is supposed to be open and transparent. Often without adequate I-O policing this results in the agents dipping into their trust accounts to fund their speculations and cover their losses, if this is not policed with random auditing then many will collapse at some point because the Bi trust placed in them was abused. Also the Iv agents are at a disadvantage in such a system because competitors could analyze their sales if this trust account information is public and so copy their sales strategies. The problem again is in trying to leave out I-O policing, by I-O random audits of trust accounts these agents are caught before they can lose too much money and usually there is a randomized insurance based system from an agent’s association to cover any money embezzled in this way.

Insurance companies such as AIG can also have this problem, for example the profits from Iv-B derivative trading and writing Credit Default Swaps was not really compatible with their core V-Bi business of protecting against chaos with randomizing amounts of liquidity paid for by insurance premiums. The Iv-B agents then made good money in the boom writing swaps but were mainly in it for themselves and many wouldn’t have cared if the company lost money from them. As it turned out there was a clause in most of the swaps that if the value of the bonds insured dropped then AIG would have to put up more capital even for ones that hadn’t defaulted. This then drained AIG of V-Bi capital especially to Goldman Sachs as Iv-B who realized the crisis was coming and were covering themselves as much as possible. This then is like the Iv real estate agents destroying the reputation of their company and dipping into the trust account, AIG had its reputation ruined and its reserves were used up by Iv agent deals so they could make better bonuses. AIG also had to be more secretive with its financing to protect its swaps and derivatives trading from competitors imitating it, for example an insurance company has little need to be secretive about its finances and usually advertises its financial strength but an Iv-B trader more often has to hide its financial situation so it can use leverage that would scare away many investors. The result then is usually deception to make the business appear transparent to appear safe but deceptive enough so competitors can’t profit from doing the same as them. The result then is building an economy that looks profitable and stable but is in fact misleading to anyone who analyzes it, with competition producing slim margins the companies are more usually vulnerable to external shocks.

The reason for these attempted V-Bi and Iv-B reconnection without using I-O police is that V management and B workers don’t connect easily together because they are on opposite end of the tree, also they don’t have I-O policing between them directly. So when they do business they usually have a more distant relationship with I-O policing, for example V uses Iv agents which have some self policing as well as I-O police connections to watch them, B workers have the Bi community which has a form of self policing as vigilantes and neighborhood watch but the I-O police also monitor these for going too far. However V management often tries to do business directly with B workers directly and cut out the other colors as middle men, the Iv-Bi connections can strengthen I-O policing because it makes sense for those 2 colors but companies that successfully run V-B companies can make more profits than those who fail. For example feudalism in some ways was a V-B system where the powerful Y-V lords used payments and threats of military might to keep their R-B serfs in line, B workers would largely accept the profits they made and R would try and steal extra food such as by poaching in the aristocracy’s forests. At this time there was no real I-O policing, the Y-V aristocracy could usually change the rules and amounts paid to its serfs whenever it wanted and calculated it was strong enough to get away with it. Often however this resulted in more theft of food which was very hard to stamp out and bands of these dissidents serfs might become highway robbers of Y-V such as the story of Robin Hood. Eventually these feudal societies evolved to be more stable by forming Bi communities where people had more rights by acting together, an example was forcing King John to sign the Magna Carta in exchange for their support. Also the Y-V aristocracy had to rely more and more on Iv agents such as tax collectors and getting provisions for troops in wartime, these were often corrupt and kept money and goods for themselves. This then resulted in the need for an I-O police to work out when they were preying on the serfs instead of handing over most of the money to Y-V, this is like in modern societies where Oy petty thieves might work partially for a Y mafia and have to pay them off for permission to steal in their territory. This system can become very instable with Oy thieves destroying a Ro community and then bringing reprisals back onto the Y mafia and so O policing also protects Y from Oy thieves.

However those Y-V aristocracy that did manage to make the feudal system work made more profits than those who had to submit to Ro demonstrations and reprisals as well as Oy tax collectors stealing from them, this gave them a competitive advantage where Y-V might win battles against those who had to pay their workers and serfs too much. This then makes Y-V management exploiting R-B workers an unstable business today but also one that can outcompete others better policed. It is also very unstable and lead to long term ruin, for example the R Communist Revolution in Russia overthrew a Y-R system like this where the Y aristocracy were using R serfs as cannon fodder to get territorial gains in World War 1. Eventually this fell apart because R being deceptive often surrendered in battle too easily, deserted, or planned a Ro communist uprising to get revenge on the Y Czar. Another example was King Leopold of Belgium trying to exploit the Congo for money using Y predatory administrators who hunted R natives into a slave like V-B business like serfs that killed millions of them. The system was unstable because international I-O laws and opinion saw this as criminal when it was finally exposed, the British Empire for example had much more just ways of administering its colonies and so Belgium eventually had to give up this enterprise. Similar businesses even today still try and exploit the Congo in this way for Coltan and Uranium, for example using Y troops from Uganda and Rwanda to steal mineral supplies and resell them to companies. It is also like the Blood Diamonds trade in some African countries where virtually enslaved R-B natives for Y-V dictators made money for them until international I-O policing such as the UN largely put a stop to it. While there are profits in V-B businesses then people will always try to make them work, some do make enough before the collapse to profit overall but the result is usually like the GFC where a collapse and discovery of massive fraud and exploitation makes a resurgence of I-O policing try to reduce this kind of business. The 2 kinds of businesses then as V-B and Iv-Bi at times strengthen I-O policing and weaken it, Iv-Bi works much better with policing while V-B is often better without it. So in the lead up to the GFC there was much more V-B business in the US such as with subprime lending, V Wall Street investors saw it as a way to make large profits from the B poor partially by having government pressure to help them make I-O policing far weaker. Other Iv-Bi businesses were hurt by this strategy because I-O policing works quite well for them in the I-O market and they tend to lose more money in the long run without it. The balance then between Iv-Bi and V-B businesses depends on many other factors such as the amount of Gb resources and actions in Roy parts of society, for example if resources are not likely to last for long then Iv-B businesses tend to exploit these better because a balanced I tree might collapse anyway like a real tree when the nutrients in the soil run out. In this situation a V-B company or even Y-R exploitation can often work because by the time the B workers protest enough to form resistance with Bi unions the resources are used up and V leaves the business with their profits. This is also like in Roy where a Y mafia or occupying army might pillage an R community and before they can organize Ro strong resistance then they have all the wealth and leave. This is like for example the middle ages tyrant Tamerlaine who would threaten cities with annihilation unless they paid a tribute, often he would have his troops completely ransack a city and with any resistance kill everyone and destroy the city completely. This worked because Ro resistance did not have time to build up, the Nazis had the same strategy with blitzkrieg where a massive Y army in World War 2 took over most of Europe and then attacked Russia. The problem is after a while the R occupied people manage to use deception and speed to build up an effective insurgency and terrorist attacks, also the people build up Ro massed protests which also become more expensive to suppress. The result was that this increased cost made the war too expensive for the Nazis in Europe, also the same tactics in Russia caused its army to be bled white as Stalin’s Marshall Zukov explained the strategy.

The US has sometimes used this strategy as outlined by Colin Powell, use Y overwhelming force against R countries and then get out before they build a Ro insurgency. If they become bogged down as the US did in Iraq and Afghanistan then the R occupied people develop terrorist attacks virtually impossible to stamp out like a contagion. In the Roy animal kingdom this is like Y lions feeding on R fast and camouflaged animals like gazelles, eventually the gazelles have a revolutionary adaptation to become faster and harder to see which makes the Y open team based tactics fail more and so the predators decline in numbers. Y lions would then do better by chasing a more stable prey such as Ro buffalo or Wildebeest and this develops the more stable O middle of the food chain. When Y predators attack R prey too much then this tends to collapse the Roy food chain as Ro, O, and Oy animals are bypassed, this was explained earlier how this causes for example O predators and prey in the middle of the food chain to decrease in numbers.

When these V-B business become more common, as they did in the lead up to the GFC, then the lack of I-O policing gives them more of a Y-R component and so they can become more associated with military force or crimes. For example businesses like this in a Y-V Empire usually have to call for military support to suppress R terrorists and freedom fighters and can draw the Empire into many wars draining its resources. This happened in the Roman Empire for example where draining its vassal countries by tributes and heavy taxes created R insurgences which were often put down by the Roman in heavy handed Y attacks such as with Palestine and the Jews revolting against taxes, or Carthage defying it militarily which was completely wiped out. When the occupied countries or others resisting the Romans developed Ro resistance then their armies wages continual wars of attrition against them such as with Julius Caesar in Gaul and Germany, Claudius and Hadrian among others in England eventually building Hadrian’s Wall to keep out the Scottish resistance, the battles against the Parthians, and so on. In the same way V-B US businesses in South America were often exploitive with plantations and required regular invasions by US Y military to crush uprisings. There are many other examples in history, for example the French Revolution occurred because the Y aristocracy built so much resentment among the people with excess taxation to pay for helping the Americans break away from the British Empire, eventually this hardened into Ro resistance and the successes and ultimately failures of this Ro government later under Napoleon inspired Karl Marx in many ways in his communist theories.

The other kind of war is where Ro develops so much resistance that in the short term it can rout Oy predators, this is like the Ro French army under Napoleon that was built because of so much anger at the Y aristocracy of Europe trying to invade France Ro restore the monarchy. The Ro armies then managed to invade much of Europe and subjugate Y monarchies reducing their armies to being like ineffectual Oy predators by comparison. This interaction usually develops more I-O policing however, Napoleon for example spread his Napoleonic Code of laws throughout Europe and was far less despotic overall than Y-R governments. Eventually his Ro army weakened as they lost their anger and motivation, also Oy armies learned to have their own revolutions in strategies similar to in Y-R, for example instead of the Y armies being highly visible and harried by deceptive R insurgents the Ro armies of Napoleon were lured by Iv forces into Russia and decimated by the same kinds of terrorist strategies of harrying and starving by denying the Ro army resources. This is also like where Ro animals such as buffaloes and Wildebeest become too strong for the predators, eventually Oy develop strategies to harry their herds until they are exhausted much like Y wolves for example sometimes have to use these harrying tactics rather than a Y frontal assault.

Iv-Bi businesses then also run into this problem, they usually develop I-O policing as Napoleon did because it is more efficient but there is still some instability where sometimes the Bi consumers and warehouses might make more money because of their high liquidity allowing them to wait out the harrying of Iv agents. At other times the insistence of Iv salesmen confuses enough Bi consumers so Iv makes more money, these 2 influences mean that sometimes Bi wins in a deal and sometimes Iv does in a mix of randomness and chaos. This was like Napoleon’s Ro army sometimes outlasting the harrying of Oy monarchist armies as they were often forming alliances against him and being beaten until eventually the Ro French army was weakened too much and collapsed. However the experiences France and much of Europe had with these Oy-Ro wars made them want to keep this system of laws and weakened the counter reaction of the monarchies trying to reestablish Y-R rule and V-B feudalism. In the same way the V-B businesses that caused much of the GFC collapsed, such V Wall Street losing so much money from the B subprime loans, this led to a resurgence of Iv-Bi businesses again which then allowed much of this I-O policing to gain in strength again. The recovery from the GFC has involved a slow rebuilding of the center of the Roy food chain and the trunks of the Biv companies that had collapsed. Currently as of 2011 this regrowth has been slow and many companies that collapsed or were broken up have not been restored, for example most of the subprime bond business has disappeared while much Iv-B derivative trading has recovered. Iv-Bi businesses such as Morgan Stanley and Goldman Sachs still have the contradictions in their make up since converting to be bank holding companies but the I-O policing has still ensured their growth and high profits. Many companies have tried to use internal policing in the same way, Goldman Sachs for example is well known for keeping track of its risk at the end of the day as to what all stocks and bonds would sell for in the market. This partially was how they realized the Iv-B market was in trouble because they could see many securities had no clear price in the market. Merrill Lynch had its own risk assessment internally but this was weakened as the Iv salesmen pushed for more risk to make more profits. Internal policing in each company tends to be too much Iv because like banks shopping for the regulators that are easiest on them this internal policing can be loosened by comparison with other companies for short term advantages, also Iv competition in a company can subvert this policing and without any alliance with Bi regulators outside this can go unnoticed. For example auditing is a mix of chaos and randomness because random audits can usually find secretive and deceptive fraud in a company’s books, however auditors also have to compete with each other and so companies that want to hide problems can try to find an auditor to suit. If an auditor is large enough then one branch abetting fraud will be detected by the other branches and stopped before it destroys the reputation of the company as happened with Arthur Andersen. In the same way a risk assessment cannot easily be done by one company because it may miss something, for example AIG forgot they had guaranteed to add more money into securities protected by credit default swaps as they declined in value. As Iv-B companies compete with each other the pressure is strong to save money by weakening this internal policing, this is why so many banks and companies such as Lehman create so many off balance sheet investment vehicles to hide their losses. This is secretive and lacks any Bi transparency, it is then Iv-B business and so I-O policing is completely absent. However if speculators that were registered on exchanges had to be audited for risk as they would be for tax or profits then the other auditors would tend to prevent these kinds of off balance sheet deceptions occurring without showing them as increased risk.

With so many complex interactions between color codes it is very difficult to manage economic policy successfully, usually this is like trying to manage an ecosystem by culling and introducing plants and animals. Some when introduced can multiply exponentially in number and then crash, this can radically affect the numbers and evolution of other animals and plants. There can also be revolutionary changes, for example insects can quickly develop a resistance to pesticides used too much and in the same way an economic poly if overused can also create resistance. One example of this was how the shadow banking system grew to control interest rates with the carry trade from Japan more than Greenspan was able to affect them. Even the stimulus and bailout of US banks and companies in the GFC strained the ability of the government to fund, the financial sector in some ways dwarfs the discretionary budget a government can try to change it. If so then changes in economic policy might sometimes work because traders want them to work to get a competitive advantage, for example if an interest rate cut is believed to be good for the market then even if it doesn’t have much effect the market will respond to it like a placebo. This can be a problem when the desired economic medicine is unwanted, in that case the market might not respond favorably such as with bond interest rates for some European economies in 2011. In effect then economic policy can be like fertilizing some plants or adding food for some animals in the hope that they might grow faster and so establish themselves when they need to feed themselves in the ecosystem. For example a Keynesian economic stimulus is designed to tide companies over in a recession so enough will survive for when the economy improves. This is like dropping food supplies to wild animals or allowing them access to irrigated water supplies in a drought, it can keep more alive but it can also affect the delicate balance of predator and prey which may have evolved on periodically eating more prey when they are weakened in a drought.

This then is the same kind of issue with economists who believe the economy should always be left alone to self regulate, tinkering with it they believe will always lead to unintended consequences. Sometimes though these changes can be good for an ecosystem, for example sinking car wrecks in the ocean might create an artificial reef and a place for fish to hide developing a larger number of predator and prey there as well as places for algae to grow. Creating dams in a drought prone area may save more animals and keep more plant food alive for them than dropping food supplies. Sometimes if an undesirable animal such as Oy cats or R mice are accidentally introduced into an ecosystem they can decimate other animals and thereby affect the plants that are eaten. Sometimes these animals can be trapped or endangered animals moved elsewhere to safer areas, so if the ecosystem is sufficiently well understood it is possible to effect good changes. In the long run this can affect the evolution of the various species but historically man has been able to change this for his own good, for example keeping cattle and sheep, raising crops and killing off weeds, killing predators such as wolves and lions, and so on.

Once the decision is then taken to intervene in the economic ecosystem then it is necessary to work out ways that can succeed, for example trying to kill off all the R mice in a forest might be virtually impossible or economically too expensive. In the same way trying to fix some economic problem such as some prices going up too much might not be worth while for the other effects it may produce, for example price controls on some goods might raise fears that other goods might also be controlled and have a chilling effect on sales generally. Punishing investors in the GFC might seem like a good way to avoid moral hazard but it might also make them so circumspect about investing that a long period of economic stagnation can follow. This then can be like banning car insurance because some people park their cars in dangerous areas because they have insurance, while this can reduce moral hazard it might also radically reduce car sales.

Expansion and contraction of the money supply is also a difficult problem, for example in the lead up to the GFC there was a lot of money being invested in the US and so while the money supply as a whole might have been manipulated by the Fed this extra loan money created a real estate inflationary bubble just as much as too much quantitative easing might create inflation or a bubble in some assets. However the market might react badly to currency controls in some economies because if they money can easily leave in a panic then they might be reluctant to invest there in the first place. Interest rates can be varied by selling or buying government bonds but this also produces uncertainty because traders might concentrate more on trying to predict what the government will do from understanding economic theory than creating sustainable businesses. For example if economists are predicting an interest rate cut because the economy is slowing then they might buy more government bonds beforehand rather than investing in businesses. This then becomes an Iv-B situation where the Fed in the US might be trying to be secretive, Alan Greenspan for example usually tried to be inscrutable so as to give no clue as to what he might do. The situation is then like a game of poker where the Fed might be bluffing that it won’t lower interest rates in a slowdown so investors are not waiting to take advantage of it, like understanding the odds in poker though the economic statistics might indicate that econometric formulae will dictate an interest rate cut in certain situations despite this bluff by the Fed. This then leads to more economists working as traders and in large companies to try and anticipate what the government will do, it is then like quants using similar formulae in computerized trading that ends up affecting the market in the same way until the Iv-B chaotic effects are unsustainable and then there is a crash such as happened with shares in the GFC. With this game of economic bluff and deception then the original goal of helping to regulate the economy can be lost sight of, the more ways a government can affect the economy and the more ways they seem to be willing to use then the more growth there will be in economic forecasts trying to predict this for profit.

Usually changes in an economy are random or chaotic and so opaque as to be unpredictable, for example the weather can affect commodity prices and traders can perform a valuable service in trying to anticipate shortages and gluts from the weather if I-O policed correctly. This is because there are no formulae that model the weather very accurately such as a year or two in the future but there are plenty of formulae used in economics that it is anticipated the government will either use or have to explain why they did not. For example the government is presumed to follow laws and people that work for it usually have to justify their actions as logical or guided by some principle, if they then changed interest rates by rolling dice or varied tariffs that favored some companies then they could be accused of incompetence or favoritism. Because of this then companies can in effect front run government economic decision much as stock brokers sometimes illegally front run shares by buying them before a big investor and then making a quick profit. For example if a stock broker leans that a large pension fund is planning to buy IBM shares later that day then they might buy some themselves because the prices will rise from the large purchase. The stock broker can then use this inside information to make a quick profit but this causes the pension fund to make a small loss because they could not buy the shares as cheaply as they might without the front running. In an Iv-B economy then anticipating the secretive and deceptive actions of a competitor can result in fast profits, this is like an Oy predator being able to catch more R prey if it knows for example how it is likely to zig zag as it runs away. Each time then the government’s economic policies are front run like this then they become less effective, in the same way pesticides become less effective because insects develop a tolerance by in effect knowing that they will be used again and preparing themselves for it.

When there is an economic crisis this Iv-B game of trying to guess the government’s economic policies can be very wasteful, for example in 2011 the Eurozone was in crisis because the bond yields of Italy, Greece, Portugal, etc were rising. Much of this was because traders were betting on what the governments would do, for example whether Germany would help to bail out other countries and by doing this they made this policies less effective and more difficult to accomplish. This then is like traders all use the same algorithms to trade with each other but here the algorithms are econometrics and similar economic ideas. For example there might be decisions in the Eurozone that France and Germany might buy some sovereign debt but this is dominated by the procedural hurdles in how the Eurozone is set up, how each politician might vote, the individual ideas of each bureaucrat some of whom might be corruptly leaking decisions to some traders, and in turn these decisions are being based on what the traders are doing, what kinds of formulae they are using to trade with, and who is able to outlast the other. Because this is Iv-B then the game is one of mutual deceit to profit from each other, if the government can bluff traders into thinking they will support the sovereign debt then the traders will stop shorting this debt or buying credit default swaps and so the interest rates on the debt will go down in a chaotic feedback loop. If the traders can convince the government that they don’t believe anything they say about say Italy’s debt then the interest rates may go up to the point that a bailout becomes too expensive in another chaotic feedback loop. In both cases though economic policy in a game of bluff and deception is not the way to make honest and sustainable decisions in a sick economy.

The history of economic intervention then has often been one of anticipating when a government’s resolve will collapse, a well known example was George Soros’ bet against the British Pound causing it to devalue while the government tried to bluff that it had no intention of doing so. If it could have convinced traders then it may not have had to devalue as soon as it did. Monetarism imposed a kind of discipline on the government that it would not change the money supply in a large way, not allowing it to inflate or contract and so this prevented speculators from anticipating large changes and so moving money into more sustainable investments. These feedback of investors versus economic policies can be exponential but still change very slowly for a long time, then as with Iv-B the changes can start occurring in real time and lead to a crisis so the government’s economic tools are all anticipated. In poker this is referred to as a tell, it means that something about the player’s actions gives a clue to the cards he is holding despite his bluffs, in the same way this economic theory acts like a tell of what the government might do. However if the government usually does nothing, for example if the Austrian economists were advising the government then they might say these changes in the economy should be avoided, then this causes another kind of feedback because the panic of investors can be a vicious circle if they believe no one is going to solve the problem. For example the panic in the GFC was so great that the government was barely able to calm the markets enough to prevent a complete collapse of the economy. The problem then is that any economic theory is self consistent in some way and so the advice it tends to come up with in an economic situation is predictable, this then allows traders to anticipate it and nullify its effects to the extent that the theory is specific. For example if there was an economic theory that said keeping interest rates at 2% was essential then the traders would know the government would try and do this and hence they could short and go long whenever the rates moves away from 2%. If the economy really needed rates at 1% then traders might know the rates would keep moving towards 1% and so the government would have to keep tightening credit to bring it back to 2%. The traders would then buy government debt whenever it was under 2% for a guaranteed profit and the support of the interest rates would be a drain into the pockets of the traders who understood this 2% rate was indicated by the economic theory. If mercantilist economists came to be influential in the US then traders would know that the government would seek to drop the exchange rate, they would then short the dollar for a guaranteed profit. If the market rate for the dollar was higher than what the mercantilists were trying to accomplish then the rate would keep coming back up, the traders would then short it over and over until the government either succeeded or gave up wasting money on doing this as the traders would be the main beneficiary of it. Sometimes these economic theories have consequences that traders and others cannot anticipate because the economy is too opaque and complex, for example the market probably realized that the Treasury would not bail out Lehman but did not realize any more than the government did the chaos this would cause. When Alan Greenspan kept interest rates low before the GFC neither he nor the market anticipated the boom and bust that would follow from it, nor that the shadow banking system had largely coopted the Fed in control of the money supply.

The world then is becoming more dependent on algorithms whether in econometrics, quants designing trading strategies such as arbitrage, complex derivatives where traders try to make them so complex that others are deceived by them, and so on. These algorithms then can often be anticipated and if for example they are driving share market prices then those that anticipate the effects of these algorithms can make profits as reliably as some forms of arbitrage. Economic theory then changes throughout history not just because economists understand the economy better but because in this game of economic poker there needs to be changes in policy to upset this anticipation of what the theory will say. For example Keynesian stimulus of the economy in a recession worked well for a time but it eventually led to stagflation, this may have been because traders anticipated this pump priming of the economy in a recession would cause certain kinds of economic stimulus and by investing in those kinds of industries being supported they could make a profit. This would cause those industries to increase in value as much from the speculating as from the stimulus and would make it appear the Keynesian theory was vindicated when it was just being anticipated. This would then lead to more stimulus in other situations and more bounces in the economy, also from a placebo effect where businesses assumed this stimulus would make the economy better and so they did not need to plan for a recession by shedding staff and cutting costs. This then would increase economic waste as companies misallocated resources until the stimulus started producing either no effect in the case of a wasted stimulus propping up businesses that needed a recession to be more efficient, or a boom from companies rushing in to invest in stimulated industries that then stagnate after the stimulus is used up causing them to lose money. This then is like the government saying they will spend money on the poor to help them buy houses, they encourage Fannie May and Freddie Mac to buy more mortgages with poorer credit scores, this causes subprime lenders to follow this government stimulus because they believe it will lift the economy in these areas. They also lend money which creates an artificial boom from the misallocation of money, eventually this becomes unsustainable and results in a kind of inflation of housing prices and then a bust as the money can no longer be afforded to be spent there. The difference is that Keynesian stimulus is intended to avoid chaotic collapse and wastage of resources from this, for example in an earthquake man buildings might be on the verge of collapsing and so an economic stimulus might fix up many of them for free and this avoids collapses, loss of life, people moving out of the area in a panic, buildings falling on other buildings like a domino effect, and so on. Such a stimulus might be cost effective, in the same way a Keynesian stimulus in the GFC should avoid losses from chaotic collapse such as the way the bailouts stopped much of the banking system from collapsing. The government might also buy more products to keep some companies going in the short term so as the economy improves they can move onto other kinds of orders. Government work programs might keep people working and paying their bills, this money circulates in the economy until the slack is taken up by more sustainable businesses and then taxes are raised later to pay this money back. In this sense then Keynesian stimulus is intended to be an insurance payout like someone getting their bills paid by an insurance policy while they are sick, if the payments continue when they are well then it is inefficient and will lead to economic stagnation as the worker might feign illness or have a black market job to exploit it. This is then like the traders trying to exploit government economic policy, the problem is that if the policy is not focused on the actual problem and the legitimate claims of people for money then not only is it wasted but it can be anticipated for profit. Keynesian stimulus then might be operated like a government insurance program as with the bailout of the financial sector, if someone is legitimately unemployed then they might be helped with mortgage payments and bills as well as welfare to prevent the economic collapse of other businesses. The rule though should be that this aid is implicit beforehand in the taxes people pay so there is no favoritism when the payments are triggered just as with welfare, also people might be required to work a given number of hours for the government in exchange for these payments. This then is different from how Keynesian stimulus has evolved, from helping businesses in a recession to becoming government spending that never seems to stop and thus becomes more anticipated, corrupted by companies getting contracts for stimulus, and becomes part of a permanent stimulus.

This then is a V-Bi economic theory that has repercussions because companies learn to anticipate it, profit from it, and so distort the original purpose of it. Insurance is not intended to be a source of profit but to prevent greater loss than the cost of the premiums, for example someone might not be able to afford their house burning down even if unlikely compared to the cost of the insurance premiums. If government insurance strays from this rule then the result is much like the failure of a Keynesian stimulus, wasted stimulus money runs up government debt just as overpaying on insurance claims can bankrupt an insurance company. In this situation then a recession is a chaotic collapse that Keynesian insurance pays out enough to keep the economy afloat until it recovers.

Iv-B economic theory also has repercussions that are exploited by traders, for example if the government intends to let companies collapse and regrow in a recession then short sellers might try to depress the stock prices of vulnerable companies until they cannot get finance and so they make money. Short selling was believed to be destroying Goldman Sachs and Morgan Stanley, it may also have played a role in bankrupting Bear Sterns and Lehman which is why the government temporarily banned it. Traders could also take out credit default swaps on a company defaulting on its bonds and then try and spread rumors or deny it business to push it into bankruptcy and collect on the swaps. Theory that indicates collapse is healthy for the economy leads traders to believe that these collapses won’t be prevented and so they can profit from it.

These theories then suffer from a problem of anticipation and profiting from it that hurts people, in some cases this can be criminal. This then is why I-O policing can be an economic theory in itself because it cannot create feedback loops. For example when Keynesian stimulus is being corruptly gotten then the inefficiency of this can be reduced just by auditing these contracts by the I-O police, if they cannot be justified by the help they are giving to specific people and businesses rather than for corrupt favors then they can be stopped. In the same way the economic theory of letting businesses collapse can be checked so it is not a cover for traders deliberately bankrupting businesses, when the I-O police investigate this and make arrests then this acts as a deterrent making traders more honest. The result then is that Keynesian stimulus can act like insurance and prevent waste from economic collapse, also then inefficient business can be allowed to fail without criminals deliberately sabotaging them or a stimulus turning them into economic zombies that cannot survive without government aid.

The same problem occurs in O policing when they stray from their job in catching and punishing criminals that hurt others rather than in enforcing victimless crimes such as some drug use. Laws then can sometimes become confused as to their purpose, when this happens then the police become exploited such as when they were corrupted to be more Ro during Prohibition because drinking was largely a victimless crime. While sometimes drunks did hurt their families the crime was the violence not the act of drinking because many drunks did not commit violence. At other times the laws become more Oy where petty crime is ignored rather than policed, this makes people angry at the police such as where they don’t come quickly to the scene of a burglary or try to catch the thieves. In the same way economic theory when it attempts to regulate an economy without regard for criminal and civil laws being broken risks either incurring the anger of the Bi community for allowing corruption and fraud, or creating red tape that tries to criminalize too much behavior such as by making banks carry excess reserves because some made risky loans. Instead of this the economic policy should focus on the economic injustice being done, because this injustice is economic waste. Fraud then should be punished and not allowed for the sake of economic laissez faire theory, red tape should be reduced and not allowed to grow just because it may stop some economic problems while stifling other activities. Keynesian stimulus should focus on relieving the collapses from a recession rather than becoming a general stimulus and waste of money just because it may help some people randomly. In some ways Volcker reducing inflation in the US by restricting the money supply was weaning the economy off this Keynesian stimulus, by reducing the amount of money increasing each year it made it harder for government programs with no clear purpose to get funding and distort the economy with false incentives instead of acting as in insurance against chaos. It also may have reduced some Iv-B booms and busts by making it harder for loan money to be drawn into a boom and so limiting it size, this then might have helped to create the Great Moderation until the carry trade managed to increase the US money supply with overseas loans and investments.

I-O police often have difficulties in reconciling the different desires of Iv and Bi people with civil law and with Oy and Ro people in criminal law. This is made more complicated by the pressures of V-B and Y-R to weaken this policing, the counter pressure to strengthen the police with Iv-Bi and Oy-Ro causes them to sometimes become confused as to their function. For example the V-Bi pressure to deregulate can also occur by trying to present a case that policing of some parts of the economy is not necessary, but also to try and replace this policing with other kinds of theories. This happens in economics for example where trying to increase the reserves of banks is used as a substitute from punishing them for reckless lending as a crime against their depositors and shareholders. An increase in reserves can be useful because the Iv competition between banks might make some insolvent, this however it only partially solved by an increase in reserves because they then compete even more recklessly thinking the reserves will protect them. Also these reserves were deceptively reduced in the lead up to the GFC by holding more illiquid subprime bonds, when it is not illegal to be reckless then banks, insurance companies, and other companies will try to find ways to use recklessness to beat the competition. This is like people driving too fast on the freeway, competing with each other to get to work or a job such as a salesman’s appointment quicker and so fit more into a day. Making cars safer and able to stop more easily doesn’t resolve this problem because people will drive faster to compensate, the only deterrent that works are laws against dangerous driving. When improved car safety is used as an excuse to reduce police patrols the usual result are car accidents that cause the demand for more police. In the economy though these financial accidents often do not bring back more police because the perceived solution is to like the cars try to make the financial vehicles safer rather than to deter dangerous business practices.

The same problem occurs with other laws, for example prostitution might be banned because a Bi-Ro community is outraged by seeing them having sex in cars, flirting with married men, etc and so banning it makes the community happy at the expense of sometimes legitimate business. This issue can then become disguised by other ideas such as religious reasons why prostitution is bad, the health implications such as with AIDs, whether some prostitutes are being forced into it, and so on. However the legal issue is usually Iv-B and V-Bi, for example Iv-B can be where men and women are secretly evading police to secretively and deceptively do this while V-Bi is where communities try to drive this practice underground as Iv-B rather than trying to come up with an I-O solution such as licensing prostitutes, protecting them from violence and exploitation, having health checks to keep their license, and so on.

There are then pressures in society to prevent I-O policing or to substitute other remedies and theories in its place, this can often be V-B and Y-R such as exploiting B workers in sweat shops free of policing or trying to stamp out the R poor from fighting against a Y dictatorship by calling them terrorists. In the absence of I-O policing then V-B for example might come up with alternate theories that explain why its interactions should be allowed to continue without the law. In the same way the 9/11 attack led to the belief that police actions to reduce terrorism were the wrong approach and that instead using Y armies to invade Iraq and Afghanistan would work better. In most cases this use of the military failed and General Petraeus for example had more success in Iraq negotiating with tribal leaders for them to police this terrorist problem.

It doesn’t mean however that V-B and Y-R interactions are wrong and should be minimized, Aperiomics is about how these systems work and so these interactions weakening I-O policing and substituting replacement theories such as laissez faire economics in their place are part of these systems. For example in the animal kingdom Y lions sometimes adapt to eat R prey such as gazelles where there is a lack of other prey, a limited number of Y predators can survive this way without damaging the food chain too much. A tree might need to have some feedback between its V leaves and B roots though more usually its growth is moderated through the I trunk, some weeds however might be mainly roots and leaves to exploit some resources. Crocodiles in Africa might feed on Ro animals such as zebras or Wildebeest crossing rivers in a herd but will also sometimes eat R prey such as lone gazelles drinking at the river. So these V-B and Y-R interactions cannot be eliminated any more than Y-R can stamp out R terrorism or R terrorists always succeed in wearing out a Y army and making it leave. V companies cannot always profit from B workers with sweat shops nor can B workers also end up outwitting them as they did to some degree with liar loans in the lead up to the GFC. When these interactions weaken there is usually a strong reaction from Bi and Iv society against them, Iv agents see their livelihood threatened by V companies trying to employ their B workers directly rather than using agents to negotiate for them. Bi communities are usually outraged by the poor wages and working conditions the B workers endure, for example with some factories making export goods in China in 2011. The Iraq war aroused similar protests where Bi and Ro communities were angered by the heavy handed torturing and killing of many civilians to find terrorists in this war, Iv and Oy people also though they could have done the job better with more surgical strikes such as finding more information about terrorists rather than killing people or torturing them without knowing for sure if they were innocent or not.

Controversies usually arise when one kind of interaction dominates at the expense of others though this happens naturally in ecosystems as well as societies usually from variations in the resources available causing instability. For example when B workers were perceived as an untapped resource for subprime loans this created deregulated lending that led to the GFC, in the same way the development of computerized trading led to V management and quants thinking they could use their talent to exploit the bad decisions of B traders without consequences. This also led to a crash in the market because they eventually misunderstood what these B investors were doing and loaded themselves up with illiquid investments that caused massive losses when there were no B people to buy them. This is the same dynamic as V-B companies where they exploit B workers with low wages to make products and then their companies crash when the B workers cannot afford to buy them, this was the interaction Marx thought would lead to the collapse of capitalism. The new B resource of workers and low wages that opened up with the fall of communism caused more V-B businesses to try and exploit this ahead of more balanced businesses and has led to massive trade deficits with advanced economies that will ultimately cause many of these V-B businesses to collapse. The situation is the same as with V capitalists using cheap wages to make profits and then speculate with each other, ultimately the B workers cannot afford their products and in the same way the advanced economies will not be able to continue to afford to buy these products while losing higher paid manufacturing jobs in this process.

When these V-B businesses fail then an oscillation to Iv-Bi businesses will happen and the I-O police will strengthen, however this will eventually result in missed economic opportunities such as companies still wanting to exploit these cheap B workers and so they will try again to weaken the I-O policing causing another collapse. After Y-R military actions such as Iraq and Afghanistan turned out badly there will be more Oy-Ro actions where like Petraeus the CIA and related agencies will try to negotiate secret incentives with Ro groups such as the tribal leaders to control their R insurgency. In many cases this will work but there will always be exceptions where R terrorists make attacks despite this Ro team trying to hold them back, this will lead to calls that the O policing strategy is not working and that more Y military intervention is needed creating another Y-R cycle.

The same occurs with crime in a Roy society, for example with drugs the R addicts sometimes cause so much trouble such as with robbing wealthy people in other communities that a Y-R drug war will be demanded to stamp them out. This results in R addicts filling up jails causing so much expense that the drug war fails, also there is so much injustice in punishing people criminally because of a medical addiction that the Ro communities will protest and become angry. In the same way attacking drug producing countries such as Columbia ends up with Y military killing and capturing R poor farmers who are only trying to survive and feed their families, their secretive planting of crops in the jungle and isolated areas makes this Y-R drug war more expensive and with poor results. The same occurred in Afghanistan with the Y US military attacking poor R farmers who needed to grow opium to survive, this conflict was moderated because it turned many of them into R Al Qaeda and into planting roadside bombs or IEDs against the Y troops. Because of this the drug war strategy became discredited and many of these poppy farms now proliferate where Oy intelligence agencies such as the CIA either profit from it corruptly or allow others to do so in exchange for turning in and controlling R terrorists.

After the GFC then these V-B businesses were discredited to some degree and so derivatives are more regulated on Iv-Bi exchanges though some V-B derivative selling still goes in through loopholes. More of the financial business is now better policed as Iv agents selling to larger groups of Bi investors such as pension funds and the new Consumer Protection Bureau in the US is designed to prevent a lot of V-B defrauding of investors and borrowers. However the missed economic opportunities will again weaken I-O policing leading to more collapses, this will occur for example with the stagnation following the GFC where some will argue that too much I-O policing is causing V-B businesses to not be able to produce employment at wages low enough to compete with the V-B businesses in economies like China. This is like in a forest where V-B plants sometimes do better than more balanced trees, Iv-B desert plants, or V-Bi grasses. It is also like in the Roy animal kingdom where Y predators will always get to weaker R prey despite the O middle of the food chain trying to chase them away or warn other animals to maintain their own food source.

One of the problems associated with weakened I-O policing is it often seems to provide good results for a while, this is because there are untapped V-B and Y-R resources that become used up and then lead to the collapse of the Roy food chain and Biv trees. Human society is different from an ecosystem because O animals for example might vary their numbers according to predators and prey making it far more resilient, a society however might change these color ratios far more extremely because of a new economic or legal theory that it proponents insist must be tried out extensively to give it a chance to work. Weakening I-O policing then produces many bad effects eventually but there are always some who complain that it has not been properly tried, Iv-B libertarians for example can claim that if the US economy had been allowed to collapse more completely in the Great Depression then it may have recovered sooner or that somehow the few remaining financial regulations caused the GFC rather than prevented it from being worse. Because there is no way to prove this without another trial of V-B business then the supporters of I-O policing cannot dismiss this arguments. In the same way supporters of the Y-R drug war in South America might claim they would have won except for the moderating influence of Ro protests in the US about the killing of R peasants, in the same way the Y military in South Vietnam claimed it could have won if it had not been hamstrung by the need to moderate its attacks on R Viet Cong hiding in Ro villages. The Y Nazis were often ordered by Hitler to use brutal reprisals against any R terrorism in occupied countries in World War 2, this often created more terrorism and conversions to R communism so many Gaulieters in these areas favored a more moderated policing approach where the Ro people were treated more justly in exchange for their moderating R terrorists while more the secretive Oy Gestapo tried to find these insurgents without upsetting the Ro people too much. This produced a more just situation but then other Nazis blamed losing the war on this restrained approach as many occupied countries developed much more R terrorism as the Y Nazis weakened from their battles elsewhere. The occurred in World War 1 for the Germans where they believed some of their own citizens acted as R and stabbed them in the back making them lose the war, Hitler responded to this in Mein Kampf with his Y-R strategy that more reprisals against R people would have prevented this. The allies also used an R strategy of attacking Germany’s allies with R secretive attacks which drew more Y army resources to prop them up and so weakened them on the Western Front.

In the same way the V-B financial businesses often blamed their failures on deceptive B workers and their liar loans, that they were in effect stabbed in the back and might have survived if there had been less I-O policing and protection of B workers. For example if people who walked away from their homes had been able to be pursued for their other assets or there had been more onerous bankruptcy laws then they as well as other creditors like credit card companies could have gotten their money back and prevented the GFC collapse. Hedge Funds also lost money in the GFC but many would have blamed this on the high Bi wages and I-O policing of labor laws which undercut American competitiveness against imports and so this caused businesses to collapse and not pay back loans as well as other B workers losing their jobs because they could not compete. This then caused them to default on their housing loans and credit cards triggering the GFC. Their solution then is more V-B business and lower wages, this comes back to Karl Marx and the problem that low wages mean that the B workers cannot afford to buy the goods they produce.

Y-V Empires also have this dilemma of either using I-O police to moderate their governing of countries but risk losing control because of this or being too heavy handed in stamping out R terrorists and getting a Ro backlash. Much of the Arab Spring has had this same problem where Y Gaddafi arguably caused so much Ro anger among the people by trying to kill this secretive R opposition that more joined the rebel army and he lost power. In Egypt the Ro crowds grew in protest as the army tried to stamp out R opposition until Mubarak had to leave power. In 2011 Syria has had the same balancing act of either attacking R isolated protestors too much and created more Ro resistance and increased numbers of R terrorists or moderating their response with Oy-Ro and risk losing control completely. The real problem is injustice where the I-O police are not neutral enough, when they are seen as Oy corruptly attacking the Ro people such as with the secret police then this will also be unstable compared to neutral O police standing between these Oy intelligence agencies and the angry Ro community. If these laws are neutral enough then the governments will likely survive, Biv democracy tends not to work well in countries with scarce Roy resources so one dictator is usually replaced with another. These dictators can also be R instead of Y and run into the same problem, for example the R communists in Russia tried to get rid of Y capitalists and imperialists in world Empires by using R insurgencies to drain the Y armies of resources so they collapsed. This often succeeded, for example the communists helped to weaken Y British control of India and caused them to leave. The US also failed to keep the Y governments of El Salvador and Nicaragua from falling under this drain on military resources, however they continued to argue they might have won if the US policies had not been moderated such as by Jimmy Carter’s insistence on more human rights in giving aid to Y dictators such as the Shah of Iran. Eventually though this R plan caused many communist countries to themselves fail such as the break up of the Soviet Union as they could not weaken the US and NATO enough militarily, in the same way the R Al Qaeda plan to weaken the US by drawing it into expensive Y battles in Islamic countries has so far not collapsed the advanced economies while Al Qaeda has been decimated.

B workers sometimes have a similar strategy, for example the use of government pressure to give them better and cheaper subprime loans as a way to make their communities wealthier. They used liar loans and speculating in houses to make more money and by this hoped to profit more than the perceived greedy V banks who would normally make more profits and keep them poor. This however led to some V banks failing which ended up causing more unemployment and poverty for B, this is also like Karl Marx’s observation about V businesses cutting wages until the B workers could not afford to buy the V business’s products. B workers can respond to this by being disloyal to a company and moving to another one where the wages are higher or they could steal more from the workplace, this acts as an unstable counterbalance to the monopolistic practices of V businesses even without B workers forming a Bi union. However this plan often doesn’t make some V businesses go broke or pay higher wages and B workers might leave a company and not get another job. In the same way the competitive situation in economies where Bi unions are banned or restricted means that workers try to compete by leaving V businesses with low wages and sometimes succeed in bankrupting them. This might scare other V businesses into keeping their B workers happy with higher wages and better conditions though this cannot succeed in overall making B workers become a wealthy community any more than V businesses can become prosperous long term by cutting B worker wages.

Just as V-B business proponents claim that their system has not be trialed enough and might work without I-O policing so too do V-B workers also believe they will eventually get the better of these V businesses. In the same way R communists also refused to believe the enormous amount of economic evidence that R communism was inefficient and that they would eventually prevail by destroying Y imperialism and capitalism. The reason for this is that I-O is not just for policing but also for reasoned arguments, for example debates in the media are usually set with an O moderator who acts neutral to be fair to both sides. Because of this the Oy versus Ro debates about crime such as the example of prostitution being criminalized can usually result in some O laws with some stability. However the attitudes of Y and R are very distant from this O moderation and so they tend to avoid this forum, for example in a Y-R war such as in Iraq and Afghanistan there was a reluctance for both sides to meet and try to work out a deal with neutral countries hosting the talks. The same problem happened with the US as Y and North Vietnam as R where they could not negotiate easily with neutral parties even with the Paris peace talks. The cold war continued for so long in part because Y imperialists and capitalists could not debate effectively with R communists and the argument was always that R communism had not been trialed properly or that Y capitalism was always too regulated to work at its best. Part of the reason for this is that Y is a team based color and so the normal viewpoint is most favored and changing this course to a minority view even when correct such as ending a war can be seen as deviant. Also R is secretive and deceptive even to each other and so their private misgivings are covered up with lies to each other to avoid being exposed by the R secret police. Because of this they also cannot debate their policies effectively, the result is that in a debate between the two colors there is so much deception and confusion about what they really believe in the R delegation and too much pressure not to be deviant to the Y conception of a normal society. This happened between the Y Nazis and R Communists under Stalin where Hitler had an unyielding view of normal Y society being polluted by deviant ideas and Stalin had so much deceptive information about what was happening in Russia that he thought it was working much better than it really was. In such a debate then Y thinks the others are deviants while R thinks the others are either liars or deceptive because of their own information shared between them.

More was explained about color logic and the different arguments the colors take in my first Aperiomics book, this goes into more detail as to the Ro positions which are against Y more directly while R tends to have their own ideas rather than even address the Y positions on issues. Iv also is a victim of deception between its members and has a different view to Bi but because they are more moderate they usually come to a compromise with the O police, debate moderators, law courts, etc. These kinds of debates are also reviving in the advanced economies, for example while part of the Occupy Wall Street movement was Bi union based and had a more reasoned position against V management paying higher wages the B participants were often completely alienated from Y Wall Street people and were unable to debate with them. This was seen for example where B was accused by Y Wall Street supporters of having a coherent message and their economic theories being nonsense and sometimes R communist inspired. In turn they believed that these movements would eventually break the resolve of these V businesses and lead to higher taxes on them as well as more employment and wages for B.

The result was the debates in the media about the movement created a disconnect where more moderate Bi members of occupy Wall Street and more moderate agents of Wall Street were able to come up with sensible compromises and sympathy for each other. Other arguments became incomprehensible where Y proponents talked their own position and couldn’t connect at all with the B protestors, one example was Peter Schieff was a Y viewpoint trying to talk with B protestors. Other talk shows such as Bill Maher’s Real Time, Bill O’Rielly and the various pundits on Fox news or MSNBC in 2011 have a similar problem where V-B people in a discussion often end up shouting at each other and the O moderator loses control of it, then other Iv-Bi guests are more moderate in their attitudes and the O moderator can often establish a middle viewpoint between them. V-B discussions about economics issues or Y-R about criminal and military issues are so difficult to moderate as I-O that usually the show collapses into favoring one side or the other, for example Fox news usually ends up favoring Y-V, MSNBC and Bill Maher tend to favor R-B. When these shows favor one side or more usually have Y-V versus R-B debates then they usually end up favoring less I-O policing or more direct action to resolve these problems, for example Fox News tended to not favor police actions controlling R terrorists and wanted a Y military response that after trillions of dollars in costs as well as so many troops being killed or wounded sometimes led to more moderate Ro versus Iv debates. Ron Paul with an Iv-Oy libertarian approach in 2011 used this more moderate argument where they tend to run from or avoid conflicts rather than getting caught in Y wars of attrition. They then attracted more moderate Bi-Ro people arguing the other side of this issue where communities in these countries as with the Petraeus strategy in Iraq might be able to control this terrorism in exchange for more aid. This then creates conflicts between pundits who cannot or will not moderate Y-V versus R-B issues and then they have to respond to O moderators who are trying to publicize these Iv-Oy versus Bi-Ro debates. For example the Europeans are much more moderate in their attitudes about terrorism as Oy-Ro while the US was more Y-R and accused them before the Iraq war of being Oy cowardly much as some accused Ron Paul’s stance of being. However this also created less of a problem for the Europeans in the Global War on Terror as their Ro friendly position meant that far less threats were made against European countries and then mostly where they had joined militarily with the US.

In 2011 then the same problem occurred in the US between Fox News on the right and MSNBC on the left where some pundits had given up on being I-O moderators on issues and openly embraced one side or refused to participate in the issues, others were more moderate and I-O. this shows the instability of I-O where it can wax and wane in strength, some issues have strong moderation where the sides are Ro and Oy such as for example with the sentence length for various criminals. Other issues such as Y imperialism versus R communism had virtually no moderation by pundits in the US during the cold war because it would be seen by Y-V as deviant and their possibly being R-B communist sympathizers. By contrast in Europe during the cold war there were many more Oy-Ro debates as well as communists openly standing for elections. Ultimately it was probably more these debates that swayed the R Soviet Union to give up its extremism to become a more moderate Bi-Ro mixed economy.

The weakening of I-O policing can then create temporary winners which then act as evidence for more weakening of the police. This can be Y-V versus R-B who are so distant from I-O of all forms they have difficulty in related to it at all, they then dismiss I-O regulating as either irrelevant to them or harmful. Iv-B acknowledges I-O policing because many Iv agents have a connection to them either as snitches or working there, however they also profit from going around the police when they find a good deal with B people. For example an Iv agent might have respect for the I-O police because they help to collect his commissions in the I-O market, he also though likes to try and get around them for some deals with extra profits and can then risk not getting paid. V-Bi also weakens I-O policing because while the Bi community has a strong relation with the police such as with posses, vigilantes, and neighborhood watch they also try to profit in wars of attrition against V companies such as with union demands and strikes. So these interactions are always pulling against the strength of I-O, however other interactions are strengthening them. For example Iv-Bi interactions are conducive to building a stronger police and to settle disputes between them, also V-B companies sometimes collapse into Iv-Bi moderation and then help to strengthen the police. Iv-B might go to the police and courts if their game of deception fails, for example many of the tulip buyers and sellers in the Tulip Bubble tried to get the law to help them when the bubble burst. After the GFC many banks that engaged in predatory Iv-B lending tried to use the courts to get their money back, also B workers using liar loans tried to pain the other side as predatory. This made it difficult for the I-O courts when both sides were guilty of so much misbehavior if not crimes. Also V-Bi sometimes goes to the police for help, for example a strike might turn violent as Y-Ro and so the O police might stop people getting killed. Also some strikes might be decided to be illegal or that a V company might have to negotiate in good faith, this might happen after one side starts to lose in this war of attrition. Not only are these strengthening and weakening color interactions occurring but there can be different situations in Roy and Biv areas that cause I and O to weaken their relationship between each other. For example in the GFC there would have been disputes as to when some subprime lending was criminal or civil and so the FBI at times might have seen criminal behavior and been at loggerheads with the SEC who could only prosecute I civil infractions. When an economy starts to fall apart into Roy or resources have become scarce for other reasons then the O police might become stronger and start jailing people for behavior that usually would only be a fine. For example as there are more Ro demonstrations the O police might hurt more protestors and this would alienate those who think there should only be fines for demonstrating about the government.

There can also be different color interactions going on between Roy and Biv areas of the economy, for example the Biv areas in the subprime crisis had been Iv-B where Iv agents and B workers were each often deceiving each other. The Roy areas though would have been much more even handed about prosecuting both for fraud in many cases, the Iv agents for altering loan documents and the B workers for fraudulent loan applications. If the police were right wing then they might have prosecuted the B workers and let off the Iv salesmen, if left wing then vice versa. These kinds of imbalances can further strain the relations between I and O, for example the SEC might have a tilt towards Iv agents because many of its workers want to transfer to Wall Street and use their experience to get a job. They might not then want to alienate potential employers by prosecuting them too zealously. The O police though might be more influenced by the Ro angry demonstrations in communities where it appears Oy salesmen defrauded people with loans they could not afford to pay. In this case then the police and courts might tend to prosecute the Oy agents and subprime lenders and assume the R borrowers were deceived into making a false no documentation loan. Sometimes the color interactions are extreme, for example the O police in Egypt might be relatively neutral on crimes such as theft but more Oy on politically motivated crimes, and then more Ro in sympathy with angry people against thieving shopkeepers who might short change someone on food rations. Then their I police might be Iv biased for crony companies to the government, by more neutral where there are fines for library books and speeding tickets, then more Bi biased when a company might be fined for misleading advertising. So in a country the O police might be Ro in being against thieving shopkeepers but then the I police might be Iv in supporting cronies of the government that own a chain of shops leading to antagonism between I and O. However there is also a bond that strengthens between I and O in that other colors are usually against them and so they are natural allies to each other.

There can also be Biv areas with different color ratios as well as with Roy areas, for example some areas in a democratic country might be V and vote for right wing parties and others are B and vote left wing. This creates various interactions between them, for example they elect V and B politicians who then have to get along in the government when various issues are voted on. However sometimes there are workers who have a V or Iv attitude and who tend to elect so called Limousine Liberals to represent them, they tend to believe that business needs to be helped to provide good Bi-B jobs. There are also V-Iv businesspeople, perhaps some because of a working class background are sympathetic to higher taxes on the wealthy and the need for higher wages and better working conditions for workers. This is seen for example in the US where some wealthy people even as politicians are Democrats and actively support goals against their own interests such as increased welfare. Sometimes this is from being a V or Bi team player, they then as V tend to think of Bi communities as somehow part of the overall V-Bi team even though it is also divided in a war of attrition on some issues. Iv people and politicians such as Ron Paul can also have ideas against their V-Iv side such as reducing the military industrial complex that might safeguard companies that funnel wealth to V-Iv, this would help the B poor who usually make up the bulk of the military in advanced economies.

So not only do colors work for their own interests in a selfish way they also tend to help other colors either in an altruistic sense but also perhaps recognizing the system as a whole can become unstable if everyone is only supporting their own profits. This is seen much more in I-O where people have evolved to be neutral but juries have prospered in advanced economies because people from different colors are prepared to be unbiased and neutral. They also work because colors can be balanced against each other, for example imagine if a jury contained one person from each color as R, Ro, O, Oy, Y, G, Gb, B, Bi, I, Iv, and V. The views of G and Gb people are covered more in my first Aperiomics book but G is basically a belief in public property and public solutions to problems such as government owning the roads and air, having a right if people decide to overrule private property by buying back someone’s house on a freeway route, put criminals in prison and deprive them of their private rights, and so on. Gb people are like libertarians in some ways but can still be V-Bi team players rather than individuals, they believe that private property can apply to most things such as private roads, private beaches, privately owned parks, that people’s property cannot be seized from them by the government, that tax can be a form of theft, and so on. However they might also believe in a kind of group ownership like a corporation by its shareholders where people agree to work as a team in a kind of privatized socialism.

Such a jury might vote neutrally because if V and Iv always vote for a businessman and B and Bi always against him then the I juror would break the tie. The G and Gb people might be neutral unless the case involves property rights, for example if a B person stole some food from a rich businessman after unemployment insurance had been cut then Gb might think this is an infringement of the businessman’s private property rights and the G juror might think the wealthy businessman should have paid more taxes and so might vote to let the thief off. The Roy part of the jury might treat this as a more criminal case while the Biv part might see this as something to be handled by fining the thief or letting him off. In that case the Y and Oy jurors might see the B defendant as like an R thief who should be punished as his excuses are probably lies, they might also see R people as a contagion that needs to be controlled like R drug addicts stealing for food because they spend all their money on drugs. R and Ro people might see the issue as Y-Oy people corruptly becoming wealthy and reducing others to being economic prey and then begrudging them even the food to survive and decide to let him go free. The O juror might then be neutral on the evidence so Roy also would tend to be balanced on the issue but more as a criminal case rather than a civil one. In this way though justice might be done on the average, just randomly picking people and allowing some to chaotically and deceptively either get out of jury service or hide their prejudices which would disqualify them might make the overall jury have a balanced amount of deception and a balanced amount of team based thinking which either works for or against the thief. In this way then a jury and also the voting public tends to vote with their interests and sometimes against their interests so the overall effect is a kind of dynamic balance.

Sometimes though this balance is upset and can then give biased verdicts in a court just as these biases might surface in a judge, in the police which might tamper with or fabricate evidence, with dishonest witnesses, with politicians who change the law or the penalties to reflect a bias, with the government trying to defund the police and courts or to give them excess money, and so on. For example a jury in this case might have more V-Iv and Y-Oy people on it, the Iv and Oy people might deceptively have said they were neutral but secretly hate B people because they have been ripped off by them in a business deal or have been robbed by a drug addict. For example there might be an Iv salesman who thinks the B workers with their liar loans damaged the economy or destroyed his business. The Y and V people might be business friendly and so want to demonstrate support for the businessman because they see society waging a war of attrition against them in raising taxes so the issue is an Us versus Them situation. In that case then some juries might unfairly convict someone who is starving and is not any kind of addict, gambler, etc but has fallen on hard times in a recession.

In the same way if the jury has more B and R people then they might see society rigged against them and they must be deceptive to succeed at all, for example with a persecuted minority like Gypsies in Europe. They might then lie about this bias and try to get the thief off, the Bi and Ro people on the jury would see this as an Us versus Them problem where greedy capitalists would let people starve to build a bigger mansion and also let him off. So the results of this kind of justice would be random variations where V-Bi and Y-Ro team players have an Us versus them mentality and chaotic variations when there are deceptive Iv-B and Oy-R people scheming against each other for or against the defendant. The result then is like the I-O market where randomness and chaos affect defendant’s fate but the I and O jurors if they are over represented might act as swing votes to make the verdict more fair, if they are absent on the jury then the verdict might be according to the color ratios of the jurors rather than the evidence.

In the same way a government or private organization can elect people that interact like this on various issues, for example when a law to increase penalties on crimes by poor people, such as California’s 3 strikes policy, is voted on then similar ideas might be held by the politicians. If then there are relatively few I-O centrists then the results can vary wildly according to the voter’s intent or sometimes the politicians secretive motivations such as being paid by lobbyists, personal prejudices, voting one way on a bill in exchange to votes promised on another bill, and so on. The same kinds of issues can affect any voting body, for example an apartment building might have elected owners to have rules about the inhabitants of the building and have the same kinds of interactions. A company or pension fund might experience these interactions though generally the company’s board might be more V-Iv and the pension fund Bi-B though some European companies have union representatives on them and some company pension funds can be dominated by the V-Iv management.

The I-O police can also become weakened by the process of failure that appears like success to some, for example Iv-B can lead to a collapse of the economy but its extreme competitiveness means that some will make more money and some will point to them as an example that the economic policies are working. V-Bi can also lead to stagnation but the team based colors will tend to favor those most in the middle of the normal curve with extra business and help, they can then point to these people and say the system is helping the normal people and is less favorable to deviants rather than failing. However as both of these continue to fail the number of losers will grow and will lead to more protests and doubts over time, for example with so many hedge funds collapsing and losing money in the GFC the overall opinion of the system would have turned negative for most of them. In the 1970s as the US and European economies stagnated even very normal families would have started to have been hurt so the excuse that only deviants were not served by the system would have worn thin. The problems also tend to be hidden and the benefits more celebrated, for example Iv-B makes the economy so opaque that saying it is doing well is difficult to dispute. V-Bi makes it so transparent that it seems there can be no hidden solutions and so the system is as good as it can be.

This can also relate to the arguments that would go on in a jury, for example the I and O jurors might be up against the various prejudices of other jurors and see that their votes will be ineffectual or that others are not interested in the evidence but the ideological and moral issues behind it. When the jurors then debate the case their arguments can encompass the full spectrum of color logic explained in the first Aperiomics book, some would define their attitude as being against something rather than for a viewpoint. For example an Oy juror might base his vote on being against R thieves rather than promoting a particular law. He might just think people like this are guilty and society is better off punishing them by deterring more crime or putting them behind bars where they cannot steal. R and B jurors are thinking of the welfare of the thief and are not really against anything. Ro and Bi jurors are against the Y-V capitalist system being too greedy and so might see this thief as a pawn in that larger battle. Y and V jurors might be for their own wealth and profits and so see any thief or even workers getting more money as cutting into those profits and so to be stopped if possible.

Usually though people are not as fixed in their color views, a V juror might have some R relatives and some sympathy against his own interests and vote for acquittal. An I or O juror might usually be neutral but has recently been robbed and this blinds his judgement, a Bi or Ro juror might run a part time business as well as have a job and so is less sympathetic when he has been ripped off such as by consumers not paying their accounts. Tracing all the different color interactions is quite difficult, especially because some colors are secretive and deceptive and so the result is often the deceptive ones with hidden biases are rarely exposed while the more open team colors find the system sometimes mysterious and perverse.

These twelve jurors then can represent a political spectrum or equation of viewpoints on which politicians or members of any organization or economy can be mapped to understand where the secretive and deceptive interactions might be, and so where chaotic collapses might occur. For example mapping out an economy with areas according to different color codes on different issues will show R-B and Iv-Oy areas which would be where chaotic pressures are building up. Mapping out a government elected body along with their advisors, lobbyists, voters, campaign fund donators, people who protest to them, petition signers, etc can then show how these random and chaotic factors interact and whether the system is strong enough in I-O people and organizations to remain stable or is likely to periodically collapse or experience instability. From charts like this the whole lead up to the GFC and its aftermath can be shown with explanations of all that happened and is likely to happen in the future, predictions though would rely on a mathematical analysis that will be covered more in an upcoming book.

For example the Great Depression can be better understood by tracing the various color interactions of the politicians, regulators and courts that guided the responses to it such as with running a deficit or trying to balance the budget, allowing the money supply to contract, allowing some companies to collapse on the theory that a rapid liquidation would result in a more rapid recovery, setting up new regulators such as the SEC and FDIC in the US, the Pecora Investigation in the Congress on how fraud on the stock market caused many companies to collapse in 1929, how tariffs were debates and ultimately passed into law on particular goods and at what rate, and so on. This is separate from the actual merits of such laws, often the I-O influences are quite weak and so the influences of different groups and individuals whether open and honest or secretive and deceptive decided these laws. This kind of analysis can be different like with the jury example where there might be no neutral I-O jurors at all and so cases might be decided by the various agendas of the people on it. As the Great Depression spread around the world then the color interactions were probably weak in I-O policing and so were unstable, this extended over time to more Roy solutions as the increased poverty led to R communist agitations and uprisings in Europe which then led to the rise of Y Fascist in Italy and Nazism in Germany to battle with these insurgents rather than having the situations being resolved by neutral I-O police and courts.

It is important to realize this point because in Biv society we can become used to a relatively strong I-O police for many crimes, for example thieves get caught regularly and punished, murderers and other violent criminals often horrify the whole community and are imprisoned or executed, embezzlers and fraudster in the GFC were in many cases brought to justice. However these relatively strong I-O interactions mask the more unstable aspects of much of the global economy where it is so weak as to be insignificant, for example in international affairs prior to the League of Nations there was probably little or no real I-O neutrality in military issues in the world. It was instead dominated by Y-V Empires who found it difficult to moderate their own behaviors when profits could be made by predatory attacks on weaker countries, some such as the British and American Empires were more just but still had no one to really prevent them stealing resources from their colonies or letting them starve or die from diseases rather than give some profits back to prevent it. In the same way the evolution of civilization has given some I-O policing from crimes but this has rarely extended deeply into the financial industries especially when they have been associated with Y-V Empires. Consequently the GFC cannot be just looked at as a mysterious contagion that infected the financial industry or money grid but a natural extension of what has happened throughout history when there have been no moderators between Roy predator and prey or Biv business deals. In this way then the GFC was nothing new compared to many previous recessions and crises, however tinkering with the balance of colors or some having remorse for their actions in the lead up to the GFC can never substitute for I-O policing in all the areas that failed. This is one of the most important points in Aperiomics, that this I-O policing is difficult if not impossible to strengthen enough to cover all these areas and so these unstable color interactions should lead to such crises and wars over and over.

For example money tends to flow in and out of economies without I-O policing its speed can have effects like cars driving too fast on a freeway. When there is a financial crisis money can move very rapidly whether in to buy up distressed assets cheaply or out in a panic and the momentum of this can cause more collapses like a tsunami of water. In this situation the I-O policing of money is only marginal, for example the regulators might check whether some money if not from tax avoidance or crime but usually not whether its momentum is causing economic havoc. Even when they have in the past currency controls can slow down this Iv-B momentum but then create V-Bi economic stagnation or see people with their money trapped in an economy like people trapped in a burning theatre. It can also keep money out of an economy for fear of being trapped later. Such a problem can be resolved by neutral policing of money movements so controls can be imposed where actual harm is being caused by it. This would then make some money flows safer because investors would know when their behavior was unlikely to trigger controls, for example they might expect that capital flight might be constrained in a crisis and so not seek to profit from precipitating a crisis by shorting a currency or trying to steer a smaller economy onto the rocks for profit. When substantial amounts of money would be policed in such a situation then Iv whistleblowers are much more likely to tell the I-O police about manipulations like this as they could not profit much from this knowledge and potentially lose from it.

For example in 1994 Mexico had a financial crisis from financing its tesobonos which eventually required the IMF to finance some of their bonds, the money flight in effect caused a crisis to some degree but the deeper problem was hidden Iv-B corruption that suddenly became exposed and led to the panicky withdrawal of money. Since there is no easy way to police economies like this to prevent corruption and unpleasant surprises then these V-Bi and Iv-B disconnects must reoccur, V-Bi investors looking for a transparent and safe investment were surprised by the boom and bust based on Iv-B corruption. The small areas where there is I-O policing then tend to mask the lawless nature of the rest of this kind of investing.

In the 1990s Japan had the first of its Lost Decades from an unsustainable boom in real estate resulting from the profits from its trade war and surplus with the US. When this collapsed many banks used creative accounting to hide their losses and so this lawless section of the economy dragged down other areas, for example the bubble was Iv-B and deceptive so when it burst the V-Bi investors in banks, real estate, and companies were burned by the escaping energy like heat burning from steam. Afterwards much of this fraud remained as Iv-B because I-O regulators still had little power to delve deeply into these companies as well as there being little political will to do so. Like a sick patient the hope was they would recover without having to expose who was involved in making him sick in the first place. The V-Bi investors then looked at these secretive and deceptive Iv-B areas and tended to avoid them, this then changed the Iv and B roots and branches form being conduits to growth to being dangerous highways where robbers might be hiding. The result then was V-Bi stagnation where money could not easily move around without encountering deceptive areas where a company might go bankrupt losing the funds. Because then the lack of regulation in this areas was masked by the seemingly efficient I-O policing elsewhere this situation was somehow presumed to be under control.

In 1997 Thailand, Indonesia, South Korea, and Malaysia had a similar problem where their economies were apparently policed well enough though the problems were masked by economic booms largely caused by the inflow of capital. Iv banking agents visiting economies would have found corrupt ties between the government and many companies, this would mean that when the bubble burst the local I-O police would side more with Iv agents and Oy embezzlers rather than the more transparent V-Bi overseas investors. This was shown for example in the book A Game as Old as Empire, particularly the chapter Selling Money and Dependency. In Thailand there was a panic because Iv-B investors began to far the currency was overvalued, this caused money to rush out like people from a burning theatre and this caused the collapse of their foreign currency reserves. Much of the reason for this overvaluing may have been for corrupt reasons, for example Iv cronies would be able to get their money out before the devaluation for a quick profit and then be able to buy into distressed businesses later. Malaysia used more I-O policing and imposed capital flight controls and prevented much of the damage to its own economy. In 1998 Russia defaulted on its debts after this Iv-B capital flight which had invested partially because of innovation in derivatives with long term Capital Management. This investment boom proved to be unsustainable and the sudden panic and rush of money out of the Russian economy caused it to default to local and overseas investors. This in turn caused Long Term Capital Management to default and threatened the global economy, the effects show the Iv-B chaos was even at this point threatening to become a GFC. They had speculated on the higher yield from Russian bonds assuming that in the opaque Russian economy that it was more policed than what it really was, the resulting default caused its highly leveraged investments to collapse and for the Fed to engineer a private bailout. There was then a veneer of I-O policing in Russia from its abandoning R communism but this was often to become Iv-Oy secretive and deceptive capitalism such as many oligarchs founding their fortunes from buying state owned assets cheaply. In 1999 Brazil, Ecuador, and Pakistan all experienced sovereign debt crisis which again showed that this veneer of I-O policing was allowing Iv-B chaos to thrive inside it. In the next few years Ukraine, Argentina, Turkey, and Uruguay had the same kind of crisis, in each cause the Iv-B opacity lured V-Bi investors to be burned again while Iv-B investors played the dangerous game of riding local booms and trying to get their profits out before the bust. Arguably these were like chaotic tremors before the main GFC shock because the same kind of lack of I-O policing occurred in each economy, V-Bi investors such as banks were lured into an apparently safe situation only have it implode as it levered businesses collapsed. Then the banks usually had to be bailed out or given some preferential treatment to make up the losses instead of the whole investment situation being effectively policed. Debt is only partially the problem with Iv-B collapses like this, it is the assumption that I-O police are more vigilant than they really are that often lures in too much money. Also Iv-B economics is designed to boom quickly with resources, this can give the quick results investors associate with the momentum of a fast growing and prosperous economy. As mentioned elsewhere the IMF and other investors can pressure economies into engineering this high growth without any way for it to mature into a stable Biv economy. If the economy is growing rapidly but there are not enough sustainable resources for it to keep going then it can either suddenly run out of resources and collapse, investors can become aware of this approach disaster and panic, or if there is enough I-O policing and transparency then the real potential of the resources in the economy can lead to slower but more sustainable growth. When there are so many intelligent people in banking and various investment funds the only way a boom and collapse can occur is with opacity and deception between people.

Sometimes this problem would occur even more if an economy had embraced Iv-B economics and deregulation, this resulted in a growing opacity that lured in V-Bi investments only to collapse. Argentina was an example of this where nearly every sector of the economy collapsed, however it also benefitted to some degree from a faster regrowth like desert plants tend to do.

BCCI was a famous example if a corrupt Iv-B bank based on Pakistan where many Iv and B intelligence agencies used it to funnel money secretly to resistance fighters such as the Oy Mujahedeen in Afghanistan against the R Soviet Union invaders. When the corruption was exposed there was a panic to withdraw money as well as much of its operations being shut down by I-O regulators whereas previously they were probably steered away from investigating BCCI because of its political uses. In some ways it resembled the rise and collapse of Investors Overseas Services started by Bernie Cornfeld, this was a largely unregulated international series of investment funds that frittered away V-Bi investments on speculative projects and then collapsed. Investors assumed that because individual countries had I-O policing of their funds that an international fund would also be well regulated.

When I-O policing appears to be more like a veneer with a lack of policing underneath this is more like deceptive Iv-Oy police pretending to be more honest and neutral than they really are. Sometimes the Bi-Ro parts of the community also are too strong in the police, there can seem to be a neutral and stable police in an economy and then this is usurped by a vigilante like protest from the Bi-Ro community. Examples of this can be Islamic economies which might periodically become angered by a blasphemy against Mohammed or a sexual transgression of women. These riots can also be damaging to economies, for example the Arab Spring was in many ways a Bi-Ro uprising against Y-V leaders and this disrupted oil production in many economies causing economic pain in others.

Sometimes the perception of an economy as prosperous and influential gives the impression that I-O policing pervades all financial transactions, for example Robert Baer in his book Sleeping with the Devil describes how Saudi royalty at one stage promoted defense contracts because it was easier to pad them with commissions for them while other contracts for construction were more policed. This also affects the whole region when arms might be purchased elsewhere for the secret Iv commissions involved destabilizing the area and creating more Oy-R arms races. It can also be that this appearance of pervasive policing deters some Iv-B and Oy-R people from deception in the system, for example they might not know if they are being monitored and so this could slow the spread of chaos. R terrorists in a Biv society could be under surveillance with their email, phone calls, etc and even if they are not being watched this will tend to be a moderating effect. This is like in the Roy animal kingdom where Oy predators would not know if any O animals are around or not so they might be more careful on another’s territory. The police use this secrecy and deception with their Iv-Oy aspect to appear stronger than they really are, for example the traders who realized the weaknesses of the I-O regulators in the lead up to the GFC would have done better than those assuming certain kinds of transactions were being watched. This might have been done by I-O workers changing jobs and going to work for Iv agents and brokers on Wall Street, they might take their knowledge of how the SEC works and allow other companies to know how closely they can skirt the law without being prosecuted. Sometimes this can be an extensive grey area where a regulator might be aware of wrongdoing but for bureaucratic reasons not have the budget, the time, the political influence, etc to go up against some large Wall Street companies. Much of this was discussed in Sauer’s book Sold Short, often the SEC for example would avoid difficult cases and prefer small and fast investigations so they could close many more of them and appear to be more effective. If an Iv-Oy agent knew this then they would be as secretive and deceptive as possible, the more complex the situation and arcane the laws involved the less likely I-O police will have the expertise or enough evidence to delve deeply. In the book Sauer also explains that many in the SEC had little experience with securities law and so were intimidated by Bernie Madoff in investigating his Ponzi scheme. They also had a small budget to pay for overseas investigations, also there was little cooperation with overseas I-O police agencies and so many criminals could hide transactions outside the US.

Trying to piece together a global fraud was then very difficult because it might require cooperation from many different countries, also tax havens often have an interest in being secretive for their clients. They might then rely mainly on Iv-Oy snitches to alert them to wrongdoing or random audits but Iv-Oy agents might not know if they have snitches amongst them or when a random inspection might come so this is a powerful deterrent even when the I-O police are very weak. For example police patrols might be infrequent in some areas or a response time to police might usually be long but many Iv-Oy criminals would not take the chance because they are more timid by nature. This can then cause a system to be relatively crime free even with a weak police and regulators and then quickly develop a problem as criminals find the weaknesses in the I-O police are too great to deter them. For example while derivatives were unregulated in the US the regulations on other securities would have had a moderating effect because many traders would have been dubious they could get away with too much in derivatives when regulated elsewhere. In effect they might suspect traps and stings and this would deter some, the natural selection effect would make some be more foolhardy and they would then realize they were consistently getting away with more than the potential fines would be. This is like in the Roy animal kingdom where Oy predators might be timid but some would always have more courage and so would find some prey are not as dangerous as they seem. The first people to take out liar loans would have been worried about it if they were taking big chances to speculate on houses, they might have expected to be reported to some I-O regulators. When they got away with it they might have told some friends and then it spread chaotically by exploring where it was safe to be deceptive, this is also like R prey being afraid to go near a watering hole because they expect predators to be there. Some might try it and then when they are not attacked the others follow quickly. In this Oy-R and Iv-B game of mutual bluff and deception then sometimes the only way to find an advantage is to call the other and see if they are bluffing or not. For example the first Iv salesmen that tried to use the liar loan applications might have also thought they would get into trouble like those altering loan documents to get them passed, when they succeeded then others would have seen this and the chaotic contagion would have quickly grown. This is why R and Oy groups of animals watch each other, they are not in a herd for mutual protection but to see when other moves towards food to compete for it. Also if one is attacked then they have an early warning to get away themselves, the secretive and deceptive colors whether in animals or people are usually watching others like them for clues of opportunities and danger while also expecting them to be deceptive about it.

A subprime office then might have discovered that liar loans were a lucrative source for commissions for its agents and that they would be long gone by the time the loans defaulted, this then would be a closely guarded secret to keep the profits to themselves. Other offices though would see this extra prosperity such as from people dressing better and driving newer cars, some would then try to make an agent snitch on his office and get the secret and in this way the financial contagion spreads without the I-O police finding out. When they are finally aware of it, perhaps an Iv-Oy agent got caught in a random audit or was snitched on by another trying to reduce a sentence, the I-O police might not easily find out the extent of the chaos because the agents keep trying different deceptions until they understand the limits of the I-O police’s powers and knowledge. This also occurs in the animal kingdom, for example R gazelles might learn how close they can let Oy predators get and still outrun them. They can only find this out by watching some foolhardy prey allowing them to get too close. Also Oy predators usually learn how close they need to be by watching others.

Bi-Ro people as well as Ro animals have their own strategy for either evading or getting more of what they want from the I-O police. Ro communities have their own biased kind of policing such as gangs might beat up Oy thieves they catch, this vigilante style justice can often lead to revenge attacks from Oy thieves as they have the backing of more a powerful Y mafia or gang. This can then lead to a war of attrition between Ro and Y gangs which is why the O police are needed to moderate Ro behavior. In the same way though too much Oy thievery can lead to a kind of Oy-R secretive and deceptive war, when Ro gangs try to stop this to protect their R friends this brings the Y mafia into the conflict and so there end up two escalating wars of Y-Ro and Oy-R where the O police need to broker a settlement just as with warring nations and O neutral ones. In this situation then Oy salesmen might be trying to get around the O police by the more foolhardy ones testing them and getting caught, often to snitch on the others. However some can find the limits of the O police this way and so a path of chaotic contagion in the economy can grow. Ro gangs also test the O police by seeing how far they can go with being vigilantes, for example if they beat up Oy thieves the O police might turn a blind eye as it saves them doing something, is deniable by them, and often police do the same thing. If the Ro gangs tortured or maimed these Oy criminals though then the O police would usually step in or a Y-Ro war might result. So Ro as a team color has a normal behavior with some deviation around this, when caught going too far then this is disavowed as from deviant members who would be punished. Sometimes though Ro gets away with it and then they see a way to clean up their neighborhoods, for example they might beat up Oy thieves more and when they find the line they can get away with, They often get away with this completely because the Oy thief might never come back, they might complain to their Y masters who do nothing because they don’t want to risk a bigger conflict, and so on. So sometimes the O police fail to catch criminals from both sides because they are being tested. In the same way each color tends to test its neighbor and others to make gains, for example R thieves might use secrecy and deception to test how far they can get against robbing Ro neighborhoods, Oy thieves might sometimes try to rob Y gangs. If they are caught then there would likely be no O police involvement so the penalty could be severe, also Y and Ro gangs tend to push around Oy and R thieves with their numbers to see how far they can get. This is why color ratios can change, each color is usually trying to get extra resources from the others and is looking for a loophole, some property unguarded, etc.

The same also occurs in Biv areas, for example Iv agents in the lead up to the GFC were always trying to find a way around I-O regulators in the financial industry and found a way by getting Congress to deregulate derivatives. After this they also succeeded in making regulation of subprime loans a federal matter rather than letting the individual states counter the fraud going on. Some of the early Iv-Oy subprime lender were more fraudulent and while they were prosecuted others watching them could see more ways they could grow chaotically and perhaps not be prosecuted much or at all. Also Fannie Mae as Bi was used to throwing its weight around with regulators and the Congress because it had so many lobbyists and donated so much money. This allowed it to control in the early stages much of the subprime business because only they could offer a sufficiently reputable and safe bond for many pension funds and government agencies to buy. This then is like the Ro gangs working out how far they can push the O police, Fannie Mae in effect punished the Oy subprime lenders for going on its turf and this raised the ire of the Y-V Wall Street community behind them who used their influence with congress to curtail Fannie Mae’s influence. At the same time the Oy lenders were secretly trying to grow a fraudulent business in lending to R people, also a more respectable business with their Iv agents lending to B workers. So this testing of other colors led to finding defects in the I-O regulation of the financial system and so the Y-V versus Bi-Ro war between Fannie Mae and Wall Street escalated while the Iv-Oy versus R-B secretive fraud grew chaotically out of control.

Usually a color’s efforts are not intended to beat another color completely, for example Oy fraudulent subprime lenders would not have intended to completely drain R people of their savings. Also they would not have intended to completely subvert the I-O police because most people recognize that anarchy without them can be dangerous for profits as well. The process then happens incrementally, Oy-R chaos grows in small steps that eventually undermine the system so much that it collapses like tree branches riddled with termites. A Y-Ro war of attrition can grow while still appearing to be sustainable, for example in World War One the Central Powers as well as the Allies at the beginning had plenty of resources and thought they could resolve the war before they became exhausted. In the same way a Y war between rival mafias or one for example between black and Hispanic Ro gangs might initially be tolerated by the sides involved but as it grows with more atrocities on both sides generating more anger it can consume too many resources. For example the fight between Bi Fannie Mae and Y Wall Street became systemically dangerous for the US economy as it affected so much of the I-O policing of subprime lending.

The same might occur in the US Congress for example, the V Republicans and Bi Democrats might have wars of attrition such as with V Newt Gingrich and Bi Bill Clinton over shutting down the government in budget disagreements, at the same time there are Iv and B fights over bills such as for welfare, security which eventually led to the Patriot Act, secretive earmarks on both sides attempted to be inserted into bills anonymously and so on. The centrists are always being tested for weaknesses to exploit which gives these V-Bi and Iv-B deals an edge making the overall political situation more unstable. For example with V-Bi disagreements these can make both sides more angry and so the gridlock gets worse, this can then lead to exposure of Iv-B secretive issues like gay politicians being outed, Clinton being exposed for his affair as well as Gingrich and Livingston, and so on. When these conflicts get out of control then it is usually up to these moderate and centrist politicians to broker a deal to make things more stable again. Not only then does this testing occur in all different industries and neighborhoods of a society but also in its government so the actual influence of the I-O police as well as I-O centrist politicians or moderate people in a community is always unstable.

Sometimes then politicians may have to resign as a secretive scandal is exposed, bureaucrat might be targeted for minor ethical lapses and sacrificed in a deal or as part of this war of attrition, police can be made scapegoats to quell racially charged anger in the Bi-Ro communities, and so on. This can also occur in other economies, for example the Russian default on its debts led to Boris Yeltsin having to stand down and be replaced by a strong I-O Vladimir Putin. In 1998 the economic turmoil les to Suharto in Indonesia being deposed, this would have been where the Y rulers of the economy picked a new leader much like a Y pride of lions might replace their leader if they fail to find food or get the pride into trouble. The same occurred to some degree with the Arab Spring in 2011 with Mubarak, while he was deposed the Y military remained in power even with Biv elections. In Argentina the Iv-B chaos caused the presidency of Fernando de la Rua to collapse as well, with so much economic deregulation this extended into these governments with the money influencing those elected democratically or appointed in dictatorships. When the problem then is Iv-B chaos deception linked to intelligence agencies such as Allende being deposed by the CIA, secret corruption such as with Bhutto in Pakistan, etc can bring down leaders. When the government as well as business changes according to these color ratios then it is difficult for one to control the other, sometimes for example the I-O police might be strong enough to bring down politicians and preserve order. At other times a country might be relatively lawless but honest politicians might be able to hold a country together. However if both are weakened together it is difficult for anywhere to remain strong enough to prevent the system from becoming very unstable as with the GFC, the US government was embroiled in the Iraq war as well as many fights over deregulating the financial sector. The business environment was suffering from increased amounts of fraud as a result of this deregulation and so more money went into politics to protect these corrupt profits, because of the instability of the government this money fed the V-Bi and Iv-B conflicts there. Usually this monetary influence would be moderated by centrists because as the left and right made more unpopular laws as payoffs for campaign donations the center would become more powerful with more politicians being elected. However at the time the more extreme parts of their respective bases were more energized and voting in higher percentages, this left moderate voters without much of a say to demand compromises. There was then little to stop the left and right trying to buy their way with increasing amounts of money to feed back in elections into the voters with more deceptive advertisements and robocalls to people, trying to build V-Bi rage with social issues, more deceptive attempts to manipulate voting machines and enrolments, and so on.

When an economic system becomes disconnected in its colors then there are usually economists, politicians, etc who call attention to these problems and try to make sense of it. Some see this disconnect as a good thing, for example Joseph Schumpeter thought an economic crisis was to some degree creative destruction where some parts of the economy have to collapse to build newer and more technologically advanced other parts. There are some theories about the Great Depression like this, that the technological transformations from such as mass production and the rapid growth of car ownership caused societies around the world to fracture. This is Iv-B where some parts of an economy continue to grow and mutate with new discoveries that outcompete more traditional Biv businesses, they can bankrupt then because consumers rush to get the new products but then cannot replace the old businesses with ones that create jobs. Also some of the products might be fashionable and afterwards people may again prefer the older more stable products but they are gone as the companies that made them went bankrupt. The problem with this phase is that commentators usually represent a particular color code and so as they each point out the merits of their own narrow world view this tends to pull apart the economy even more as people flock to the certainty of one expert or another. When the two experts each appear to be right but each refutes the other then this contradiction threatens to bring back this uncertainty and people may simply ignore the inconvenient facts rather than try I-O moderation of taking a middle path between these ideas. This has been a particular problem since the GFC because Iv-B and V-Bi systems are contradictory in principle, one is based on dependent variables and the other on independent variables. This problem however has occurred throughout history in times of crisis whether political, military, economic, social, racial, and so on. The expert in his field knows he has part of the solution and so assumes that the best path forward is to follow him and not worry about the contradictions around this policy, this is instead of getting the various known facts and charting a middle path of compromise with them.

Other experts have been more cynical about the problem and have concentrated on defining it rather than trying to propose solutions. For example Hyman Minsky was an economist who tried to document the process of an economic crisis. He defined debt as the problem but in Aperiomics it is not so much the debt but the lack of policing that causes debt to be wasted, also in many cases companies, people, and economies need to take on risky amounts of debt that will lead to a crisis if they don’t succeed. They must do this because others are doing the same thing, it guarantees then that some will experience a disaster or chaotic collapse in their finances, we see this all the time in business for example where clothing stores might open up hoping they will attract customers with a new line of fashion before they run out of money. In the meantime they must keep up a prosperous appearance because looking poor will reflect rightly or wrongly on the goods and services being offered, this is like the same goods in a poorly maintained store seem somehow not as good as those in a new store. This is why many department stores need to maintain a modern and well kept appearance. When people are looking for work they may need to go into debt to look prosperous rather than desperate or an employer may think this is because there is something wrong with their qualifications. Economies also have to compete even in potentially ruinous ways, for example free trade has created huge trade deficits for the advanced economies but most believe they need to somehow outcompete the trade surplus economies rather than tighten their belts and perhaps protect their industries with quotas and tariffs.

This is a paradox of the situation, when companies are seen to be hurtling towards disaster it is natural to point this out and say the GFC was the inevitable outcome of their bad decisions. However it is also the economic environment that makes any other course of action worse, for example the companies that do not compete in this way end up losing market share and perhaps go bankrupt or get bought out. They then have to make a decision about the debts they occur from the V-Bi parts of the economy, they have to either be conservative and run the risk of being outgrown and overshadowed, they have to try and keep pace with the others they see around them and either grow like they do or go over a cliff together like lemmings, or they can borrow much more than they can possibly repay and hope their Ponzi like scheme will result in a financial windfall such as selling out to a larger company or their competitors going broke and letting them survive. Minsky defined these three kinds of debt; hedge borrowers who can finance the interest on their debts and pay them off, speculative borrowers can afford to pay the interest and not the capital repayments, and Ponzi borrowers where they cannot even afford to repay the interest over the long term.

Minsky also referred to five stages in his model of the credit cycle: displacement, boom, euphoria, profit taking, and panic. This is mainly an Iv-B boom but the reasons for this happening are also the disconnect with the slower moving V-Bi sections of the economy brought about by weak I-O policing. Displacement is where a new invention or economic policy exposes new chances for profits and in Aperiomics as described earlier this can be from B workers finding more Gb resources or V talented people finding a new way to improve these resources. When the boom comes from Gb resources such as a discovery of gold in an area then B mining prospectors might keep finding nuggets but prospect in secret, this makes the situation unstable as they might either exaggerate the amount of gold they can find to raise money to downplay it to avoid competition. Getting accurate information is unusual and so this can easily lead to euphoria and panic, Iv agents start to buy the gold and they also might either hype the amount of gold there is to get more funding or downplay it to keep out other agents. So there are then four different kinds of deceptive stories from Iv and B which are most likely going to lead to euphoria and panic just as with many poker hands. The boom can also be seen like poker hands where the bets raise dramatically and then some might profit take by calling early rather than trying to extract the maximum amount from other players and risk being beaten by a better hand.

This credit cycle then is innately unstable because it is occurring with weak I-O policing, otherwise it would not follow this path. For example if the gold prospectors were well policed then lies by Iv agents and B prospectors to get funds would be prosecuted early on as fraud so as with modern mining companies there is less of a speculative boom and euphoria, there is also less profit taking from this fraud and panic from others. In Aperiomics then this would be why Minsky’s theories were out of favor for a long time when I-O regulating was more powerful, as deregulation grew in part from V-B businesses pressing for more freedom and others looking for weaknesses in this policing the various inventions and economic policies started producing Iv-B booms like with Minsky’s five stage plan. It then appeared that this credit cycle was building even in the 1970s though at other times the colors were more balanced or following V-Bi credit cycles. He would also be right though because Minsky like credit cycles would always be occurring somewhere in an economy because the I-O police often miss frauds, for example Michael Milken created a financial innovation with junk bonds which was like Minsky’s displacement causing a boom, then euphoria from extra business deals and profit taking by some while others panicked in a collapse. This occurred at a time when the I-O financial police were relatively strong but missed this Iv-B growth because it was so fast and well hidden. When secretive Iv-B businesses like this grow then there is a temptation to assume that other secretive businesses are doing the same thing and that all the economy works like this 5 stage cycle but that it just cannot be seen. However there are also V-Bi businesses that are very different as described earlier and more balanced V-Bi trees. Minsky believed the solution was financial regulation to prevent these manias but this begs the question of how to keep the I-O police strong with so many pressures to weaken them. When the economy is good for a long time businesses complain about missing economic opportunities because of some theoretical boom and panic that might happen, after all an Iv business just wants to do their own deals and not to encourage others to join in on this money making. Eventually then the secretive and deceptive nature of Iv-B growth causes I-O regulators to either miss them or misjudge them and weaken their policing, this is like a neighborhood with low crime and so the police are lulled into becoming very lax and this brings criminals into the area. At first they work quietly so as not to alert the police and a crime wave can build before the police realize what is happening.

When there was an Iv-B bubble that led to the GFC most home buyers were hedge borrowers who could afford to pay off their homes completely over time, then as prices rose and many refinanced they could only afford the interest payments, and then with many liar loans they could only make a few payments and hope to resell the house at a profit before they defaulted. This however is not just the cause of the bubble but is also the effect, it was not possible for people to avoid this progression because families had to buy homes to raise families. So many were hedge borrowers but they could not just give up their homes if they lost jobs or wages went down because of their families, they might then have refinanced to become speculative borrowers and just paid interest. The problem then is that in Iv-B people are competing against each other in an opaque environment and so don’t really know if it is safe to move to be a speculative borrower from a hedge borrower, like in a poker game though the amount of deception and disinformation lulls them into higher leverage and a more fragile financial situation in the hope of financial security later. In effect then these families are like plants who grow in an unsustainable way because they see other families like plants doing the same thing, instead of assuming they are all lemmings heading for a cliff the disinformation around them is saying that everything will be fine. For example Iv real estate agents would say that prices would continue to rise so if they did not buy then they would be unable to buy a house later with higher prices. This is like plants that sense other plants around them and this spurs them into greater growth because their number makes it seem that there are plenty of resources for there to be so much growth. In fact it can also be that the resources are so limited that whoever does not jump in quickly will find that buying a house later is not possible. This is in effect what happened after the GFC, many bought houses and now have a negative equity but many others are unemployed or lost their savings and have no hope of buying a house even at low prices. So those with negative equity might still do well if they hang on and the market recovers but those who did not buy would be left behind perhaps for a generation. In any case the economy was so opaque from weak I-O policing that house buyers could not see clear evidence of a crash coming to counter the deceptive stories from agents, also other B workers buying homes tended to be optimistic about the situation because if they did not believe it was safe they would not have bought homes. Each then was usually preaching to the converted while the doomsayers had no way to access the hidden information of a future problem. When the crisis some there is a Minsky moment where people have to sell, some for example have moved to becoming Ponzi borrowers where they cannot even make interest payments but this also occurred with ARM or Adjustable Rate Mortgages that pushed people from speculative to Ponzi borrowers as the rates adjusted upwards. Minsky also believed that bankers and speculators in effect played the role of arsonists damaging the economy, this is like the example earlier of how trees might evolve to become deliberately flammable or prone to disease so the ones that regrow faster after a fire or contagion might reach the V canopy and overshadow their rivals. Iv agents and smaller businesses then might deliberately damage the companies they work for so that later they can go out on their own and exploit the weaknesses they created. When the economic crisis makes some areas turn to Roy then the financial market can become Y-Oy predator and Ro-R prey and these arsonists are in effect criminals in a crime wave caused by weak O policing. For example credit default swaps in some cases allowed speculators to insure a company’s bonds against default and then profit by forcing the company into economic difficulties. Shorting stocks can create a panic and so they make profits as prices fall, also when companies like Bear Sterns and Lehman failed in part from shorting they can create huge profits. One argument is made that companies like this are usually found to be fraudulent and so the shorters are rendering a valuable service in the economy, however this is only when I-O policed properly otherwise it can be like burning down a neighborhood and blaming the fire on the homes having too much wood in them rather than brick. Usually in an economy there is Iv-B fraud going on all the time and the I-O police try to domesticate this by using snitches and random audits to control it, if they are weak then this fraud may grow chaotically because only those using fraudulent accounting may be able to compete financially. So for example companies may be fraudulent in their Iv-B growth phase such as with off balance sheet investment vehicles in the chaotic growth phase. Later they may try to mature into trees with large canopies which makes their competitors fail with their frauds exposed and perhaps shorted, the ones that succeeded though manage to cover up their frauds permanently with extra profits. So just as shorters can create fires and contagion in the economy to make money they can also simply research and then point out these frauds compatible with stronger I-O policing, for example in the book Selling American Short Sauer discusses how companies shorting stocks would complain the SEC was not investigating these companies more for fraud and potentially giving them profits. This then is because with weak I-O policing and no way to strengthen it then some fraud may become endemic but not cause a general crisis if enough of them can mature into winners and perhaps buy out the losers. Arsonists of course are criminals in Roy, O police try to minimize their influence but some always get away with it. In the same way financial arsonists will always succeed to some degree and because there is no way to keep the I-O police strong enough to prevent it then these financial contagions and firestorms are an inevitable consequence of V-B promoting deregulation.

Irving Fisher had the advantage of observing the Great Depression at first hand, he developed a nine point model of debt deflation. The first point is debt liquidation and distress selling, just as a bubble is in effect localized inflation where some assets such as real estate, art, oil, tech stocks, etc go up much more than prices of other goods and services. This is because in Iv-B roots and branches funnel the money in the economy more directly to specific areas and goods like a river or delta, when the economy is more V-Bi the money is more widespread but has little motion like a swamp or flood plain. Because of the fragility of these roots and branches an external shock can cause them to start to collapse, they can then start knocking each other down like dominoes because chaos is based on dependent variables. These collapses as mentioned earlier cause shock waves because chaos is wave like in nature with a strong and directed energy and momentum, this can be seen for example when lines of dominoes fall on each other like a travelling wave that appears to have a momentum. Debt deflation then like Hyman Minsky’s model happens in an Iv-B economy and so does not usually occur except in times of crisis. This is the same problem as with Minsky, in other times the colors are more balanced or V-Bi and so these observations don’t match reality. Some then can gain credence for their own theories or make profits by saying that the economy has changed and these models can never happen again or at least not soon enough to curtail Iv-B speculation. These Iv-B speculators however tend to be forced into this viewpoint because they compete so much that bursting a bubble or trying to slow it will likely bring many collapses in businesses. The color imbalances then mean that models like with Minsky and Fisher, or even Karl Marx and his ideas about the fall of capitalism will be vindicated in crises but largely ignored at other times.

In his second point Fisher refers to a contraction of the money supply as bank loans are paid off, this is because the bubble stops generating profits and so investors repay speculative loans rather than roll them over into new investments. The velocity of money also slows, this can be good when a Biv economy is maturing into stable trees that slow and grow more V leaves and fruits while repaying loans into its Bi reserves. So far then the first two points can be consistent with a tree maturing in a stable way, the distressed selling can be as the Iv-B phase of growth tapers off and so speculative ways of sprouting more roots and branches are reduced. The loss of momentum then causes some waste in resources as companies reduce their leverage, lay off Iv salesmen, pay off debts rather than proceed with new investments they might have spent money investigating, and so on. Just as a tree doesn’t know whether this maturing phase will be successful so too the economy might appear to be going through a small recession at this point as there is some debt deflation from paying back loans. The lower leverage can mean less deposits into banks, for example speculative businesses might borrow large amounts for stocks and bonds and then relend some of this onto overnight money markets rather than paying back the original loans or buying back shares in their own public companies from the public. So when these companies start to repay debt then the money markets around them can become starved of capital, this can happen suddenly because Iv-B companies are highly competitive and so if some are trying to mature into growing a large canopy and overshadowing the others then so must their competitors. For example if software businesses are growing rapidly and innovating as Iv-B then at some point there will be an attempt by some to mature into a near monopoly and either bankrupt their competitors or buy them out. So in this situation the competitors must do the same or else might have to sell out at a large loss. Because of this need to buy out competitors these companies need to have higher reserves of capital, this is why for example Microsoft, Google, Apple, etc have such large amounts of cash on hand. This money however is much slower in velocity than an V-B business, for example hedge funds might do high frequency trading and so their money could be turning over in minutes while a more mature business might put its money in more stable investments where there might be a delay in getting it available for a buyout of another business. These V-Bi reserves then would be unlikely to go into an overnight money market.

This phase then starts to create a shake out in the economy where some companies are going to overshadow the rest, some then will be losers and collapse. When too many are Iv-B or the I-O police have been weak then this competitive phase would have been rife with fraud and the resulting exposure of this can cause panic among many businesses. There can also be a domino effect like trees falling on each other and either smothering others or knocking them down. If the boom has been well policed though then most businesses have a strong connection to the I-O market and so distressed assets can be sold at a reasonable price limiting the panic. When there has been a strong V-Bi and Iv-B disconnect then many companies will discover their Iv-B products and investments are virtually unsalable to V-Bi lenders who instead demand their loan money back causing a sharp drop in liquidity. As described earlier the situation is then like someone bleeding from veins and arteries as these roots and branches fracture, trying to reflate the economy with bailouts then is like a blood transfusion which is intended to keep the monetary circulation going while the companies try to heal these financial wounds.

The fourth point is where if this reflation is unsuccessful or not attempted then like a person running out of blood from many wounds the circulation slows and stops, money might pool in some areas where it can still circulate while other areas might become cut off from liquidity and the economy fragments. This causes the net worth of many businesses to plummet, for example a company with branches all over the US might find that liquidity problems in some areas make for large losses while other areas are still making profits. They will then tend to close down in the areas making losses causing more knock on effects there as liquidity dries up still more. This is like an animal with many wounds, clots start to form preventing a waste of blood but these also cause large areas of tissues to starve of nutrients and die. If there is a transfusion of blood like with money the patient might be kept alive like a zombie economy on reserves, this may give them time to heal but in some cases they may end up in a vegetative state where there is too much tissue loss and the animal cannot heal. So with the company’s branches they might try and support losses in some areas because their company might not be viable if they shut down too many or be vulnerable to being taken over or losing market share. For example a freight company might suffer a big loss to its reputation if it didn’t keep picking up and delivering to these depressed areas and so unless they receive a zombie like stimulus or loans they might go completely bankrupt. A similar example occurred with GM, if it had not been bailed out the losses from all the smaller companies making parts for GM cars would have been enormous. Some may have been able to retool to make different cars but many would probably have collapsed like the tissues cut off from a financial circulation for too long. In this fifth point then companies are running at a loss and so resources are being wasted, workers might have to retrain if their original jobs disappear and spare parts might become unavailable for products made by the company leading to large losses from consumers as the products break down. As mentioned earlier some of this can be caused by V-Bi stagnation like a marsh that needs water flowing through channels to keep plants and animals alive, instead the velocity of money is much slower and does not move far enough. For example the transportation company needs to move money and goods around a while economy and so if it is stagnant it becomes expensive to move goods from one side to another, these longer routes may create losses while smaller more local deliveries and pickups are still profitable. So like the marsh the money tends to be stagnant and like with no rivers to move fresh water around then all kind of businesses with long distance connections start to fragment and collapse.

Prices can also become more disconnected, assets for sale in a bankruptcy might be in a stagnant or depressed area and so bring little money while other areas with better circulation bring higher prices. This can also happen in real estate, for example new and growing suburbs in the Iv-B boom might find themselves stagnant with few prospects for growth and so there can be little interest in buying houses there. Just as economies of scale make for greater efficiency when an economy is growing when it becomes stagnant these savings turn into losses, for example when there are rivers flowing through a marsh then different species might survive because nutrients from one area move into another so it is as if many species are coexisting even though far from each other. When the water turns stagnant fish from one area might no longer be receiving nutrients from another area in the water and die out, it might then take a long time for other fish to evolve into this changed environment where fewer species can be supported. In the same way many different companies might be unsustainable because parts for goods might not move around as easily in a stagnant V-Bi economy, for example some cars in the US were getting parts from Japan but with stagnant sales they might try to build parts locally to save the freight. This is also like a large Biv tree collapsing and then its seeds have to try and regrow as a smaller shrub because of poor soil and water, or perhaps they are overshadowed by larger trees. Its B roots would be smaller and if the larger tree was surviving by tapping into different minerals and water widely separated then the smaller bushes might not be viable at all. In the same way larger companies like GM might be able to make cars but if they collapsed then smaller car companies might not be able to afford to have parts manufactured in Japan as their purchases might not be large enough to get companies interested there. Some factories require large costs to set up and do not scale well when downsizing so smaller car manufacturers might never be profitable and go bankrupt. The same can occur in the Roy animal kingdom where a collapse in the food chain can cause starvation of some species that have adapted to specifically to some predator or prey. For example some birds might have adapted to only drink nectar from certain flowers and when these die out in a drought they might not be able to feed from other flowers, the same might occur with bees and other insects. Often a food chain is finely tuned in Oy-R where predators can just barely catch their prey, if the prey die out then the predators might not be able to catch other prey and so there can be a large reduction in the different kinds or branches of species. Increasing numbers of species is chaotic and can vary largely in a Roy food chain, plants also go through this where many mutations can occur from Iv-B growth. When there is a large collapse in plants such as from an external shock like a drought then specialized animals feeding on them might die off which causes their seeds to be not distributed and their pollen not moved to other flowers, this can then cause many plant species to collapse as well. This reduction in different kinds of products and services is like Fisher’s sixth point where many workers find their skills are no longer needed because V-Bi businesses are more normalized with fewer differences in products. For example in an Iv-B boom there might be innovations in restaurants with many new dishes and this creates specialized training for different kinds of chefs like different species of plants and animals. In an Iv-B collapse a stagnant economy might have less interest in different kinds of dishes and more normal kinds of meals might become more common. Exotic dishes might require ingredients from further away and as these distributors collapse critical ingredients like car parts become unavailable so a whole dish might either become more expensive or impossible to make any more. Economies of scale will then shift to more standard foods, for example sandwiches and fast food burgers might remain cheap while expensive dishes might rely on Iv salesmen or others making big profits to spend a lot of money on. For example an upscale restaurant might be supported by chaotic customers that sometimes make big commissions or profits and eat out there, the average wage earner however would rarely spend money outside his budget and so he might go to a cheaper family style restaurant. When the Iv-B economy collapses these people with windfalls of money become rare and so the restaurants collapse because they cannot make these dishes at a price V-Bi people would buy them at. Also however the V-Bi economy is highly normal in its outlook and not only would these kinds of customers not buy expensive food infrequently but they tend to be in teams and eating a different kind of food can make them feel alienated from the others. For example B workers in a slump might unionize as Bi to protect their jobs and it is then important not to stand out as deviants because they might not get the better jobs when so many are looking for excuses to cut some out of contention. The same might occur with religion, even habits of dress or speech, this is also like Ro herd animals that become very similar to each other to not stand out for predators. Oy and R animals however can be much more differentiated because they are always mutating in a revolutionary way to survive.

A V-Bi stagnant economy then is like Fisher’s seventh point where pessimism and conservatism outweigh innovation and energetic optimism. People tend to conserve resources rather than speculate with them, this leads to hoarding of resources rather than like trying to grow and innovate as trees need to do to regrow a forest. The ninth point is where interest rates become adjusted for deflation, this is also like where money is lent at a higher rate because goods might fall in price and lead to losses, for example as the economy decays more goods are sold off at a loss and so lender might demand higher interest rates to compensate for the possibility of losses from companies. Fisher says these nine points will occur in an approximate way if there is no reflation, however reflation does not work well in an Iv-B economy because it is a V-Bi solution disconnected from the problem. Leverage in an Iv-B economy is fragile, as discussed earlier this is a fractal process where various fractal shapes such as roots and branches, which can also be like Sierpinski Gaskets where the economy is hollowed out into the approximate shape of roots and branches, and when it collapses trying to reinflate it with extra liquid money does not recreate the structure based on strong conduits of money at high energy and pressure. So reflation in this situation is in effect like trying to replace a blown steam boiler with a tank of water, the money looks the same in the sense that water is like steam but it doesn’t do anything. It is also like creating zombie companies as with an animal in a coma or vegetative state, nutrients and blood might be pumped in but the circulation is not working properly in all areas and often the circulation has to be forced rather than working naturally by Positive Sum Game deals driven by supply and demand. For example when the financial sector in the US all but collapsed the Fed replaced much of it with in effect nationalized finance where they provided money to many companies and banks. This is like the transfusion into a zombie hoping it can somehow regenerate itself without having to operate deeply and see what the problem are in the secretive and deceptive Iv-B areas. The money however has mostly pooled rather than circulated in money traps, this is like replacing the steam boiler with a tank of water because there is little energy in the economy to drive the liquid money into higher energy gaseous money that raises prices around it. It may be possible to rebuild this boiler economy with stronger I-O policing this time, this is like having building inspectors checking the pipes and pressure to make sure it won’t blow up again. For example lowering depreciation schedules on new equipment for a short time can make companies hurry up to take advantage of it, this higher energy and shorter time can then rebuild more roots and branches to get this equipment. Contracts awarded under a stimulus might be under time pressure, for example buildings or roads might have to be constructed more quickly than usual and this prevents building a stagnant infrastructure around these projects that will only be good for a stagnant economy later. Reflation then needs to rebuild roots and branches to get the money into areas to reflate them, for example while the Fed followed Fisher’s ideas to reflate the banks the money didn’t get into many areas of the economy and resolve the low price of houses. If the government or a sponsored private corporation had bought up houses to fix up and rent for eventual resale then this would have injected money directly into many communities, it would have allowed people to sell and move to areas with more jobs and it would have also raised the prices as speculators also bought assuming the prices would go up. For example say the government bought houses in depressed areas to raise the prices 10%, this would reduce the losses by banks and securitized bond holders as well as give some people incentives to stay in their homes if they have a small negative equity. When Iv-B speculators realized prices might rise 10% then this is a good profit when interest rates are so low, many houses might then be bought by Iv-B speculators or taken off the market by banks and home owners which would create an artificial shortage raising the prices even before the government bought any homes. To make it more of a private Biv enterprise the government might just guarantee the financing for this as money the Fed would just be supplying to banks anyway, instead of trying to make the banks lend money to speculators to do this by creating the roots and branches directly it starts money flowing into these areas. Reflation then needs to target what prices actually need to reflate and work out a way to rebuild conduits to those areas, if not then it just creates money pools just like irrigation with making canals will just make lakes and swamps instead of farmland.

Fisher’s quantity theory of money is different in Aperiomics because there are three phases of money, frozen money which is like debt or savings that move slowly or not at all, liquid money is like this money theory because it has a more hydraulic action so that that the money supply times its velocity can be thought of as like water in a pipe where so many liters a minute pass a certain point or like watts in electricity. Assuming then that goods and services are being sold in these conduits then the output from these pipes are these goods times the prices they are sold at. Assuming then that each of these goods and services are sold then the first part of the equation is Iv-B because it refers to the momentum or energy of this money because it measures velocity. For example a shop might turn over a million dollars worth of stock a year or a hedge fund might turn over a million dollars worth of stocks and bonds in a day with high frequency trading. At this point then there is no relation to whether the deals done are good or bad, this part would be true a year before the GFC or the day after Lehman collapsed. This is because Iv-B has no direct connection to what goods and services are worth except in a deceptive bidding game that eventually will collapse when people have to show their hands or fold. The second part of the equation refers to the output of goods times the price which is not related to velocity or momentum, it is instead a position. For example a shop sells a thousand items in its stock for an average of a thousand dollars each or a hedge fund sells a million stocks and bonds with an average price of a dollar. The first part of the equation then refers to momentum but it says nothing about the actual situation at a given moment, for example the shop might be selling a million dollars worth of stock in a year but this says nothing about what stock is sold, whether it represents a profit or loss, and so on. The second part says the shops sells a thousand items at a thousand dollars each but says nothing about how long it takes to sell them. It then assumes that one side equals the other but a velocity times money is like momentum or mass times velocity, it cannot equal goods times price which has nothing in it to represent movement. It is like saying for example that a car moving at a 100 kilometers an hour is equal to a car travelling down a freeway of a certain size.

It may be that a car travels down a freeway at 100 kilometers an hour so there is a relation between the two but this need not be an equality, there is a fundamental uncertainty between them because the terms are different. This uncertainty can be in the I-O market or policing where this is resolved to a minimum, for example the car might travel faster on better roads like a freeway and slower on dirt roads so looking at the quality of the roads will tell you to some degree how fast the cars are going. If this is inaccurate then it tells you that the situation is unbalanced, for example if there are dirt roads assuming that cars are going slow rather than policing it properly might mean they sometimes go too fast and have crashes like booms and busts in an economy. If assuming that because there are goof freeways that cars are going fast without policing then there can be traffic jams from a broken down car as a V-Bi stagnation. Conversely knowing how fast the cars are going will tell you something about the quality of the roads, in the same way if this is inaccurate it may tell you that cars are driving too fast in Iv-B and might crash like an economy or too slow and so there are traffic jams like V-Bi stagnation.

The Fisher equation can then give an approximate uncertain relation between the velocity and momentum of money and the output of goods and services along with their price, but concentrating on one and assuming the other without observing and policing will lead to Iv-B and V-Bi disconnections. For example the government might monitor how fast money is loaned out from banks and redeposited, how fast shares are bought and sold, how fast houses are bought and sold, etc and come up with various measures of the momentum of money in different areas. They might then assume without looking that this implies a certain amount of goods and services being bought and sold at a certain price and in a well balanced I-O market this will have a relation that can be estimated with some uncertainty. However in an Iv-B boom and bust this momentum of money will disconnect from the output of goods times their price, for example speculation in housing will have increased amounts of leverage so that far more money is being used in a smaller amount of goods times their price. A city might in a well connected I-O market have people buying and selling a thousand homes a week which represents at a hundred thousand a home a hundred million dollars of sales per week. Assuming everyone owned their home without finance then this would be a highly stagnant V-Bi economy and so this hundred million dollars would be money owned by the buyers and sellers. If the I-O police were looking at this figure then they might assume that money was moving around well rather than being stagnant because the output of houses sold seems to be good, however a well connected market might have a 50% ratio of equity owned and 50% borrowed which cannot be worked out from the output times the prices. It also does not show how much money momentum is safe just as the number of cars passing a point on the roads per second does not tell us how fast they are going, if some are accelerating dangerously or braking to avoid a pile up or traffic jam, if some are turning around to avoid the road ahead, and so on.

If there is a boom then each house might go up to a million dollars each and ten thousand homes sell per week giving an output of ten billion dollars but there might be no more homes than before, they might not even have been substantially improved. In this case then instead of people owning their homes in the V-Bi market they now have high leverage trying to make money and so each might have an equity of around 10%. Some of these sales will be forced because of defaults while others from the pressure of higher bids being irresistible to some sellers. Now whereas before the hundred million dollars in equity was moving very slowly from bank accounts of a buyer to a seller now the momentum of money has to be very fast because the hundred million is moving as before but there is an additional velocity of ten billion dollars minus a hundred million moving along with it. This money need not move in the same way as before, for example it might come from overnight money markets, a carry trade from overseas, from margin borrowing on shares in high frequency trading to loan out money and then get it back minutes later when the shares are sold, and so on. In one house sale then the nine hundred thousand dollars borrowed on it might represent millions of small transaction each lasting only minutes where money is lent then gotten back in small transactions like this. The momentum of this money then is much higher, if there is an external shock like sudden news of a contagion of termites in these homes then this can send shock waves through millions of businesses and deals who quickly need to avoid lending into these houses until the contagion is better understood. This can then stop the momentum of money for loans and then make it hard to restart, the result is the output of homes times the price might suddenly and chaotically plummet causing many to lose their equities and from there many sales might be either where the seller owes more than the house is worth or they cannot sell because the market is insolvent with frozen money instead of steam or gaseous money previously. Observing the momentum of money by itself then is like watching the velocities of cars such as with speed detection devices used on roads, trying to deduce from this the condition of the roads will lead to a boom or fast driving and crashes because the speeds made the police think the roads must be safe. In the same way the speed of money moving in the financial sectors of the global economy made it appear that these money conduits were safe and that they still represented a healthy output of goods and services times price.

Once these situations have gotten out of control from not observing positions and momentum or time and energy then there is often an argument over whether to do anything at all. For example a toll road might confine itself to measuring output times price as the toll paid on each car and not worry about the momentum of this money flow such as how quickly the money flows relating to how fast the cars are going. They might not then realize the toll road is V-Bi stagnant and that many drivers avoid it because it will take too long because break downs are not removed quickly, there are potholes reducing speed, and the signs are confusing which slows people down. It might also be an unpoliced road where many people speed and have accidents so there is either a good road where people get through quickly or they are stopped in pile ups waiting for the road to be cleared. This is like a stagnant economy measuring the sales made times the prices paid such as with a Gross National Product, it doesn’t show whether the economy is stagnant but still growing as V-Bi or growing in a speculative Iv-B bubble that will crash but both might show roughly similar percentages of GDP. For example in the 1970s the US might have had a stagnant V-Bi economy but was not in recession, in the 2000s before the GFC the GNP might have been similar enough for economists to conclude the two economies were about as stable as each other. If the GNP was weighted over a ten year period for example then the GFC like other recessions would be less noticeable and observers might conclude something unimportant happened in that time, the same is seen when people look at the long term growth of US stocks weighted to reduce these fluctuations. It implies a healthy economy overall and looks as though I-O regulations are unnecessary.

Monetarism then is like observing this velocity of money and assuming that it always relates to this output of goods and services times their prices, it is also like Fisher trying to associate inflation with unemployment as a forerunner of the Philip’s Curve. For example in the Great Depression the money supply contracted as well as its velocity slowed, this was associated with a reduced output of goods and services and a fall in GNP implying the two are connected like cause and effect or an equation as Fisher proposed. However the money supply fell because so much leverage collapsed, this meant that whereas before a million dollars in equity might have been controlling a hundred million dollars in stocks, bonds, real estate, factories, etc it could no longer attract this financing and so it might only control perhaps two million in these assets. This then led to a fall in the prices of goods and services because people could not maintain Iv-B roots and branches of leverage to pay the higher prices for them. When a bank fails or people withdraw their savings, even if businesses repay their loans rather than using the money for other deals there is a contraction in the money supply because people are no longer simultaneously believing they have their savings available on short notice and borrowers having the money invested in something. The momentum of this money however depends not just on this but how quickly these loans are repaid and new ones taken out as well as how quickly people take out money and redeposit it. For example in a boom businesses might make many short term loans in buying stocks on margins and then selling quickly as there are small profits and losses, margin calls, etc. People might take out some savings to buy shares and sell them the next day redepositing the money but overall the money supply in the economy might hardly change because the average amount of savings in the banks is about the same, people for example might spend their profits on buying luxuries while businesses do the same or invest in new equipment. Controlling the money supply as Milton Friedman later proposed then might track this activity by businesses and savers, if they need more money and the money supply is restricted then this acts as a mild brake in their activities. If there is a mild recession then like higher blood pressure in a sick person this allows more nutrients to flow around and acts like a mild accelerator, a relatively constant or slowly growing money supply then is like the blood pressure in an animal. If it grows faster than the ability of the animal to use it then it might lead to dangerous pressure in some areas and a rupture, this is what happened in the GFC as money flowed into the US from the carry trade forcing itself into the real estate market making steam money that raised prices until it ruptured and collapsed.

However this money supply says little about its actual momentum just like the level of deposits and savings of people in the bank example says much about how quickly loans are made or savings are taken out and replaced. Concentrating on the money supply then can lead to an Iv-B boom or V-Bi stagnation even though the overall money pressure is monitored like blood pressure, for example it ignores whether the heart is beating too fast leading to a heart attack or there are blockages like clots or cholesterol leading to a stroke or poor circulation. In 1929 then this momentum finally collapsed and the lack of energy occurred from lost momentum, this lack of ability to buy with leverage then caused output times prices to fall. This then only indicated that the V-Bi and Iv-B markets had some connections and not that there was an equivalency with a small uncertainty. The relation between inflation and unemployment was also like this, inflation and deflation tend to be Iv-B because prices move up and down with higher energy while unemployment is V-Bi. The relation between these two then occurs in the I-O market with some uncertainty, Iv agents are more worried about inflation because they buy goods which might deflate in value while they hold them so they avoid holding stock, alternatively they might be holding cash which is inflating away its value and so need to hold more stock to avoid this. Bi unions however are not so worried about inflation because they can strike to have their wages adjusted for it, this is successful because in effect they are not asking for extra money in real terms. When the government or I-O police want to control inflation then they have the Iv agents worried about the momentum or growth of the money supply and so they complain to reinflate in times of deflation or slow the money supply growth when inflation increases. The relation of the money supply to their situation doesn’t concern them, they just want the value of their stock or cash to remain relatively stable while they are holding it or preferably to be in their favor. For example an Iv agent who holds little stock that sells quickly like selling plasma TVs might prefer deflation because he makes more money than other agents who sell goods that sit on the shelves for longer, the deflation then might result in his making more profits and overshadowing others later as V or buying out competitors as they collapse because of heavy discounting by those benefitting from the situation. Another agent might benefit from inflation because his stock sells slowly and he can put the prices of it up before it sells, the plasma TV agent then has more cash losing its value and might be vulnerable to being V overshadowed or bought out. Inflation then might benefit those who sell goods more slowly and deflation those who turn over stock much faster. Overall then the I-O police might want this inflation or deflation to be relatively moderate to prevent collapses in some agents when others concentrate more on taking advantage of each other than selling in the market.

In Bi communities inflation might give them an opportunity to ask for even higher wage rises by claiming inflation is worse than it really is, companies become used to wage demands each year and so lose their ability to resist higher ones. This can then lead to wage price inflation where V-Bi businesses keep putting up prices by colluding between themselves and Bi workers demand more inflation adjusted increases plus extra money. This drains money from the Iv-B parts of the economy, Iv agents find it harder to put up their prices because of competition and often end up losing from inflation. B workers don’t have the unions to help for wage rises and often also have to lose money from inflation. Trying to manipulate inflation with unemployment then depends on a strong I-O police because Bi unions have to be prosecuted when they damage businesses with unreasonable mass action, also predatory pricing with Iv agents can occur when the money supply is tight and agents must choose between deception and going bankrupt with these changes and their tight profit margins. Generally then reducing the money supply will create unemployment but more in Iv-B first as they are more fragile, Bi unions will resist this with their reserves of money and V businesses will also have reserves to try and last out the recession. The pool of unemployed then can come from small businesses going broke and Iv agents along with B workers appearing in the statistics to be enough to moderate inflation, however the V-Bi teams might be relatively undamaged. Monetarism like this can then lead to a stagnant V-Bi economy as the Iv-B roots and branches break, this also occurred in the GFC where money from the carry trade was like money coming from the Fed, when it was withdrawn this was like the Fed bringing on a small recession to reduce inflation as they might have done to prick the real estate bubble. However because of weak I-O policing there was so much fraud in Iv-B balance sheets as well as deceptive deals done on low margins such as AIG writing so many Credit Default Swaps it could not support. Like bringing on a recession using the Philip’s Curve eventually caused stagflation the withdrawal of money from the carry trade caused the collapse of much of the Iv-B economy and stagnation afterwards.

A Keynesian stimulus then is similar to increasing the money supply, if the stimulus is targeted on rebuilding roots and branches such as building new roads and railways then this might lead to more economic growth. If the money diffuses through the economy as random V-Bi then it can be like extra water flowing through a swamp without more channels, it might decrease the stagnation all over but might also collapse the few river channels still working by making mudslides. For example Iv agents might still be surviving after the GFC but might find that a massive stimulus causes a change in the I-O market, workers who bought from them might move away or change their route to work, shops along roads used to workers stopping in for coffee and lunch might then be pushed into bankruptcy only to find the stimulus ends a few months later and the workers now have nowhere to eat and there are more unemployed. Because of the cost of setting up new businesses the old stores then might be either unused or have to bear the expense and uncertainty of another stimulus. In other areas the Iv shops might benefit from workers getting more money near them and expand assuming the recovery is underway, then the stimulus ends and they go bankrupt from now having stores that are unsustainable in size as well as debts to pay off the new equipment. This is then like inflation benefitting some Iv agents over others, as prices rise those who hold more stock do better than those who hold more cash and so with a local inflation from the stimulus those who sell stock more slowly like a furniture store are more likely to survive the ups and downs from the stimulus rather than those who sell things quickly like a coffee shop. In the same way B workers are affected differently, those who do long term jobs such as building factories that take a long time to finish might get more work that is still going in a downturn as well as longer contracts from the stimulus. These are often targeted in a Keynesian stimulus, for example with road works. Other short term jobs might be hurt more from the stimulus, for example painters might only be in the factory a short time and might suffer in a downturn then buy more equipment to do contracts in the stimulus and then be saddled with more debts when the stimulus ends and the economy doesn’t pick up.

This is also like how Roy animals and Biv plants might get affected with more water through a swamp, Oy-R animals such as Oy foxes in Africa might multiply rapidly as the R insects and rodents they eat multiply and then both crash in numbers. Other Oy animals like birds might live on R insects that don’t change in their numbers as quickly and so the changes in the water supply might not leave them starving or having too much food as much. With Biv plants some might grow fast like desert plants with the water and die out faster when the temporary flood ends, others might grow more slowly and so there are not so many competing for the same water in the coming drought. To avoid this problem of merely flooding the swamp more roots and branches like canals need to be dig, this involves connecting the two more and so strong I-O policing like the trunk of a tree is important. If not then V-B businesses will try to take their place by wealthy V people trying to exploit the low wages B workers are forced to accept, however these kinds of businesses are very unstable as the wages so not create much demand for goods and services and so often the V management also lose their money when they fail. This is like smaller plants like moss and fungus that try to exploit the temporary conditions by growing quickly but they cannot build a large infrastructure with few resources and the need to quickly seed, this is like small fly by night V businesses trying to make fast profits directly rather than using Iv agents but their slow nature causes them to often fritter away their money with being ripped off by B workers or R shoplifters. Eventually then they might make occasional large profits or disappear as they lose their random protection against the chaos of trying to exploit B workers.

Deflation might occur in a similar way when the government tries austerity because they fear a breakout of inflation or the economy and tax receipts are stagnant so they need to tighten their belts. This then is like a contraction in the money supply with the Philip’s Curve trying to control inflation by increasing unemployment except the government doesn’t really want the unemployment because of even less tax receipts. It results in more Iv-B agents and workers going bankrupt because with their intense competition few have enough profit margins to handle the sudden changes of less money in the economy. For example Iv coffee shops might go broke if they had local government workers as customers laid off, again those with more long term orders have less energy and more time such as the furniture sellers and so might survive the austerity better. This however skews the economy towards less energy and more stagnation as the businesses with the short term order are hurt more. In the same way B workers suffer unequally, furniture store workers might last longer than coffee shop baristas. The unemployment after the GFC then was like a recession brought on to moderate inflation by increasing unemployment and thereby caused more deflation as well as the undesirable loss of jobs. Austerity might be necessary if the economy is short of money, however it is more important than ever that strong I-O policing creates more efficient Biv businesses. Both a stimulus and austerity then might lead to extra state debt, in the 1930s in the US the stimulus was accompanied with historically large increases in I-O policing such as the creation of the SEC, the FDIC, and many other regulators which prevented much of the stimulus from being stolen. The market can be very efficient when there is the right amount of transparency and privacy, when it is too opaque as it was in 1929 and just before the GFC then buyers and sellers are no better than players in a poker game and so the market cannot be efficient without enough reliable information to make good decisions. It also cannot be efficient without enough privacy so people can plan their affairs without eavesdroppers stealing their ideas, or anticipating their actions to rip them off.

Adam Smith is one of the most influential economists in history, his theory of the invisible hand is like Iv-B because most of these transaction also happen invisibly. In a more policed I-O market though the Iv agents are more like what he refers to, each tends to act like a knave trying to find a Bi fool and if the I-O police prevent most of the fraud then order tends to come from the Iv chaos and Bi randomness. When there is too much Iv-B in the economy though both Iv and B are trying to outwit each other as knaves, this is also like how Iv agents also try to outwit each other in Adam Smith’s idea economy. However the difference is that the behavior of these knaves is rarely exposed except in a market meltdown, B workers might be deceiving the Iv agents about their costs of production and future supplies and so there is no honest connection to balance the knave like behavior of the Iv businesses. Transparency and secrecy tend to self regulate like Adam Smith’s supporters claim the market does, when some business is too secretive people tend to shun it until it opens up for more inspections, however if consumers expect the I-O police are watching these secretive businesses then they may be more easily defrauded as with Bernie Madoff. In the same way if there is too much transparency then agents might move to other areas to make their strategies secretly, they might assume though that their offices and cafes have no secret surveillance where competitors learn of their plans and take advantage of them. It is difficult then for a market to not use some kind of policing, buyers and sellers will sometimes renege on deals or defraud people and without recourse they can easily make more profits from this than from honest business. In Adam Smith’s first book The theory of Moral Sentiments he promotes a more Bi viewpoint of sympathy to other people and moral behavior arising from seeing how they behave towards each other. He also says that many people are happy from doing good for others, this is more like a V-Bi team behavior while his second book The Wealth of Nations is more Iv-B as it discusses the invisible hand where people often act as knaves deceptively to create order. There is little evidence then that Adam Smith was against the idea of I-O policing a market to keep it working smoothly, for example he refers to the gluttonous V rich as sometimes unproductive though sometimes this wealth can be redistributed by employing more servants or Iv agents. He also warned against V monopolies and collusion where businesses can team up and squeeze more profits out of the workers. Iv agents according to him would try to promote laws that deceptively benefit themselves and this kind of invisible hand was not beneficial, instead their suggestions should be closely examined. This is like the I-O market where the deceptive and self-serving ideas and deals from Iv agents are looked at in a semitransparent environment so the deceptions are exposed and the good ideas can then be better evaluated.

The division of labor was also an important insight of Smith’s that B workers should compete with each other in more specialized jobs such as in making different parts of a pin, those less productive then could be fired without Bi collusion such as with unions. This competition should also occur among talented people such as Iv rather than V collusion to make their goods and services cheaper and promote more Iv-B growth, Smith seemed to think that the V wealthy colluded just as much to raise their prices or hold down wages as Bi unions to raise wages and reduce prices. The I-O courts however at the time seemed to favor the V capitalists more then the Bi workers acting as a team, there seems to be little evidence he favored V collusion over Bi. When his first book is taken into account then Adam Smith seems to propose a well balanced Biv economy as in Aperiomics, Iv agents and B workers should be encouraged to divide their labor into specialties and compete to avoid inefficiency. V and Bi parts of the economy can collude too much against each other and be unproductive, however he believed this should be subject to a neutral I-O court rather than allowing the Iv-B invisible hand supremacy over this team behavior. He also believed in V-Bi charity and the working for other people’s happiness rather than always acting in Iv-B self interest.

Smith’s ideas were refined by others including David Ricardo and Alfred Marshall, the evolution of economic theory however is also subject to the color interactions and so different ideas from Smith were emphasized and disputed. For example the idea that Iv agents by acting as knaves in a policed society was interpreted as meaning that this would always occur and so the market was always right no matter what happened. This is also true in Aperiomics because there are no right and wrong color interactions, but only consequences that flow from different ratios of colors. For example the Roy food chain might sometimes collapse and animals starve, but this is part of evolution and not wrong in any sense as it usually revives in a similar or revolutionarily different way. In the same way a recession or depression is not wrong in the sense that color interactions are just changing in a process, the problem is whether these interactions can be manipulated like a gardener pruning his plants or a food chain manipulated by culling some animals. Sometimes this is possible and sometimes not, for example some weeds might become resistant and agriculture in some areas can end up being abandoned despite every effort. Sometimes a foreign animal gets into a new food chain and wreaks havoc despite all efforts to catch them, in the same way I-O police try to prevent economic crime from creating hardship for people but it is an open question as to whether they fail in some cases or are undermined so much they cannot do their job correctly. If this undermining is also part of the color interactions then economic management might sometimes fail because people are unwilling to finance the I-O police properly or listen to them as well as the police making mistakes. In some cases then an economy may have pressures that cannot be resisted for long even with a good understanding of them, trying to ward off a recession by tinkering with the economy may make it worse.

A market being self regulating need not be the same thing as a balance of knaves scheming against each other, this is Iv-B and is inherently unstable. It is also not a kind of collective wisdom as Louis Bachelier said where prices represent all known information about goods and services for sale, the two ideas represent an Iv-B and V-Bi disconnect where each is unstable but the market can only work properly where these two principles are resolved together in a compromise. This was seen in 1929 when the economist Joseph Laurence said the stock market was not overvalued, the market by then was so opaque with Iv-B that the only information available supported his view.

For example to some degree Iv agents scheming against each other can be for the Bi public good but if there is too much crime such as one agent killing or robbing the others then the result may be a few Iv agents creating a V monopoly by colluding together. In the same way B workers as Adam Smith said might be more productive by competing against each other but if this competition becomes too destructive such as by undercutting each other’s wages too much then their overall wages fall so much they cannot afford to buy the goods they produce and the economy chaotically collapses. It can also cause them to realize they can make more money by colluding together in a Bi union and so become like V negotiating in a war of attrition. When as Bachelier believed the market represented all that was known about prices then this can create V-Bi stagnation where Bi unions demand transparency from Iv knaves and V businesses force B workers to be more transparent and so reduce their ability to compete with each other. A market then always has a collective wisdom but there are also those with secret information trying to profit from it, they can also influence the prices. For example Iv agents might secretly hear about a coming glut of grain coming on the market and short its price for profit. B might hear about new areas opening up for farming needing new workers and suddenly leave so their old farms cannot find workers except at a higher price leading to an increase in the grain price. The chaos from this Iv and B information then can drive the prices up or down according to who is right, but the Iv agents and B workers would only try to deceive the other because they profit from this deception. For example the Iv agents might know of these new farms but telling the B workers might spread knowledge about them, then the market might find out too early limiting his profits. The B workers would not tell the Iv agents they were leaving to work on the new farms because their employers might find out early and replace them before they are ready to go, this then might alert the market about these new farms and that local grain prices might go up. The market then is self regulating in the sense that secretive and deceptive information vies with the collective wisdom in driving prices, if this is moderated by I-O police then the market will be more healthy but if the I-O police are weak then sudden deceptions from Iv-B and stagnation from V-Bi can make it inefficient.

A market also has different motivations than profit or even in being efficient, as Adam Smith said many people get pleasure from seeing the happiness of others rather than deceiving them as knaves. At times then various colors prefer other interactions than an efficient I-O market just as Roy animals might prefer to satisfy their appetites and collapse the food chain or Biv plants grow in all kinds of shapes and sizes. So while a market might regulate itself in principle this is only if those involve prefer this, for example a tree might evolve to be well balanced with a strong trunk while another plant might evolve as an Iv-B desert plant to quickly fruit and collapse. In the lead up to the GFC few in the financial sector might have wanted a well functioning market as they were exploiting defects in it they preferred, for example Lehman profited by financing subprime lenders such as Ameriquest and might have preferred the risky strategy to wealth even in retrospect because they came close to surviving by being too big to fail and getting bailed out. Countrywide as a lender might still have preferred the weak I-O regulation because without it they might not have had a chance to grow as big as they did, in the same way Goldman Sachs and other changed from being a more regulated and staid investment bank to being more ruthless and wealthy. Just as Iv-B people tend to connive for their own self interests and sometimes work for the common good regardless others with their selfishness cause no benefit for others in Biv at all, this is also part of the system. For example many profit from trying to exploit blind spots in I-O financial regulators or using lobbyists to defund them and exploit their weaknesses. They are also part of the system even if they devote themselves to making it function less efficiently or even to break it completely for profit. Some when they shorted subprime bonds before the GFC could have warned the I-O regulators for the public good but instead chose to let the economy collapse or like Magnetar hasten it for their own profit. With Adam Smith this is like the baker he referred to using ingredients that were cheaper but poisoned all his customers, he might destroy the market for bread as few might trust bakers after this but might make more money.

A visitor to any swap meet could probably find room for improvement, perhaps they might be cleaner, the stalls might be better laid out, the staff more helpful, etc. So a market like this might be in principle self regulating but through the apathy of its staff fall apart and be closed down as consumers shun its poor organization. V can have talented people but it can also have swindlers who want to pass their looted monies onto their offspring as a new aristocracy seeking rent for this money, they might for example use some of it to buy off the government to reduce their taxes or give them information about government actions that will make them profits. For example the government might be planning a war and alerting V people might allow them to go into the munitions business or buy defense stocks. The market might be able to regulate them in principle but they are more like Adam Smith’s gluttonous and unproductive rich, if they represent a wealthy racial minority in a former colony then they might collude together and maintain a permanent grip on power rather than allow a fair market to strip them of some of their assets. In the same way Bi unions do not usually try to be the most efficient for a market, they might employ as team members disabled and incompetent people for some tasks that could be better done by more healthy and able people. However just as Iv and B people act according to self interest according to Adam Smith V and Bi teams act according to their their interests and these need not be a sense of altruism for humanity in general. So Adam Smith’s referring to desiring to see others being happy can be about their own team, for example those at a football game might rejoice to see their own team win and the other fans being happy but this does not mean they desire a fair game or for the opposing team and fans to also be happy. Bi unions and different Bi cities might compete with each other and even fight, this can be like Ro herds of buffalo that push each other away from waterholes rather than share them. While they might have a common enemy in Y predators they still can have a team selfishness while each being altruistic towards other members of the team.

David Ricardo expounded on Adam Smith’s views about the specialization in labor, there can be situations for example where one economy has a competitive advantage and a second might decide to erect a tariff wall such as the Corn Laws between England and Ireland in his time. He argued that an economy did not benefit overall from tariffs because while one section of the economy profited another lost as they had to pay higher prices such as for the corn. This is like Iv-B where competition is presumed to be always better than cooperation, for example a V-Bi economy might decide that it is better off sacrificing being able to buy cheaper corn in exchange for getting better wages for some working on corn farms. This would benefit local feudal V owners of these farms but also to some degree the Bi community supporting this arrangement. Instead with Iv-B they might compete openly with other economies that could grow corn cheaper and so lose their own corn farms, perhaps this might then lead to more specialization where they could grow wheat cheaper so both economies then benefit from trade. This relates to Adam Smith’s points about specialized labor such as in making pins, if one economy can make one part of a pin cheaper and another economy the rest of the pin then overall they might make cheaper pins than if both act as V-Bi subsidizing their own less efficient pin production and preventing imports from the other. This is similar to the problem of Bi unions dividing up various jobs in an economy, for example one union might build part of a car and a second union another part. It may be that a single union could build both parts but this results in a demarcation dispute between the two Bi unions similar to two Ro herds trying to use the same waterhole. Overall it may be more efficient for the buffalo in the herds to try to drink as R individuals than to each shield the weaker members of their herd. In the same way the Bi unions would each have some members who might lose their jobs if they amalgamated and made the two parts together, however the idea of a Bi union is to help the team not to compete with each other.

The question then can become whether competition is always better than cooperation or whether each has its own benefits. Ricardo then took the Iv-B part of Adam Smith’s ideas of specialization like how the roots of a tree specialize into different areas and compete with each other to find nutrients. In Aperiomics a balance between competition and cooperation builds a stronger economy but if there is not a neutral I-O police and courts to find a compromise then an Iv-B and V-Bi disconnect can cause problems. For example there might be some V businesses that use their government influence to protect themselves with tariffs or Bi unions might seek to have foreign goods banned if their labor laws are inferior. Other industries might be Iv-B and not have protection, for example in the US some industries such as defense are protected against being taken over for national security reasons and GM was bailed out rather than left to go broke from foreign competition. Mercantilist economies such as Japan and China often protect their local industries from Iv-B competition at least until they are on their feet, sometimes then an industry might be viable but still need some protection at various times. This is then like workers who might be competitive while still in a union, if they receive health insurance, unemployment insurance, and protection against being fired unfairly they might still have to compete and be subject to dismissal if they are lazy or incompetent. An industry might be vulnerable to competition when starting out but be able to hold its own against foreign manufacturers soon after, for example it might take a year to get established and then compete successfully for a century so it is profitable for an economy to protect workers and businesses in some situations. As Japan and China also showed, their protectionist policies often produced businesses that were competitive when these protections were completely removed. This is like in a Biv forest where a small plant might be vulnerable to weeds or being eaten by small R animals, as it grows taller it might be able to survive more easily. If a plant however is stunted and diseased then natural evolution might still allow it to survive because it overshadows its rivals even when it is not as good as them. This is often the goal of Iv-B businesses so the idea of competition is not always shared even by them, for example they might try to grow fast by competing but as soon as they dominate they can try to turn into a V monopoly like Adam Smith’s unproductive rich. They also often attempt to influence the government to make laws on their behalf, this government then as shown earlier elects politicians according to their color codes and so is part of the Aperiomics system and cannot be separated from it. Ricardo’s example of the corn laws and free trade then is not so much a situation of being right and wrong or Iv-B being superior but how the whole process works to produce undue influence on the I-O police to sometimes allow unfair tariffs or unfair competition. Allowing unrestricted Iv-B competition can then lead to large trade deficits especially against mercantilist economies and even eventual bankruptcy as the foreign exchange to pay for imports may not be available. While this might be resolved by a devaluation there are many other industries which can be adversely affected by this, a currency’s value then is from all these industries. Some Iv-B industries then might only be viable at a lower currency value but the currency is kept higher by the natural advantages of other exports and so the local Iv-B industries remain permanently unable to compete. This may result in the specialization Ricardo supported but if this situation is temporary, such as with foreign loans propping up the currency, then a later devaluation may leave Iv-B industries unable to defend themselves even when they are more economical than the imports. For example the exports may dump goods at low prices whenever the local businesses try to start up and then raise their prices when they go broke. If there is then effective I-O policing such as with the WTOs rules against dumping this can lead to more efficient economies overall.

Ricardo’s Iron law of Wages implies that B workers would compete against each other so making wages come down to a subsistence level, however when B workers realize they can make more money by forming a Bi union team then they can raise their wages. In the same way Karl Marx thought this competition would drive worker wages down until they could no longer buy the goods they make, at the same time Iv competition between capitalists would drive down prices until many went bankrupt. However just as Bi unions can stop the downward pressure on wages the collusion between V capitalists can occur when they realize they can make more money from this than competing.

His ideas on Rent are usually applied with both V and Bi in the Biv economy as each tries to develop a surplus and then loan this out to Iv-B businesses for a risky but higher rate of return. This is like in a plant where the V and Bi parts tend to accumulate reserves of nutrients that are loaned out to the faster growing Iv branches and B roots, it is also like in the Roy animal kingdom where Ro prey build more reserves to withstand wars of attrition from Y predators such as prides of lions. They then try to exploit the chaotic situations of Oy predators and R prey, for example Y lions might use their team to run down a solitary Oy predator and profit from this like the V leaves profit from the Iv branches. At other times Oy predators might profit from the Y lions by taking some of their kill after they have finished. Ro animals might profit from R animals drawing off predators from them, at other times R animals escape because the predators attack the Ro herd. This is like Bi communities trying to save money, build up pension funds, etc and so they need to buy interest bearing securities that are sometimes stable and safe but also others that are more risky with higher rewards to protect themselves against stagnation. B farmers might borrow money from a Bi cooperative to grow crops and then sell them to Bi for a more stable return. The difference is in Roy it is a Negative Sum Game where predator and prey both lose in their struggle, the Y lion for example loses energy but tries to regain it by killing a Ro buffalo. In Biv it is a Positive Sum Game where both sides benefit, here then a V business might try to beat a Bi union down for higher profits but usually both are still making money from the business. In Roy Oy and Y predators sometimes manage to eat each other and in Biv overtones of this relationship is where Iv agents sometimes make profits from V management and vice versa though both usually profit in a Positive Sum Game. In Roy Ro herd animals and R solitary prey tend to benefit from the other being a target for predators at times, in Biv the overtones of this relationship is where B workers sometimes benefit from Bi risky investments though overall both tend to profit from this pending.

Rent can be more complicated an issue because often that real estate that produces the best rent is the most scarce, for example the best positions for shops in a city might be on main roads and the best houses to rent on a river or hill. This scarcity of good rental properties can make them become more Roy because a Roy system develops around scarcity of resources. This is why Roy crime then can become associated with rare valuables such as gold and jewelry, also why scarce real estate might be a target for swindles or eventually be owned by Y organized crime wealthy people who then move to become V robber barons or respectable businessmen. Rent then can involve developing more reserves to loan out in V-Bi but in some areas where the best real estate is scarce, like only a few houses might have views or river frontage, these reserves need to be well policed by O or they may end up being owned by criminals. For example a third world economy might have a few wealthy mineral resources and so Roy dictators might try to control these and extract rent by taking the profits for themselves rather than giving money to the rest of the economy. Other areas without this scarcity might be more Biv, they would not have enough scarcity for the Roy criminals to try to steal crops and houses for example. This can be like a forest where resources are particularly rich and so plants try to grow in the best areas and become very predatory on each other, there can be vines trying to strange other trees and plants from outside trying to get seeds in there. Wall Street then can be like this, though the Biv wealth there can be more abundant and lead to many Biv workers and management the scarcity of alternatives can make it a magnet for criminals such as the mafia trying to infiltrate Wall Street on many occasions. This then can lead to wealthier areas becoming Roy like the poorer areas and crime developing there, for example the US presidency or being a politician is a scarce commodity and though it controls much wealth it can attract criminal elements with lobbyists, people trying to bribe politicians, blackmailers, and so on.

John Stuart Mill also analyzed booms and busts in the Principles of Political Economy, he believed the bubble usually starts from some external shock or accident. This can also be from an Iv-B revolution such as an invention or discovery of Gb resources. For example a large storm might knock over some large trees in a forest creating a hole in the canopy, this gives some trees the opportunity of a lifetime to grow and become part of the V canopy if they can. This is often the motivation behind a bubble where people believe the big opportunity it represents is too rare to miss out on and so they gamble by jumping into it. In a forest the sudden extra amount of light reaching the forest floor will kill or hurt some plants used to shade, this is like smaller businesses such as coffee shops around an industrial area that are also hurt by the crash and gives more opportunities for new businesses with vacant shops and factories. Whereas before renting or buying a business site might have been expensive because of the competition from other business buyers, this is like the competition on the forest floor where seeds struggle to find an area safe from being trampled or overeaten but not taken already by another plant, now there are cheaper rents and prices so not only are there opportunities to grow and become a monopoly themselves but also a cheaper environment for it. The poorer areas to start a business can be where the Gb resources are poor such as being too hard to find or not enough parking, they can also be trampled like with a poor area where criminals might rob them or scare away customers. A revolutionary opportunity can make these costs seem cheap by comparison to the profits available from a new technology, such as software developers as x86 computers made by Intel improved or discovery of gas deposits in the US and elsewhere in 2011, this can be like a new source of fertilizer in the forest such as herd animals getting caught in the think undergrowth and as they died their carcasses created a richer soil. So for the same amount of competition between seeds there would be much more of a chance for success, also the extra fertilizer would be better suited for some plants than others that might be so used to poor soil that they cannot use this windfall to grow with. The result is more Iv-B plants growing in this richer soil until it is exhausted, they might also take over the ecological niche from the previous plants and by overshadowing them get a revolutionary advantage from this temporary windfall.

As these Iv-B plants grow the most intense competition can result and many might skimp on creating a strong I trunk because there is less risk from being knocked over by Roy animals or the weather than missing out on getting to the V canopy and overshadowing their rivals permanently. This is like the boom phase where companies and people are desperately trying to get what money they can or to build a bigger market share before someone else overshadows them, for example the rise of Roland Arnall in building the subprime lender Ameriquest was in a highly competitive environment and others such as the Jedinak’s Quality Mortgages often undercut them in a race to finance more dangerous mortgages in battles with the I-O regulators. Any company that had too many scruples would have been either bought out or overshadowed so any business they tried to do would have been undercut by rivals, for example mortgage brokers would tend to go with the lender who gave them the highest commissions and did the most deals quickly. As Mill said then this speculation success gives rise to many imitators and causes businesses to go into areas less likely to be successful, this is why a boom tends to spread into areas where the chances for profit are more dubious. This is like as some seeds grow to try and fill the canopy hole or take advantage of the carcass fertilizer other seeds also sense the opportunity, soon there are again few places for these seeds to make a start and so for example they might be trying to grow on the edge of the canopy hole where the light is marginally better or on the edge of the carcass fertilizer which is not much better than the average soil. These plants then must grow even more desperately as Iv-B and save on all unnecessary infrastructure such as strong Iv branches and I trunk. If they collapse they might also fall on their competitors knocking them down, this is the same kind of domino effect that occurred in the GFC and so some plants might fill in the canopy hole temporarily but then get knocked down because they are too weak to withstand any shocks.

The same can occur in the Roy animal kingdom, this can be like more predatory businesses such as subprime lending around the rise of Ameriquest in the 1990s presaging the subprime fraud of the 2000s. For example a Y pride of lions might disappear, they might get killed by humans, starve, get cornered and annihilated by Oy predators like hyenas or even another Y pride of lions that cannot cover their territory and so it falls vacant. This disturbs the whole food chain as it gives other animals the chance to be an alpha predator, for example there might be cheetahs or the hyenas. To get big enough quickly to fend off rivals they must eat many prey and the fastest way is to catch R prey like gazelles rather than a slow Ro war of attrition against herds of Buffalo or Wildebeest unless they could get to their oldest or youngest. So like the subprime lenders they would aim for the weakest parts of the Bi communities to try and deceive them into making large profits, only in this way can they grow to have enough money to fend off rivals from other areas moving in. For example the Y cheetahs or Oy hyenas might be able to keep out a rival Y pride of lions from taking over the territory if they are strong enough, in the same way a local gang or mafia might strive to grow to fill a void left by a war between different mafia families as occurred many times in the US. In this situation the O police are trying to catch criminals unless they are sometimes paid off with secretive Oy corruption, if the local gangs manage to get their own O police and judges on the payroll they may be able to withstand the deeper pockets and stronger killers and thugs from another area.

So this Roy situation grew with predatory lending as companies began to realize from Russ and Becky Jedinak’s original Savings and loan that lower grade mortgages could be sold with extra profits, this then was like the hole in the V canopy that was unexploited or as it turned out more like the carcasses giving extra nutrients. It was also like finding extra R and Ro prey that would allow another Y alpha predator to coexist with those in other industries, for example there can be many alpha predators that eat different prey and so do not directly compete so they tend to control a territory between themselves. If a potential alpha predator wants to get to the top they need to either depose someone, exploit their disappearance or misfortunes, or find other prey they don’t want. For example eagles and hawks might find prey in an area that hyenas and lions aren’t interested in, this was like the subprime lenders finding often Black and Hispanic elderly and naïve borrowers as a way to raise money quickly and often criminally. The I-O police in this situation were more concerned with these lenders being insolvent and causing depositors to lose money triggering Federal insurance than protecting the actual R borrowers. This is like with I regulators that concentrate on Iv agents and Bi communities so the Iv agents don’t commit too much fraud and the Bi communities have enough randomness to insure against this. They often don’t care as much about V-B businesses like V subprime lenders chasing vulnerable B borrowers as they are far from their jurisdiction, in many cases these borrowers never even complained until they were drawn out by class action lawsuits and exposure of the situation in the media.

In the same way the O police tend to not focus on Y alpha criminals like mafia gangs attacking R weak people, for example loan sharking and numbers rackets might become tolerated in the US in Mafia areas. The I-O regulators of the financial industry then usually overlooked these predatory loans perhaps also because Black and Hispanic areas were usually R-B and unfriendly to the police in most cases. This subprime bubble then was growing through the 1990s even before the most dangerous part in the 2000s, also it was finding more ways around the I-O regulators, for example Arnall gave up his Savings and loans license to get around some regulation and the Jedinaks became agents to get around the potential prosecutions for fraud they were facing. This growth then was based on finding flaws in this I-O policing, this is like in the Roy family kingdom where the Y animals trying to fill the vacant niche need to get around the O and Ro animals to get the R prey which are the easiest to eat and grow from if they can be caught, often with deception as occurred with misrepresentation from salesmen to elderly saddling them with high interest rates and up front fees. Often they lied about the terms of the loans and even altered the loan documents later to charge them higher fees. Many of the borrowers were then like R prey or R younger or older members of a Ro community who naively got too close to Oy and Y predatory animals trying to quickly grow their numbers.

Mill also realized that there was a great expansion of credit in booms like this, the subprime lenders even when Roy criminals were able to borrow large amounts of money from Wall Street, Michael Milken for example was trying to entice Savings and Loans to buy junk bonds to keep the prices higher and others such as Lehman knew about the predatory lending but wanted the large profits because they too were trying to fill holes in the V canopy with the new securitization opportunities by growing faster against Morgan Stanley and Goldman Sachs. This is like as the Y alpha predators grow in strength they may get some support from other Y teams, for example Y cheetahs might be preferred by other cheetahs as an ally against lions returning. Cheetahs might prefer hyenas fill the niche because they might be easier to steal from later than lions, and so on. This is like a growing mafia gang having some allies and getting support with money and weapons because they might be preferred in this territory than some more dangerous other gang. In the Biv forest some plants are more antagonistic to each other than others, for example some trees might not compete as much with seedlings of their own kind or similar trees which is how they evolve cooperative behavior in forming the canopy. Other plants such as smaller shrubs might be the enemy of larger trees, the clearing might be taken over by smaller bushes which overshadow the tree seedlings and so part of the forest becomes smaller and sparser. In such a situation the bushes and trees will continue to compete against each other, this is like for example cheetahs and hyenas in Africa competing with lions trying to reclaim their territory. Some of this credit also comes from the bubble itself, for example as people buying houses and companies lending money for securitization made profits from US real estate in the 2000s they often reinvested it and ended up losing much of it. This is like in the Roy animal kingdom where the growth of Y-Oy predators is taking its toll on the Ro-R prey who will soon start crashing in numbers leading to this predatory bubble bursting. For example as the alpha predators jockey for supremacy this upsets much of the food chain and smaller predators also do well will others starve more, this is like smaller related businesses and salesmen in the subprime boom making a lot of money or being pushed out if they were no passionate or crooked enough. Also the losses suffered by Ro-R borrowers as well as the rise in real estate prices made for more winners and losers in these communities as well destabilizing the whole financial food chain like in the Roy animal kingdom. The growing numbers of some predators then occurred as other predators were eaten like with companies taking over others then dismembering them for profit, some prey such as the elderly subprime borrowers were being wiped out while others such as R deceptive speculators were increasing so this made it appear there were more profits for the Y-Oy subprime lenders just like with the Y-Oy predators.

Mill then thought the boom ended as the collapse of some large companies caused a general mistrust and rise of uncertainty, this is like in the Roy animal kingdom where some Ro-R prey become rare and this makes some of the contenders for alpha predator begin to starve and collapse, this would tend to make the other animals more fearful as food gets harder to find. In the Biv forest this is like some trees getting to the V canopy and then collapsing from the knock on effects of smaller rivals collapsing from being overshadowed, there can also be an external shock such as a storm making them fall before they could strengthen their fragile Iv-B structure. The boom then allowed some with weak I trunks to succeed and these snap in two because of this, like in the Roy animal kingdom where some predators succeeded temporarily at the cost of undermining and destabilizing the food chain under them. In the lead up to the GFC then these companies vying for territory and market share damaged the economy so much that they suddenly found their traditional prey such as elderly Black and Hispanic people being tricked into high interest rates and upfront costs were disappearing. This caused many of these lenders to collapse such as later with Countrywide, also this can be because these disturbances in the food chain lead to R revolution and Ro evolution in their financial prey as people become poorer and more wary of these Oy financial salesmen as predatory and the Ro communities either chase them away, use the O police to turn on them, or use O lawyers and the courts to prosecute them or pressure the regulators to act. This is like in the Roy animal kingdom where the disturbances caused by the Y-Oy predators makes the Ro-R prey change, the R prey become faster and harder to catch because the slower ones were eaten like the less wary people lost their homes from predatory loans. The Ro communities talk more about the loans and alert their neighbors to this threat, more start to not sign anything until they talk to community cooperatives and lawyers who protect them. This is like Ro prey evolving to become more protective of their R young and elderly because those less team spirited have been eaten over time. In the Biv forest the upsets in the traditional mix of plants caused by the canopy hole and carcass fertilizer result in some plants resisting this Iv-B growth and crashing, for example some develop stronger B roots that get more Gb resources and so can hold their own against those growing faster in patches of richer soil. Others might develop more Bi resources of nutrients so they cannot grow as fast as the Iv-B plants but if they collapse then these ones with more reserves take advantage of the hole as they are stronger and larger than the Iv-B plants having to start from further down. There is then an unstable relationship between the Iv-B strategy of fast growth and collapse to get to the canopy and the V-Bi strategy of slower and more stable growth that sometimes gets overshadowed. When one succeeds too much the other evolves to counter this and so the first loses some of its advantage, this as said earlier when there is an Iv-B and V-Bi disconnect can cause swings from one to the other such as with the economy and times of Iv-B boom and bust followed by V-Bi stagnation and then Iv-B boom and bust again.

Mill then says that panic might set in, this can lead to pessimism as great as the original optimism. This can be because in Roy Ro-R are positive and Y-Oy are negative, in the early stages of a boom then people are generally positive or optimistic like a food chain where there is plenty of Ro-R prey and fewer Y-Oy predators. Eventually though this swings from overeating to too many Y-Oy predators which makes the mood negative. Initially then the Y-Oy predators are more optimistic from the amount of food allowing them to vie for supremacy between each other, when they overeat this leads to panic among them as they begin to starve. It also leads to panic among Ro-R prey as they become even more overeaten because the Y-Oy predators have to eat even more unsustainably risking extinction of their food source or starve and become extinct themselves. Whereas before then the boom seemed to be creating more animals than before, the bust makes less than before as both predator and prey can drastically decline in numbers like a severe recession or depression with a decline in the GNP. In the Biv forest the growth and collapse of many plants trying to fill the canopy hole can exhaust the soil temporarily as the humus building up has no time for the roots and branches, leaves, etc to decay enough to be reused in growth. This leads to a depressed Biv economy where like a forest dominated by dead wood there is both not enough room to regrow because of the fallen wreckage and not enough nutrients. In an economy this can be complicated by zombie banks and companies propped up but not healthy enough to grow, this is like trees partially damaged and not able to grow efficiently again like a tree stump. Because they are alive they will not rot and create room and humus for seedlings but their misshapen stump also does not easily allow them to regrow and so this dead wood and zombie trees can dominate the hole in the canopy instead of new successful trees. In the Roy animal kingdom this is like predators starving but still staying alive enough to keep decimating the Ro-R prey numbers, if the predators disappeared then the prey might recover but their hanging on leaves them too weak to compete with other areas poised to move in when the prey recover. They are then like a depressed economy where the dead wood and zombie businesses don’t allow new growth and any economic opportunities get used up by financial predators while others stay out of the economy because it is too dangerous to invest in. This is like the US economy in 2011 where banks are fearful of lending money into the main economy and so the liquidity lies in pools or in localized Iv-B bubbles such as commodities or variations of the carry trade using Fed money. The new businesses that might either allow the economy to recover or cause more chaos from growth and collapse are then prevented from getting a start, if they make profits then they become a target for financial predators like investment banks used to making big money before the GFC. Like the R prey being ripped off by Oy predatory subprime lenders these new businesses are likely to be deceived, for example they might get some funding and then shorted as the finance is withdrawn like a pump and dump scheme while Credit Default Swaps on their debt pays off. These V-Iv financial predators then tend to exploit any green shoots in the economy, like the starving Y-Oy predators they cannot give way and allow the new companies to create their own V-Iv infrastructure but manage to stop the new businesses enough on keep themselves on life support delaying the recovery.

Such a situation seems to belie the idea that I-O markets can be self regulating, sometimes chaotic relationships between predatory animals can make their numbers unstable for long periods. However more usually the instability first comes from an external shock or a change in Gb resources. William Stanley Jevons championed the idea of external events causing market problems but he attributed it to sunspots. This has some merit in a few cases, for example the Maunder Minimum and Dalton Minimum were two periods of colder weather associated with a decline in sunspots and the temperature changes in many areas were severe. For example the Thames in London froze over in the Maunder Minimum so the effects on crops and the global economy would have been severe. While there seems to be no other plausible connections between sunspots and the global economy it is interesting that the GFC occurred at a time of record lows in sunspot activity that as of 2011 may be presaging another time of low temperatures globally. Small temperature differences can widely affect the yields of crops, for example there was a Medieval Warm Period from about AD 800 to 1300 when, in contrast to the Thames freezing over in the Maunder Minimum from 1645 to 1715, England was exporting wine to France at the time and even Norway was growing grapes. According to Don Fagan in The Great Warming this period changed the weather on every continent drastically, this would have caused collapses in Roy food chains and Biv plants nearly everywhere. For example in this time herrings were a major food staple in Europe but virtually disappeared after the warm period ended. This also drastically affected societies everywhere, for example droughts on the Central Asian Steppe may have caused Genghis Khan to move westward plundering and destroying many cities. It may even be climate disruptions associated with Global Warming have affected food supplies in some areas, when an economy becomes too Iv-B small external shocks even from the weather may causes collapses in companies and even economies. For example much of the Arab Spring was caused by food riots because of higher prices, some from Iv-B speculation. El Nino weather patterns can also create droughts and floods creating collapses or booms in Iv-B economies while others more random as V-Bi might have more reserves to cope with these natural cycles.

Karl Marx wrote mainly about the crises of capitalism, he thought this would eventually lead to its complete collapse and the rise of another system. In many ways this is like a Biv forest collapsing because of scarce Gb resources into a grassland which then supports Roy animals instead of the plants dominating the animals. For example he believed that the use of more machines would increase the profits of the V capitalist but would continually put pressure on the wages of the B workers, this problem has been recently revived as many wonder if computerization will eventually lead to mass unemployment. Arguably for example the rise of mass production in the 1920s made it much easier to produce goods such as Ford’s Model T cars and if this occurred quickly enough it might outstrip the ability of people to retrain for other jobs. Each time they retrained that job might be taken over until they could never learn a job fast enough, Ray Kurzweil in Transcendent Machines forecasts a future something like this where AI becomes as intelligent as humans and so can do any job requiring human intelligence. In 2011 for example the Watson program made by IBM won the championship in the game Jeopardy and now is beginning to be used to interact with people, this is like how secretaries and other jobs based on relating to an understanding people attract wages. Robots are increasing exponentially as Iv-B industries in many ways because of free trade, they allow low wage economies such as China to use the trade deficits of the advanced economies to invest in these still lower wage businesses to maintain a competitive trade advantage. Marx thought this would lead to economic collapse eventually because the B workers could not provide enough value compared to machines to justify their wages, however if the workers cannot afford to buy the products then there may be little point in making them so this can lead to overproduction and underemployment.

This process in Iv-B can be a hollowing out of the global economy, for example consumers and businesses buy products made by Iv-B machinery because it gives them a competitive advantage over other products made more with expensive human labor. The result is more businesses firing workers and unemployment but because there are still some savings in the economy people can still afford to buy these products for some time, the result of this imbalance is a trade deficit because it becomes more difficult to sell something back to these trade surplus economies to reduce this deficit. The same has occurred since the Industrial Revolution inside economies, in England for example Karl Marx saw wages plummeting because of these new machines and saw that this process could not continue forever, being chaotic this mechanization should grow exponentially hollowing out the V-Bi savings of workers until they lose their jobs and then the Iv-B economy must crash unless prices also drop with deflation. There needs then to be an equilibrium between the Iv-B competitive growth of machines and computerization and the V-Bi reserves in the economy, this is similar to the subprime crisis where the savings of V-Bi people went to buying houses in a bubble. When people make investments in a bubble the prices rise and these profits are like money saved like buying goods cheaper. Instead then of improved Iv-B machinery making for cheaper goods hollowing out the V-Bi savings of consumers the bubble hollows out their savings by appearing as if they will make profits from buying these goods instead of just saving money or their being labor saving in the home. Then there is a crash when the V-Bi savings are gone and the Iv-B winners take the majority leaving the rest as losers in a crash, in the same way with increasing mechanization and computerization when the savings of advanced economies with trade deficits are gone there must be a correction where their hollowed out economy might implode.

Mechanization and computerization then can be bubbles as Iv-B because those that invest in them by buying their goods as well as loaning money to their factories assume that it will be able to continue, this is like with the real estate bubble where many assumed that these savings fuelling the bubble would somehow be available forever and so it would never end. The problem is people bought real estate in the bubble often because of the pressure to buy early or miss out, to make profits, etc and so when this was no longer possible there was no reason to put savings into it. The problem then is not whether the savings are available though often they might be exhausted before people realize the Iv-B boom will collapse, once people realize that there will be little overall return from putting their savings into Iv-B there is little point in doing so. This is like in plants where the V-Bi sections lend nutrients to the Iv-B branches and roots for faster growth on the basis that later the plant will spread out V leaves and fruit while the Bi areas will grow strong to protect against being uprooted. If consumers knew then that increased mechanization would lead in say ten years to permanent unemployment and lost savings as well as the goods they bought having broken down then they would not buy the Iv-B products. This is again the secretive and deceptive nature of Iv-B, it appears like there is something from nothing and that V-Bi jobs can be lost and savings spent without consequence.

When Iv-B is stronger in the economy then there can be booms of many kinds and often they appear together, for example many people making money in the housing boom spent the money on ever cheaper electronics goods so it appeared that they were profiting in both ways at the same time. It may also be the scientific revolution in computerization underpinning the Iv-B consumer goods bubble convinced people that the same would occur with rising house prices and subprime finance, that because TVs and cars are made more efficiently that this expertise had carried over into finance.

Throughout history there is this tendency to have Iv-B disconnected from V-Bi, this has been mention earlier but as Marx said there is an association between speculative bubbles and the competitive nature of capitalism slashing wages and prices. These industrial revolutions have happened frequently, for example the Industrial Revolution in England that Marx witnessed but also the revolutions of electricity, railroads, sewerage, mass production and cars, telephone, and so on. Each time these Iv-B revolution caused people to pay money into them whether to buy the new consumer goods or to loan money to these businesses, each time they also depleted the savings of the economies while they reduced wages in some industries they replaced. For example the revolutions in mass productions and cars in the 1920s caused people to buy these goods perhaps faster than the economy could sustain, at the same time traditional jobs related to horses and buggies disappeared or had their wages slashed. At the same time some new Iv-B industries boomed making more profits and raising the share market higher, the revolutions were like in the Roy animal kingdom where R and Oy animals having revolutionary changes destabilized the food chain. This sometimes led to a boom for some animals, for example Oy animals that discovered a new ability to catch R prey might boom in numbers and then crash as they starved when the R prey were depleted. R prey might have a revolutionary leap in becoming faster or harder to catch, this might cause their numbers to grow so the predators still catch some but then the Biv plants get overeaten causing the R prey to starve, this causes them to be overeaten more by the predators as they become too weak to run and the food chain crashes again.

The rise of Iv-B computerization then is similar to as Marx predicted, it has a downward pressure on B wages because they must compete more with machines but it also causes an Iv-B investment boom as the profits from these new companies are invested into the market. So because loans were so easy to get at low interest rates many invested in real estate causing a global real estate bubble while globally also high wages in advanced economies were being taken away by low wage B workers as well as mechanization in emerging economies. The V-Bi parts of the global economy then get hollowed out in two ways simultaneously, they invest more money in speculations caused by the V loan money available while they also overspend on Iv-B consumer goods which become cheaper. The result is as was seen in the US in the 2000s an overall reduction in V-Bi savings while people withdrew equity from their homes and the US ran an increasing trade deficit, eventually this led to tipping points and collapses.

Marx believed these crises would lead to either the enforced destruction of some of this production or the opening of new markets such as with colonialism postponing the crisis. This is like in Biv forests where too much Iv-B growth or an external shock can cause collapses and the accumulation of dead wood, trees then live on feebly like zombies enough to prevent their decaying and the regrowth of new trees. This destruction of this production then is like this process of decay where trees collapse back into humus to be available for the growth of a new forest that can adapt better to the new conditions such as changed weather or soil. When economies don’t decay fast enough they have this ossified structure, this is avoided in Iv-B economies to some degree by planned obsolescence where goods are designed to break down and be worthless around the time when newer and better goods are available. This is much harder with housing though, also the trend of preserving older architecture as a heritage can make many cities like dead wood leaving no room for factories or new homes. Paradoxically then just as a forest might suffer by trees evolving to be too strong and so decay too slowly an economy might also suffer from this overproduction, then the resulting glut prevents new industries from growing an creating employment for people to buy the accumulated goods. This is happening for example in the GFC where there is overproduction of electronic goods from such as China and Japan along with a slow down in sales to advanced economies who are running out of savings with their trade deficits. This hollowing out of some economies then has led to economic collapses and the excess of factories in China might need to be torn down even without selling many goods because new technology makes their goods obsolete. One way the Biv system regulates this problem is by fire sales where this overproduction is sold off cheaply enough to liquidate debts associated with it, sometimes companies also go bankrupt. Generally though Iv-B tries to have these businesses wither quickly and rot into humus so as to fertilize rising and mutating businesses. For example companies might quickly collapse as their staff moves to other businesses and their computers are reprogrammed with new software or sold as junk for recycling.

Such a system seems efficient if it can collapse and regrow fast enough, it might seem to overcome Marx’s objection about overproduction but as the GFC shows it can cause major economic problems. This is because the system is basically inefficient, having to discount or throw away the fruits of overproduction can waste resources better left in the ground for sustainable growth. In the same way a Biv forest might be better off not growing so fast that it produces trees that have to collapse, then there would not be so much dead wood strangling future growth. In the same way the overproduction in the 1920s arguably contributed to the Great Depression, the various recessions since then culminating in the GFC also resulted in overproduction and a loss of wages as unemployment spiked. At the same time savings declined in the lead up with this overproduction as people bought too much of it, this reliance on savings also gives a false signal to the Iv-B economy that its growth is more sustainable than it really is. At the same time these recessions were usually accompanies by booms that bust, this then is also Iv-B where profits from this overproduction initially fuelled speculation often drawing more V-Bi savings into them to be lost. The result then is this overproduction hits the wall of reduced savings, for example the real estate boom caused many extra housing subdivisions to be built resulting in overproduction for the savings looking for profits, the tech bubble caused many variations of internet start up ideas that eventually were too much for the V-Bi savings available to invest in and to buy the products from so that bubble collapsed.

The problem then is the same with any Iv-B and V-Bi disconnect, there needs to be a process of reconnection to the I-O market ferreting out fraud and crime while trying to find a real market value for the overproduction that the unemployment and low wages of B workers can afford. Usually this results in Iv agents trying to sell these goods as agents in the I-O market with large discounts, the Bi community has the most savings left and so can afford to buy some of it. In this way the V-Iv system pays off some debts and get more capital to in effect tear down their own dead wood and rebuild their businesses in line with this reduced demand. This is like plants adapting from this tendency to grow too fast and then collapse leaving dead wood, they evolve to rot more quickly and form humus faster for regrowth rather than trying to grow too much from stumps and fragments of trees that cannot regrow properly. This is also like in the Roy animal kingdom where Oy and R animals after booms and busts in their numbers settle down with fewer revolutionary changes in their genes, at this point the O middle of the food chain has to be rebuilt and like a market there needs to be found a new balance between predator and prey that doesn’t result in feast or famine for each of them. This can then lead to a period of V-Bi stagnation which could be what Marx foresaw as the end of capitalism, the Soviet Union for example became a stagnant society that eventually fell apart by giving up this Iv-B technological engine in their economics.

For example in a Biv forest too much dead wood might take so long to decay that a forest doesn’t regrow at all, the humus might blow away as it cannot support enough regrowth between the dead tree trunks and the viable seeds are eaten by Roy animals or rot. The forest might then die off from this overgrowth and become a grassland, in the same way a Roy food chain might not be able to survive its collapse from too many revolutions in predator and prey driving some of them into extinction from overeating or starvation. If these animals are key to the food chain overall then much of it might collapse permanently, for example if a drought in Africa caused R prey such as gazelles to be eaten so much they were wiped out then many predators might be unable to adapt to other prey and die out also. This then might lead to areas with plenty of plant food and few animals because the food chain needs to evolve new animals to survive in it or the older animals from other areas need to emigrate to take it over again. Much of this problem is probably avoided in nature by variations in the life spans of Roy animals and Biv plants, for example if plants live too long then it is harder for them to adapt to changing conditions and also they might not decay fast enough because their very longevity builds them too strongly. Roy animals might live so long that they don’t have enough offspring and so R prey being overeaten might leave them unable to reproduce quickly as their long lives would have adapted them to a low birth rate to prevent overpopulation and starvation. If animals have life spans that are too short then even with a high birthrate they might run into problems with cyclical changes such as with the weather. For example if every 10 years there is a 2 year drought then animals that have a life span of 5 years might be decimated because they might be too young or old to survive the drought. If they lived for 20 years however they would be adult for much longer and less likely to be too young or old for breeding or warding off predators from being weak in the drought. With predators the same problem would occur, if they had a short life span then some might grow up in the drought and be decimated from a lack of experience or being weak from their youth, this would cause their numbers to drop precipitously in the drought but then if they increase their birth rate they might also starve from being too many in the good times. Oy and R animals often select this path of shorter life spans and higher birth rates because time is short and energy is high for these colors as with Iv and B in plants, the Y and Ro animals though tend to live longer and have lower birth rates because time is their strategic advantage rather than energy. In the same way a forest might have Iv-B plants that grow quickly and die while others as V-Bi might grow slowly but live for a long time such as Sequoia trees. If the forest has a problem then these long lived trees might form so much dead wood that it might not recover and become grassland, just as planned obsolescence attempts to resolve the problem of overproduction plants and animals then probably do the same.

This can also happen in economies, for example the Great Depression caused so much economic devastation that many companies and products disappeared forever, the economies of Germany and Italy for example became completely transformed into dictatorships and many people died in a world war. This overproduction then grew in the early part of the 20th century culminating in a boom in the 1920s so when it collapsed the factories collapsed form being unable to sell their goods or being able to raise enough capital from sales to retool for the new economic conditions. Eventually the skills of the unemployed were lost by being idle so long, plant equipment fell apart or was sold off to pay bills and the economies become like the dead wood forest that collapsed into grassland. However the Iv-B and V-Bi disconnect can always be resolved by strong I-O policing preventing much of the fraud and secrecy that leads to this overproduction, also it can help to police these fire sales in the I-O market to allow regrowth. The problem though is how to make this I-O policing strengthen fast enough to handle the situation, usually the reasons that weakened it in the first place still exist leading to either a switch from Iv-B to V-Bi stagnation or a strengthening of I-O policing for a time of more stability.

Keynes also believed that the free market economy could be unstable at times, while Marx looked mainly at the potential for Iv-B crisis in capitalism Keynes looked more at the V-Bi side. The classical view of economics was that the economy was self regulating, if wages go too high then the lack of demand for the products they make will cause them to shrink or the workers will lose their jobs. If prices go too high then the lack of demand will also cause companies to lower their prices or lose market share. As prices and wages fall this stimulates more demand and so the cycle begins again, however in Aperiomics this is only true when the I-O market is consistently strong and this does not happen. This self regulation is like in the Roy animal kingdom where if there is too much demand for Ro-R prey by Y-Oy predators then they will be overeaten and lead to a collapse in both numbers, then the cycle begins again as both numbers rise. In this situation the predators and prey generally self regulate their numbers if the environment is stable, with evolution over time they adjust their life spans and birth rate so the R and Ro prey numbers stay about the same, the Y and Oy predators also do this and the O middle of the food chain is both predator and prey and they adjust their numbers up and down to act like a dampener of swings in the numbers of the other animals. This O is like the I-O market which adjusts the supply and demand because in Roy the supply is prey and the demand is what predators want from the prey. However the converse is also true where the prey demand something from the predators they supply which is a governor on their overbreeding as well as evolving them.

In an earlier example a basic market was shown to evolve as small B farmers came together into Bi communities, some then started to trade their produce of for example milk, eggs, wheat, etc. Then V and Iv people started to add value by the V talented people working out how to refine some goods, they might for example combine these goods into novel kinds of bread and biscuits to sell at a profit and their Iv agents receive a commission for showing these in the I-O market. Such a situation is self regulating to some degree, for example if the farmers sell the milk, eggs, and wheat for too much then others might prefer to grow it themselves or keep their own cows and chickens. This then puts pressure on the prices of these goods where the farmers can charge more than they cost as long as they don’t stimulate competition from other farmers which would lower the prices perhaps too much. For example if their prices were too high then many farmers might go into the same business and produce a glut which would lower the prices until some of the farmers stopped. In the same way the V talented people might charge too much for their bread and so the farmers might prefer to just make a rough bread themselves or even a porridge rather than pay the high prices. The V talented people and their Iv agents then would either lower their prices or lose business, if not then other V talented people might try to make bread and the resulting competition lower prices again until some V have to leave the business. This is basically the regulating part of the market, with wages each might charge for their labor instead of making an actual product, for example the V talent might charge to visit farms and paint portraits, if they charge too much or their Iv agents demand too much commission then demand will fall until they drop their prices or some painters leave the business. If the Bi-B farmers were laborers on farms owned by V then if they charged too much for their labor then the demand for it might go down because it might then be too expensive to grow wheat and keep cows and chickens.

The reasons why this is not self regulating have been explained many times in this book, the problem is the Iv agents and B farmers make deals secretly with each other while the V talented team of artists etc and Bi team of farmers make deals with each other using collective bargaining. The two interactions then often become separated from each other and this reduces the self regulating ability of the I-O market because in effect both Iv-B and V-Bi are bypassing it. Wages are often set by Bi collective bargaining with unions in a war of attrition of threat strikes and lock outs against V companies, other wages are highly competitive where Iv agents and B individual farmers try to outwit each other. Eventually the wages and prices of Iv-B and V-Bi diverge so much that the I-O market is weakened, neither wants to sell their produce and labor there. Eventually though this arrangement collapses and the two sides have to reconnect for a while, this is usually because the Iv-B deals become far too cheap or expensive because their secretiveness makes them lose touch with reality. This is what happens in most booms causing a bust when they have to sell some goods in the I-O market to get liquidity and they find no one wants to pay the prices they are charging. The V-Bi side also fails because the collective bargaining also produces wages and prices out of line with reality, this was seen with wage price inflation and stagnation in the 1970s in the US and Europe. At some stage the Bi unions realize that the B workers will take their jobs for less money and the V companies realize that the Iv agents can source goods cheaper than they can sell them for by bargaining with members of their V team. V and Bi then find they need to correct their wages and prices in the I-O market, otherwise for example the Bi unionists become unemployable and the V companies cannot sell their goods.

Keynes then looked at the V-Bi side of this market inefficiency perhaps because Marx had raised so many questions about the Iv-B side. He said employment levels and prices are determined by effective or aggregate demand, the goods then are regarded as a collective whole produced by a V team while the wages demanded by another team of Bi workers. This approach worked well in the Great Depression because the collapse of the Iv-B part of the economy left most of it as V-Bi and stagnant because of a lack of growth. Economists and governments then were trying to manipulate this situation by making the V-Bi areas grow and somehow substitute for the Iv-B collapsed sections which does not work well. V-Bi plants for example are like grass, they can be highly resilient but resist growing into trees because their system can quickly collapse if it pushed into this because of a weak I-O trunk like trees have. This is also like a Y-Ro interaction in the Roy animal kingdom where Y predators form teams and battle Ro teams of prey, they then have stagnant wars of attrition between them and if both their numbers are low then both also have a low birthrate and the overall animal kingdom will be low in population and weakened from this fighting for each meal. Both Roy and Biv then underutilize the resources available, V-Bi grass might grow where forests stood before and the collapse of the Oy-R food chain might leave these Y-Ro animals slowly increasing in numbers.

In an economy this V-Bi stagnation would normally result in some V talented people becoming Iv agents to sell goods cheaper and Bi unionists work for lower pay restarting the Iv-B businesses, however these might quickly collapse when they try to get off the ground. V-Bi investors might be reluctant to risk more money in them because of these collapses so starved of capital they avoid trying and lay off their B workers. The V-Bi businesses have less diversity in their goods and services because of the normalizing tendency of their teams, the good available to buy are also stagnant in their evolution as with the Ro Soviet Union after World War 2. The lack of appealing goods makes the Bi workers lazy, their laziness makes V businesses not interested in trying to expand or start new enterprises. This became a common complaint in the 1970s for example, Bi workers in the US and Europe were seen as lazy and overpaid but would strike if the management tried to make them work harder or cheaply enough to make profits to expand the business with. Goods were also seen as sloppily made and there was little technological progress because of this V conservative business attitude so workers often saved because there was little to buy. The system then developed a glut of savings as with Japan in its lost Decade. This underemployment equilibrium then is like the grass growing where a forest or Iv-B weeds could, or slow growing herds of Ro prey and teams of Y predators where there could be far more Oy and R animals.

The lack of demand with an oversupply of goods and labor then leads to cost cutting on both sides, the V goods get discounted as do the Bi wages causing a deflationary spiral. This is like V-Bi wage price inflation but in reverse, in the 1970s for example increases in the money supply caused the Bi unions to demand some of this extra money as did the V companies. Adding money then caused this V-Bi war of attrition to take the money leaving little for the Iv-B businesses to grow and end the stagflation. With deflation came falling profits and thus falling wages, this led to banks contracting the money supply as people withdrew some savings and so the banks could loan less money. This deflation is extensive deleveraging below what is necessary for a resilient economy, for example V-Bi grass cannot collapse because it is so springy in nature and over time might evolve to be even lower in size as higher grass might get trampled more by Roy animals. This is like tall poppy syndrome where talented Iv people get cut down because they are seen as deviant from the normal population, also B workers might also be seen as deviant because they want to work too hard or for lower wages upsetting the other Bi workers.

This deflation can be dangerous when there is V-Bi debt because assets become worth less than the loans on them, this is happening after the GFC where the V-Bi stagnation allows Bi house prices to drift downward increasing this problem while overproduction causes sell offs of goods at losses bankrupting V companies. Wages also seem to high so there is a pressure to bring them down but this reduces demand for goods in the economy and increases the sell offs of the V goods bankrupting companies more and putting more out of work. This is because the I-O market is not functioning properly and also because of the weak I-O police who can stop too much V collusion on prices as well as too much Bi unionism. For example these were both discouraged approximately in the 1980s allowing more growth as unions were weakened and V companies prosecuted for price fixing, this allowed more Iv-B growth and reduced the stagnation. In effect then the laws favor V-Bi in this situation, the wars of attrition between them led to both having some laws that favored them but discriminated against Iv-B businesses. For example when V companies could collude on prices then Iv agents could not easily find bargains to sell in the I-O market to stimulate demand and this higher turnover reducing costs and reviving some businesses. When Bi unions could dominate many industries then companies trying to do the work cheaper and more efficiently could not compete without their businesses being hit by strikes, for example there might be a ban in picking up their goods by transport companies or unionized businesses might not be allowed to do business with them.

The tall poppy syndrome then referred to the Iv branches being discriminated against for their abnormal energy and entrepreneurial ideas, in the same way there was a deep root syndrome where B workers were also discriminated against for working harder. The resulting stagnation was like a loss of animal spirits just as in Roy where Oy R animals with higher energy could disappear leaving only slower Y-Ro predator and prey. The solution to this is stronger I-O policing in the market, however Keynes advocated more Roy government action which also works because this stagnation produces such scarcity of resources that public ownership becomes more efficient. In Roy there is G public property and with the scarce resources in the Great Depression the government was able to stimulate the economy by taxing and spending, Hitler did the same in Germany in the 1930s with public works such as building the Autobahns helping to save the economy there. Russia was apparently doing better than the West because it also had a Ro Roy economy where the government provided jobs and kept goods and services moving. Other economies in the Great Depression did little Roy government business such as in the British Empire and so its Biv business continued by also failed to grow. The problem is the same as in third world economies where Biv business fails to grow, when there is so much poverty it is easier to steal from businesses than to trade with them. Also the costs of running a business in a poor area are much higher, for example as mentioned earlier trucks might not be able to pay for making deliveries because the amount of these are so low compared to the cost of wages and fuel. The amount of business has to increase for the economies of scale to make it efficient but in the third world economies there is too much poverty for this, in the advanced economies the Great Depression had the resources but the V-Bi stagnation like the grass replacing a forest was mired at a low level of efficiency.

The Keynesian solution of government G business then was correct for the Great Depression but it was not the actual solution to the V-Bi stagnation, instead they needed to revive the I-O market with stronger policing after the massive fraud and corruption of the 1920s in the US. Instead the belief was that because the Roy business stimulated the advanced economies in the 1930s that it was always the best way to handle a recession even when resources were still abundant. In a V-Bi stagnation the resources are abundant in the sense that they might be there unused in an advanced economy but the situation is so stagnant that they might as well be not there as in a third world economy. Some of these poorer countries also experience this stagnation, for example many in Africa have large amounts of mineral resources and farmland but are also stagnant and so cannot use them. Because Roy government intervention helped the economies in the Great Depression then it was assumed this would work in any recession, the governments then tried a counter cyclical approach of nationalizing businesses in downturns or manipulating interest rates as if the banks were in effect Roy nationalized. This led to too much G public ownership which was inefficient with so many abundant resources, they would work better as Gb private property in many cases. The result was this inefficiency of G public property became a self fulfilling prophecy were it caused more poverty and so perpetuated the need for more G public ownership from this inefficiency. This is why when Margaret Thatcher and Ronald Reagan privatized much of this G public property the improved efficiency made their economies grow again. The West in effect had the same problem as Ro communist economies as well as some Y authoritarian ones such as Franco’s Spain and other right wing dictatorships, they all had too much G public ownership which made their economies so inefficient that Gb privatization at first would fail because it was like trying to make a Biv free enterprise economy in a third world country. The privatization needed time to work and this needed someone as stubborn as Margaret Thatcher for example to push these reforms through despite the poor results initially.

This is also seen with the Roy welfare state where the government taxes money to become a G resource, it then provides pensions, unemployment insurance, etc for R and Ro people as well as subsidies and tax breaks for Y and Oy businesses. Much of this idea came from the US New Deal where this was necessary to create business activity in the newly Roy areas, pensions and welfare as well as government funded work projects helped to stopped chaotic collapses in some families much as the work programs did in Germany and Russia in the 1930s. When an economy becomes Iv-B it tends to move even more in that direction with boom and busts when there is a weak I-O police and market, when an economy develops V-Bi stagnation it doesn’t tend to regulate itself and can continue to get worse with a deflationary spiral and more stagnation. For example the Ro Soviet Union eventually broke up because of this stagnation, Keynes then was correct then that this tendency to more V-Bi needs to be turned around. If left alone it will eventually turn itself around when the situation becomes so dire that Iv-B businesses can again hire B workers without Bi union retaliations as well as buy V goods cheaply without their colluding to keep prices up. However just as the uncontrolled Iv-B economy resulted in the GFC and before that the Great Depression this V-Bi to Iv-B turning point can be a devastating situation.

Some of these Roy welfare state payments and company subsidies have been reduced after they no longer seemed to be helping the global economy in the 1970s, instead the idea of Biv unemployment insurance gained ground where workers would pay into a fund and only get a limited amount of payments back according to how much they had invested overall in it. So if they had only worked a short time they might not be entitled to much money when unemployed. The emphasis became more on savings to combat unemployment and Biv personal retirement savings instead of Roy government pensions. The line of efficiency between the two often moves however, in a recession or after the GFC more Roy public welfare and government stimulus is needed while in better times more Biv insurance and annuities for retirement are more efficient. This can be accomplished to some degree by a flexible welfare system well policed with I-O, for example in a good economy people might be investigated for being unemployed too long while in a recession the reasons for being unemployed might be more obvious. If this welfare system is not policed though then it becomes disconnected in Iv-B and V-Bi again, for example there might be a Y-Ro welfare system where people get so much money on welfare that Iv-B businesses cannot pay enough in wages to persuade people to work instead. Also businesses might get so many government subsidies that Iv-B businesses cannot compete without this largesse and keep collapsing resulting in high levels of unemployment.

A high level of welfare and unemployment then is normal in a V-Bi economy just as grass might have plenty of reserves and be mainly idle rather than trying to grow ever higher. A stagnant economy can still do well with moderate I-O policing, for example while Japan has been largely stagnant as V-Bi for nearly 2 decades as of 2011 it is still relatively prosperous and its savings fuelled much of the US real estate boom with the carry trade.

After the GFC some of the advanced economies have developed Roy areas again, this leads to a quandary where some economists advocate a Roy Keynesian stimulus while others believe the Biv free market would do best. The answer is difficult to calculate and is different in many areas, the issue however is mainly being decided ideologically rather than by examining the scarcity or abundance of resources to determine whether G or Gb ownership is best. Some of this V-Bi stagnation is also coming from a different cause to in the Great Depression so this complicates the situation, when the Iv-B businesses collapsed in the GFC with massive fraud because of weak I-O policing the advanced economies also lost even more of their ability to lessen their trade deficits. Lowering their V-Bi wages currently can only resolve these deficits if they can somehow build electronics goods and sell them to China, Japan, and other Asian economies. This is unlikely to happen because of how much wages would need to fall, the lack of capital available in these advanced economies except loaned by the surplus economies who would not invest to help their competition, and even if they succeeded the mercantilist exporters would just erect trade barriers to stop these imports. These persistent trade deficits then create a downward pressure on Bi wages causing V companies to sell at a loss creating a deflationary spiral because the Iv-B economy has effectively been transplanted to these trade surplus economies. Free trade then results in too much competition because it is Iv-B collapsing industries in some economies while creating vast wealth in others, Iv-B does not spread money around like V-Bi economies do. The situation as said earlier is a result of the Iv-B bubble in the 1990s and 2000s from deregulation making it appear that international deregulated trade was also desirable. Just as the weak I-O policing caused the bubble and crash in the US and Europe so too did it cause the trade imbalances which make it so difficult for the advanced economies to recover as their Iv-B businesses are crushed from import competition.

### Milton Friedman

Milton Friedman had a different view of the Great Depression, he believed it was caused by fluctuations in the money supply. His ideas have been covered earlier but he countered in many ways the Keynesian view of using Roy government spending, instead he believed much more in Biv free enterprise. For example he believed that Roosevelt extended the Great Depression by forming V-Bi cartels of industries as well as supporting unions to keep wages up. This would tend to move more money into the V-Bi section of the economy and starve the Iv-B businesses for capital, the best solution though would be stronger I-O policing to resolve these imbalances in the market and law courts.

Roy Keynesian meddling in the Biv economy had produced many inefficiencies and Friedman’s idea that Biv business was always a better solution was not correct but was the right idea for the 1970s. By attributing a different reason for the Great Depression he countered the need for Roy government spending then though according to Aperiomics it was necessary at the time. The money supply growth is important in an Iv-B economy but the real issue is the amount of leverage being used, for example in a V-Bi economy a 10% increase in the money supply each year might lead to a 10% wage price inflation because the money spreads itself randomly around the economy. In an Iv-B economy though this extra 10% might lead to a doubling in effective money because with leverage it might all be used as a 10% deposit to borrow 90% from overseas as with the carry trade or with banks in fractional reserve banking as 10% reserves kept on hand.

Usually this 10% would not become completely concentrated in leveraged areas however Iv branches and B roots are efficient at containing and directing money in conduits and avoiding this random spreading, this then causes it to be funneled into localized inflation as a boom and localized deflation as a bust. Just as this extra money can cause a boom and bust though so can investment money from outside the economy, for example the US economy borrowed a lot of money to cover its trade deficit and this money also became highly levered as did the money invested from the Japanese carry trade. Sovereign wealth funds also tried to keep their money in dollars, the Middle Eastern oil economies because of US pressure to reinvest this money and others with trade surpluses to try to keep their exchange rates low for mercantilist reasons. This money then wherever it went in a weakly I-O policed Iv-B economy became highly levered and contributed to the boom and GFC bust. In the same way the 1920s boom in the US was caused by a growth in the money supply but also by money flowing into the bubble and becoming highly levered, this might well have occurred with a steady money supply at the time because of this loan money. Generally however just as animals are healthier with a relatively constant blood pressure or one that grows as they do, economies also are more healthy with a relatively constant money supply or one that perhaps grows along with the GDP.

He believed that much of the Great Depression could have been averted by lowering interest rates, this is like altering the lending ratio between V-Bi and Iv-B. For example in a plant the V-Bi sections store more nutrients and the Iv-B sections grow more with roots and branches. Altering the amount of nutrients available to Iv-B then can make it grow faster or slower, the idea then of lowering interest rates can make it cheaper to borrow from the V-Bi part of the plant. The loan of nutrients has to be repaid because as the tree grows its V-Bi sections must grow as well, they receive their stores of nutrients through the Iv-B roots and branches so both grow overall. In the economy then lowering interest rates can either lead to an Iv-B boom such as the real estate bubble caused by the Japanese carry trade and trade surplus economies investing their money in the US and Europe. Lowering interest rates can then ward off some collapses in the Iv branches and B roots of an economy by giving them cheaper loans, however Iv-B when deregulated is so unstable that it will usually collapse after a bubble at some stage. This gives rise to the difficult problem of when to prick a bubble or, as Greenspan decided, to allow the US real estate bubble to grow and deflate by itself. Trying to fix a ruptured Iv-B bubble with extra credit and lower interest rates usually doesn’t work, the various Iv-B systems try to fruit quickly giving profits to their V management and when the economy is in trouble they usually continue to do this rather than try to grow some more first. Extra credit can allow some Iv-B businesses to get their profits out before the collapse but this is not desirable overall for the economy as it does little to stave off the V-Bi stagnation afterwards. The credit and lower interest rates are useful and often essential, however the most important thing is stronger I-O policing which shores up the I trunks of businesses to reduce their collapses, reduces the contagion by prosecuting fraud, it reduces the opacity which misallocates resources and later frightens off investors by getting rid of the fraud which keeps the investors away, and so on. Another problem as Friedman pointed out was the wave of bank failures, Iv-B moves as momentum like a wave with dependent variables, this is the like falling dominoes where each bank failure made people go to the next in panic making it fail and so on. The upward momentum of an Iv-B economy when it ruptures means the momentum has to go somewhere, tipping points like the failing banks propelled people into more disastrous directions than if they were able to do nothing. When Ben Bernanke flooded the markets with liquidity in the GFC this acted to make the waves of momentum less damaging because they could not temporarily make different businesses and banks dry of liquidity. For example as mentioned earlier waves in an economy are usually in deep liquidity so some companies have more or less money on different days as the waves move around, when the liquidity is low because the leveraged economy breaks down then these same waves cause devastation.

Pumping money into the economy as Friedman suggested or stimulating aggregate demand according to Keynes both miss the real problem, the ruptured Iv branches and B roots in a crisis like this collapse and take down others in a domino effect like tree branches breaking others as they fall. Trees however rarely break each other’s branches because they use Fibonacci numbers as a power law that is exponential but more moderate in its growth. Friedman then was advocating flooding the financial system with liquidity and propping up the banks to prevent these waves causing damage while Keynes was advocating pumping liquidity through the economy by sing government spending to pay wages and buy goods. The two ideas are complementary, they are like a person with ruptured blood vessels as the Iv-B system leaking blood. Giving them a transfusion is like Friedman suggested to keep the blood pressure up, staunching leaks is like stopping the banks from collapsing as well as like keeping these heart like banks beating, and pumping money through the economy to keep demand high can prevent businesses collapsing just like a heart massage or artificial heart can keep the blood circulating and prevent tissue dying. However as mentioned earlier this can produce a zombie economy, if these processes are needed continually then they can be like a person on life support that cannot heal enough to withdraw them. To fix the problem the roots and branches need to be protected from more rupturing and new ones grown, this is best done by strengthening the I-O police to remove the contagion causing much of this problem. Because these were not protected or fixed in the Great Depression the result was this artificial Keynesian pumping of public money kept the economy alive but were more like making a sluggish water flow through a swamp than making rivers flow strongly by clearing the channels of debris and silt. Ironically the situation was probably similar in the Soviet Union in that they were having more successes in the 1930s with their Keynesian like public spending but also had a highly stagnant economy until the war made it grow much faster to survive. The same probably occurred with the US in the war, the need for faster production made the economy work with high energy again clearing out a lot of stagnation and leading to healthy growth when the war ended until V-Bi stagnation returned in the 1970s.

The situation between Keynes and his later critics as well as those who tried to synthesize his ideas with classical economics illustrates how the color codes change, not only do they manifest as Keynes and Friedman said but they also tend to rewrite and either promote or bury the ideas and writings of these and earlier economists. Keynes was writing about a specific situation, the economy had gone through a fragile Iv-B boom after being mainly Roy in Europe after the end of World War One. It was then always in danger of slipping back into Roy because so much blood and treasure had been lost in the war. The crash then which occurred mainly because of weak I-O policing allowing corruption and few insurance like safeguards made much of the global economy Roy again, for example it appeared to vindicate R Marx’s teachings of the inevitable collapse of Y-V capitalism as well as leading to the rise of Y Nazism and Fascism. Because of the success with this public spending, as well as Y Hitler and Ro Stalin also using this collective spending, this became most associated with Keynesian economics while his other ideas were reduced in an attempt to reconcile them with Iv-B economics such as with the Austrians. When there is a disconnect like this the result is usually one side or the other loses ground rather than a genuine attempt to form a synthesis of the two in a neoclassical synthesis. This is seen for example with the GFC where the need for public bailouts and some stimulus was recognized as Keynesian but there was also a belief that the economy would largely recover by itself like classical theory, this ignored the Keynesian ideas of a downward spiral and stagnation even though this had just happened with Japan in two lost decades.

The problem is that the two ideas are inconsistent with each other and so to make a theory that makes sense it is needed to take some parts and leave out others for consistency instead of describing the actual economy. This can be a recipe for making zombie companies as well as a zombie economy, for example the V-Bi idea of pumping money through the economy as a stimulus is retained though not enough to make it revive completely. This led for example to complaints from Paul Krugman that this insufficient amount of stimulus would lead to either a recession or a slow recovery in the US and Europe. However the need to let the economy regrow with this self regulating mechanism implies the need to leave it alone, this has led to more stagnation as the recovery from this self regulation has not happened as of 2011. Much of this was explained earlier, the main point here is that Keynes and other economists are put together in a synthesis that is often ineffective.

In a later book I will explain how moderating the Iv-B growth in an economy with Fibonacci numbers might make it more stable, these are already used in stock market charting to predict some price swings. For example the tax scales are usually worked out in an arbitrary way but generally they are higher for the V-Iv wealthier people to get money back down into the Bi-B communities. In the same way trees may have a similar system to distribute nutrients fairly or they risk a top heavy tree collapsing from its own internal inequalities. A tax scale that grew with incomes according to Fibonacci numbers might moderate this exponential tendency for wealth inequality to accumulate making the economy more stable.

### Hyman Minsky

As Minsky pointed out, Keynes was saying that capitalism is not self regulating because these Iv-B animal spirits such as euphoria and panic so depleted in a V-Bi stagnation can grow too quickly and lead to a boom and bust. Keynes also pointed out that financial intermediaries or agents create many connections between buyers and sellers, these are like the Iv-B roots and branches in Aperiomics. The banks as Keynes and Minsky recognized were by nature unstable, this is because of fractional reserve banking where too much momentum in one direction can cause havoc, for example too many deposits can leave banks unable to lend the money except in risky ways that cause losses while too few deposits can leave them insolvent. Iv-B momentum then is a problem for V-Bi banks because they rely on having enough time to balance their books. For example loans need to be repaid on time, if there is a bank run without government insurance then they need time to borrow money from another bank to protect themselves. When this momentum of bank withdrawals is too large such as in a financial panic then other banks may also be affected by high momentum movements of money and people, this then is like waves and currents of money that overwhelms some banks by leaving them high and dry or insolvent. Much of the problem with the banks in the lead up to the GFC however was caused by too much liquidity, this money forcing its way into the US and European economies from trade surplus economies had to be loaned out or refused, banks that refused it were liable then to shrink while others took their market share and perhaps even bought them out. To survive then banks generally had to go along for the ride but this then also implies making some bad loans and hoping they would do competitively with them, either so many would go broke that no one won or everyone might do ok. Banks then tend to work as a team in V-Bi so there seems to be a normal course which looks safe because so many other banks are doing it, this is like the Ro herd of buffalo where each is reassured by the similar movements of the others in the team. Because of their team association with the government then this helps them to be bailed out as long as they don’t stand out from the normal as deviants, for example because most of the banks were in the same boat with the GFC few were charged with fraud and corruption because it was so ubiquitous in the system. To charge everyone with fraud just made it look like the government’s fault for not having prevented it.

Debt made the economy more dynamic, this was because money was often loaned to Iv-B businesses as growth made it more likely the money would be paid back rather than loans in a stagnant V-Bi economy. In a balanced I-O market there is always some uncertainty but this can be minimized by compromises between the colors, for example the transparency of V-Bi can lead to stagnation but the secrecy in Iv-B can lead to innovation. Balancing the two can mean there are few surprises that can catch the banks making them lose money, at the same time borrowers can protect their ideas and make money from them to repay the loan. In an Iv-B or V-Bi economy there is a time of higher certainty which catches the banks and other businesses followed by a time of much higher uncertainty, for example the momentum in Iv-B can create a boom where prices seem to keep rising as with real estate in the US in the 2000s. It appeared to be a sure thing then to lend money on houses on small deposits where the borrowers had poor credit ratings or even deceived the lenders about their assets and ability to repay. This was because the house prices seemed to be certain to rise enough to sell for more than the cost of the loan protecting the lenders. This reversed abruptly into such high uncertainty that in the stock market and with subprime bonds at one point in the GFC no one really knew what they were worth. So when the economy is Iv-B it becomes more certain but at the same time the V-Bi aspect becomes more uncertain, this is like the time energy uncertainty in the Heisenberg Uncertainty Principle. In the Iv-B bubble this V-Bi uncertainty is ignored but in the resulting panic the uncertainty is frightening which either leads to an I-O market correct with minimal overall uncertainty or a swing to V-Bi certainty allowing Iv-B uncertainty.

Uncertainty then is minimized in a balanced I-O market but when the economy become more Iv-B and less V-Bi it becomes more Iv-B certain and V-Bi uncertain until the turning point when Iv-B must fail and move back to either the I-O market for reconnection or to V-Bi. When this turn happens V-Bi uncertainty is noticed more causing panic, all the calculations based on the previous certainty unravel. For example in the Iv-B chaos there is a kind of certainty because of the connections of Iv branches and B roots seem to mean that the system is functioning like a giant well oiled machine or clock. V-Bi randomness is highly uncertain in this state because of so much determinism and it seems that this randomness has disappeared, however when the Iv-B bubble collapses randomness is suddenly needed like an amount of looseness between the connections in the economy allow shocks to be absorbed rather than tearing the whole system apart as happened in the GFC. Also randomness represents the ability to insure risk as the basis of insurance, when the Iv-B bubble burst it was suddenly realized no one knew how to insure this risk or even how much liquidity there was for this insurance, for example so many Credit Default Swaps were supposedly insurance but no one knew how many were likely to pay off.

The market may return to I-O balance as a minimal uncertainty between chaos and randomness but usually as after the GFC it goes to the opposite extreme of V-Bi and this appears to be increasing certainty again, this time though it is more certain V-Bi randomness and uncertain Iv-B. For example the economic systems are flooded with liquidity overinsuring everything against chaotic collapse and the resulting transparency from looking for fraud and other problems results in stagnation. This is then like a machine that has so much looseness in it that like a worn out motor it can hardly run. Then in the depths of V-Bi stagnation this certainty breaks as people come to realize that Iv-B uncertainty is very high, no one seems to know where the Iv-B growth is going to come from because in all this transparency there doesn’t seem to be any prospects for innovation. This leads Iv-B experts to come forward and offer more certainty with Iv-B policies but again ignoring the safe V-Bi stagnation created with insurance, in the turn to Iv-B there is again far more inefficiency than if the economy had remain balanced in I-O.

This occurs not just with markets but with economics itself, for example in the 1920s there was an Iv-B certainty about the invisible hand of the market and the continuing boom, this was reflected in the pronouncements by experts and the media, Irving Fisher was an ignominious example of this. When the Iv-B boom collapsed the economy moved back towards the I-O center but then swung too far into V-Bi stagnation and increased certainty that the old Iv-B ways were wrong. V-Bi collectivist ideas were the new certainty such as reviving aggregate demand, work programs, Roosevelt promoting collective bargaining by Bi unions and allowing collusion on prices by V companies. This certainty was also found in Europe as mentioned earlier with the Ro economy under Stalin and the Y socialism under Hitler and Mussolini using public works to get these countries out of their slumps. Both the left and right were certain that they had the right answers politically and militarily as well as economically by ignoring the Iv-B uncertainties, the war however prevented a clear change back to Iv-B because it made assessing economic policy more difficult. Many of these ideas then persisted in an I-O reconnection after the war. The conflict had energized the V-Bi economy and made it more balanced, also the war made I-O policing very popular as it was fought to prevent so much evil. The regulatory agencies in the US for example were still strong from the New Deal and Europe was being rebuilt with the Marshall Plan creating much growth there policed by the Allies to prevent more dictatorships arising and thereby creating more honest societies. This global I-O prosperity eventually moved back into V-Bi stagnation in the 1970s as the stimulus from the war dwindled as well as the effects of the rebuilding in Europe, the V-Bi Keynesian certainty then became highly uncertain. The belief in the Soviet Union’s collectivist approach was exposed by Ayn Rand and written about by Friedrich Hayek in The Road to Serfdom. Friedman, Rand, and Hayek among others argued for a new Iv-B certainty again based on the individual instead of the V-Bi team way of thinking. This created a new Iv-B revolution promoted by Ronald Reagan and Margaret Thatcher and a momentum of certainty until it broke in 2008, then there was again a realization of the high V-Bi uncertainty of no safety net for the economy and a desire to return to V-Bi certainties all over again.

### Carl Menger

Menger believed that prices were determined mainly at the margin, for example small changes in supply and demand might make prices change and it was this change induced by the extra supply and demand that was most important. This however is part of an Iv-B system whereas in V-Bi the margin might be an outlier or deviant result to a normal price. For example if a share has a normal price because its market is relatively stable then changes at the margin, from small and temporary amounts of extra supply, are not so important because the prices will tend to revert to the norm. Marginal utility then is like saying that the edges or tails of the normal curve are more important than the center, this can be true in Iv-B however. For example in the GFC many prices of stock and derivatives became completely disconnected from the I-O market so there was no single value according to the Iron Law of the One Price that arbitrage depends on. Instead the margin became most important, the price was whatever you could get at a time and place which in an opaque economy might have no relation to what price others got elsewhere. This is also like in poker where the margin is more important than the normal value of a hand of cards statistically, if a bluff works in one situation then it may not work again because the other players might become wise to that deception.

Marginal utility can also refer to having to spread insufficient resources which can be a Roy situation. For example a Bi farmer in the earlier example of a primitive economy might have to decide whether to feed his family or his livestock. This is a highly chaotic situation because either might die without food, the tipping point of how little food will avoid starvation then might be very delicate and easily affected by external shocks like the weather. In this situation deception might easily break apart the Bi community, for example some might become R thieves and steal grain from each other secretly leading to a distrust in the Bi farmers for each other and so they might break up more into B individual farmers wary of each other. A stronger Bi community might overcome this marginal problem by loaning grain to each other, for example if a farmer is short of food for one week then the marginal utility of the grain is changed by borrowing from a well stocked neighbor and returning the grain later. In an Iv-B bubble the marginal utility becomes very important, for example if someone has bought a house on 100% finance with a liar loan then the most important part of the price is whether he can sell at a profit or half to walk away from it with a loss. This would happen no matter whether the house was $100,000 at the start of the boom or $500,000 towards the end. When the market had a limited demand towards the end then some might sell their homes for a profit leaving the others stranded with having to default, this is how the subprime bonds began to fail in higher tranches as this margin became more important. The problem was the bond structures were worked out using V-Bi probability so the normal price was more important than the margin, for example holding a higher tranche of the bonds meant that defaults didn’t affect the returns so these marginal changes were in effect insured against by removing all the marginal changes to lower tranches where the edges of the normal curve had fatter tails in the crisis and more chaos.

This also occurs in the Roy animal kingdom, for example a Ro herd of buffalo might be random with the most conventional towards the center and more deviant buffalo ending up on the edges where they are vulnerable to attack by Oy chaotic predators. Their movements then on the edge are more likely to be deterministic as they get picked off by secretive attacks and deception. At the same time they might be under attack internally as Oy predators steal into the center to grab their young, also there can be secretive movements of R buffalo that move more for their own benefit than the herd and can break up its unity but some for example running for their own lives rather than sticking together.

In the same way the lower tranches of the subprime bonds were more vulnerable to the deception of liar loans and the value of these might grow and collapse according to whether better or worse than expected repayments were received. In my first book I explained how this process can cause a Ro herd to become completely R as it becomes overwhelmed from Y and Oy attacks so only hiding and running can ensure their survival. These attacks on the edge of subprime bonds with liar loans eventually got to the upper tranches and so investors instead of a V-Bi transparent approach, like the Bi farmers under attack from R thieves, had to stop trusting each other and the market collapsed under mutual suspicion. For example in the GFC the banks stopped trusting each other with overnight loans and so the interest rates charged, the TED spreads, jumped chaotically and then crashed when this trust resumed. Sometimes there are then attacks from one side and sometimes from two sides, this depends on the situation. For example Bi farmers might not have evolved an Iv population of agents and an I-O market and so their only chaotic problem might be internal R-B thieves. They might also have Iv agents but are so tightly knit as a community that R-B thieves and loners might have little effect on them so they can present a united front in the I-O market. This is rather than Iv-B deals getting around them like Oy-R where Oy predators get around the Ro herd to its R young.

Bi pension funds were then under attack from two directions on the margin, internally with B workers and externally with Iv agents. For example when they bought subprime bonds they had to cope with the price gouging from Iv agents so this affected their overall returns by the extra price charged at the margin. Then they also had to contend with B workers and their liar loans defaulting which when they reached the upper tranches caused the marginal price of these subprime bonds to also change chaotically. The same would occur with V investors such as on Wall Street, the marginal price of their investments and company stock was affected by dishonest salesmen making bad deals for their own bonuses to increase. They were also affected by the R thieves with their liar loans making their held subprime investments more shaky until they collapsed under this dual attack. This is also like plants in a forest where the Iv branches might have overgrown and be very weak, they also get attacked by overeating R grazing animals who can easily break the branches and so these plants collapse. In the lower part of the plant the roots might be very weak and so the plant is easily uprooted to get to the Bi reserves like with turnips and carrots while the Iv branches are also weak allowing the foliage on top to be stripped away to get to this Bi food. Eventually these attacks on V and Bi might make this plants rare and so the Roy animals feeding on them might begin to starve until they recover.

The same occurs in Roy societies, for example Ro communism was under chaotic attack from Oy Western spies such as from the CIA and MI5 in the Cold War. They were also under attack from the secretive corruption of R elite in the party getting better goods and houses for themselves, this then tested the Ro team spits on both sides until it fragmented. Y societies can have the same problem, for example the Nazis were random with a strong team feeling but saw themselves under attack from the secretive and chaotic R communist insurgency trying to break up Germany. They also had a chaotic Oy part of their organization causing trouble for them such as Ernst Rohm and the Brownshirts threatening to damage their popularity. In a Biv society there is a similar process as overtones, for example a Bi government such as the Democrats under President Obama might have to contend with the fragmentation of its base by more extreme B views as well as sniping attacks by Iv media pundits, also opposition Iv politicians trying to undermine them on both sides. Before this the V Bush presidency had to contend with being undermined by Iv neocons trying to transform the Middle East with democracy and breaking up V-Bi OPEC into an Iv-B competitive market, at the same time they were trying to fight a Y war in Iraq against R insurgents using secretive and deceptive warfare such as roadside bombs. In both cases then these marginal events can affect the solidarity of the V-Bi parties causing their collapse in popularity or failure in some policies, at other times they are relatively unaffected by the chaos and so the margin is not as important.

### Ludwig von Mises

Mises also had an Iv-B philosophy and so became loosely associated with Menger, Hayek, etc. Like Hayek he also believed that individual actions rather than collectivization was more efficient, he used as an example the Ro price mechanisms in the Soviet Union as too inflexible to cope with the complexities of the marketplace. However much of Biv society also has this planned inflexible price structure, for example in government the fees for driver’s licenses and most charges change very slowly. Many companies are the same, for example even Iv-B stock brokers have had relatively fixed charges and V-Bi banks might have similar fees that change very little with different market situations. This inflexibility can grow as an economy moves more to V-Bi certainty and increasing Iv-B uncertainty, for example in the V-Bi stagnation after the GFC there are more standardized prices such as the interest charged by the US Fed for loans to banks. Whereas before the crash the Iv-B economy was highly complex with its interest charged on overnight loans as well as the values of Credit Default Swaps against default the Fed by contrast changes it rates rarely to avoid V-Bi uncertainty as well as reducing the uncertainty around possible defaults on many bonds. This certainty then appears to be reassuring for the markets but it only increases the Iv-B uncertainty of where the growth and diversity from chaotic complexity is going to come from.

For example small Iv-B business might be microtuning their prices throughout a day, a shopkeeper might change the prices of some produce to make it sell better or raise them if they are selling too quickly by watching other stores to see what they do. This is like arbitrage on the stock market where Iv agents watch other dealers and prices to pick up cheap stocks that are being sold for more elsewhere, in the same way an Iv shopkeeper might buy more tomatoes from a B farmer if he sees they are selling for higher prices before the B farmer realizes this and raises his prices. This can then become chaotic, for example the B farmers raise their prices watching each other and so tomatoes go up, this results in less demand and the Iv shops make a loss trying to sell them. Then the price might come down as the B farmers reduce their prices and so tomatoes might move chaotically at the margin. This then can be efficient in some cases, better though is where the tomatoes are bought wholesale in an I-O market and retail in another I-O market. For example the Bi wholesalers might buy tomatoes from B farmers at a more stable price in higher quantities avoiding the movement on the margin but making for a more fixed price and demand from consumers. The Iv agents try to buy some tomato bargains and sell them occasionally for higher prices giving some movement at the margin but stabilized by the ignoring of the margin by the Bi wholesaler. The V refiners might buy tomatoes and sell tomato paste, they might have a relatively fixed price for this relying on the stable prices from the Bi wholesaler as V-Bi business, the Iv agents try to buy it cheaper sometimes to sell in the I-O market and also try to buy some cheaper tomatoes from B farmers perhaps secretly selling to avoid other farmers realizing this. So this creates some movement at the price margin though mostly the price is normalized and so the margin is unimportant. In an Iv-B boom the B wholesaler might miss out on so many B sales that the marginal price becomes important swinging chaotically, also the V refiner might lose the ability to buy from Bi and so its supply prices also swing wildly at the margin. Here both V-Bi and Iv-B are less efficient overall than a strong I-O market, for example the V-Bi sales miss out on the small marginal changes in price where there is more demand with the occasional bargain, the Iv-B sales miss out because much stock is wasted with overbuying at high prices and then it might rot before it sells.

### Friedrich Hayek

Hayek was also against V-Bi collectivism, however he was mainly concerned with Y Fascism versus Ro communism. He believed that the state should confine itself to the rule of law, this is similar to the I-O principle in Aperiomics where economic decisions can potentially be reduced to legal questions of who they benefit and hurt. He believed that this collectivization would eventually lead to totalitarianism, this is similar to the idea behind V-Bi rival teams where the transparency in each makes some appear more normal and others deviants to that normal center of the Gaussian Curve. This then tend to make the center tyrannize the edges to some degree, for example Bi unions might penalize workers who work too hard making others look bad. This was like the Ro Soviet Union where the concept of normality gave rise to looking for deviants and shipping them off to Gulags, getting citizens to inform on each other, etc. In V there is a similar pressure to conform as a team, for example being described as not a team player can be a disadvantage on a resume. In some cases people going to top schools such as Harvard or Princeton might form a team or old boys network favoring each other and looking down on other schools, this can lead to a domination of one kind of school of thought as the mainstream while others are deviant to this. For example in V-Bi mainstream science this conventional outlook such as in medicine based on random tests of drugs, treatments, etc can be seen by some as tyrannizing alternative treatments.

### Joseph Schumpeter

Schumpeter saw an economy as being like two opposing states, the first was like a V-Bi Walraysian equilibrium where there was little innovation going on, then this was disturbed by various kinds of innovation or Iv-B revolutions that disturbed this state leading to cycles that often grew and then collapsed. It is difficult to analyze this kind of theory because Iv-B tends to be secretive and deceptive, like between two poker players trying to bluff each other. Because of this the history of Iv-B cycles often has a lot of deception in it, the origins of a cycle can be obscure and they tend to lose control because of this lack of honest communication between the innovators and speculators. According to him there were four main kinds of cycles or momentum waves produced with this innovation of different lengths, Kondratieff, Kuznet, Juglar and Kitchin. Together they might form a composite wavelength, there could also be other smaller or more irregular cycles complicating this waveform shape.

This is much like Iv-B as it also moves like waves through an economy though it can also move as a current or tide, V-Bi by contrast tends to describe a stationary state or stagnation where like in a gas the molecules move randomly with migrating often from one area to another. These cycles are difficult to confirm because in Iv-B when there is a chaotic system that is predictable then others tend to use this information for advantage to profit from it, for example in the stock market if price rises are predictable then many investors will tend to erase the curve by buying the stock ahead of time flattening the curve. It may be then these cycles were more prevalent in the past but any predictable cycle now might be found by computer analysis and exploited.

This is like in the Roy animal kingdom where any predictable movement or cycle by Oy or R animals can be exploited to their detriment, for example if R animals tend to drink at a watering hole at the same time then Oy predators might wait there instead of hunting for them. This would then lead to the R animals coming there at different times or going somewhere else for water, this then creates a complex chaotic pattern where each tries to anticipate the other to save energy in the Oy predator catching the R prey or the R prey escaping. This can go the other way as well, of R prey notice that Oy predators tend to give up unless they get close enough then the R prey might stay that distance away from them. When a chaotic pattern is detected it needs to either be changed, alternated, or it becomes randomly transparent as nothing is being hidden any more. For example in poker if a player has a “tell” or typical facial expression when he bluffs then the other player might know almost as much as if he just placed his cards face up. When the Oy predators make known how close they can get before they start running then this information becomes random and transparent so nothing can be hidden about it, instead the Oy predator might need to change the chaotic pattern like a bifurcation point in chaos or splitting into two Iv branches in Biv. For example they might plan a route where they can catch the R prey more easily because the prey have to slow down in tall grass to run into a natural obstacle like a river, this may deceive the R prey to let the Oy predators get too close for this situation. In this case then the safe distance between them might shorten in complex ways for different terrain, or even different times of the day or climate if either is affected by the heat, humidity, etc.

In the same way there might be economic Iv-B waves but to the extent they encounter an I-O market they are attenuated or resolved by their contact with the Bi community who demands some transparency to do business. For example an Elliott Wave might be believed to work in the stock market, its Fibonacci basis is a power series which is exponential as Iv-B. When Iv investors using this are seen openly then their results are analyzed according to their formulae used, any successes then might be added by quants to computerized trading system to adjust their strategy and over time nullify the advantage the Elliott Wave and other traders might have. However Iv-B waves rise in an economy because there are different levels of energy in it, when there is higher energy or a shorter amount of time to do a deal then this creates momentum and waves associated with a deal. When there are many deals similar to it then this can create a large momentum moving like a wave in the same direction whereas smaller deals might just produce a choppy sea with many waves cross crossing each other with a V-Bi random interactions between the deals. For example in the ocean there might be many small waves but each moves through the other and doesn’t usually influence them so they are independent of each other and random. When waves join together they are less random, for example a boat might put out a wake which has a momentum from the boat’s motion. If these waves are high enough then they might nullify some parts of other waves and tend to make them add or subtract to the main boat wave. This is like for example where a random V-Bi stock market might have small amounts of chaotic Iv-B trades where a sale might trigger another one if it makes another trader nervous. If there is a general panic there might be a momentum of selling where these small individual trades add or subtract to the rout but more likely someone wanting to buy might be put off by this momentum of selling and another might sell more because of seeing this larger wave. Smaller Iv-B waves can be exposed as a pattern and then randomized for profit by V-Bi traders, Fama for example believed the market was random and arbitrage to a large degree relies on these chaotic patterns to eventually return to the normal price. Detecting an abnormal price movement might be part of a momentum wave but an arbitrage trader might short the stock if it went up too much or buy long if it went down, when it returned to the normal price they made a profit. This is different from a casino bet where this wouldn’t work, the prices change here because of a predictable chaotic pattern that is exploited in arbitrage.

However if the Iv-B momentum gets too big then the price might not return to normal and its changes at the margin become more important than its price in the center of the Gaussian curve. At this time then the momentum waves are becoming stronger than the ability of being exposed to randomness stopping them, then they can affect the economy such as in a boom and bust. This was like in the GFC where these waves became so unpredictable that random V-Bi arbitrage traders lost a lot of money because the price never returned to normal, in effect there was no normal price at that time.

The same occurs in a Biv forest, a cyclical growth of some plants might be exploited by others who try to grow quicker than them to overshadow them, this can make it dangerous for plants near others to have a cycle of dying each season and regrowing. Instead they tend to live much longer so when they have reached the V canopy for their share of the sunlight they don’t relinquish it until they have a chance with their seeds to regrow. They do this by randomly dropping seeds every year so if they happen to do then their seeds have a good chance to regrow in their place. If a kind of tree has a finite lifespan then they are safer to have this Iv-B growth staggered randomly otherwise another tree might be ready when they all died to take their place, this is how in nature Iv-B momentum waves can be inefficient and dangerous as they are in an economy though they may seem good at some times. In an economy then businesses like people usually have finite lifespans and tend to grow, mature, die or become bankrupt, etc. When these happens with a larger cycle such as with the baby boomers it has more inefficient effects in an economy than if the births and deaths were random, for example with an aging population this increases the taxes on younger workers as well as making it harder for them to invest and buy homes because the older people still have so many assets to live off.

### Aperiomics waves

Waves in an economy can also be offset against each other rather than larger Kondratieff waves being perhaps able to be divided into Kuznets, Juglars, etc. Shorter waves are more vulnerable to being anticipated and their effects changed by speculators as mentioned earlier, an offset wave however might rise part of other waves in a more chaotic way. For example Kuznets thought there may be a wave from immigration where an influx of people eventually build houses, this can also be where they go through a process in some order of renting, buying, educating their children creating different skill sets for industries, saving for retirement, and so on. Just as the baby boom created an Iv-B momentum in the US which is now subsiding as they retire these waves can be associated with a boom and bust. For example the baby boom started around 1945 as soldiers came home from the war and had families, they might then have concentrated more on a well I-O policed environment for their children as well as working hard to provide for their future. This then might lead to an economic boom to some degree, the children are in effect growing like B seedlings as individual B families try to set down their roots.

At some point the children go to school and the parents and others get more involved in a Bi community as they are brought together as a team more by the ties of schooling and related social activities. In this period such as the 1960s these children might be more rebellious leading to an effect on foreign policy such as the riots about Vietnam military service in the US. There is also a sense of idealism where more are concerned with the poor in other countries and the environment, music is revolutionary, there is a sexual revolution, this however gives way as they grow a little older and have their own children to a conservative attitude like their parents. The natural tendency of teenagers to have independent ideas from their parents then might have resulted in a B revolutionary atmosphere where they also joined together as a more separate Bi group uniting in protests. This might have been an I-O time in history as well, people were very concerned with the role of police in society, countering injustice to black in the US for example. Politics was much more centrist then with most US politicians being either moderate Gypsy Moth Republicans or Boll Weevil Democrats, since then US politics has moved further to the right like Churchill’s maxim of younger people being more liberal and older more conservative. In effect then this baby boom led to a B left wing momentum in the 1960s where kids growing up believed they would change the world leaving a gap between them and their more conservative parents. As they became older they joined together as Bi communities in more mass protests but also became more moderate looking for high wage union jobs to look after their new families. Then they became more centrist and more like independent voters in perhaps the 1980s as their financial interests tended to drag them from Bi but not into being conservatives yet. By the time they neared retirement age many were extreme right wing looking to be Y-V predators on others to look after their retirement and enjoy the V fruits of their labors, they then saw as a threat the R-B attitudes of their grandchildren as the cycle was beginning there again. Of course there are all different ages in any economy but this bump in numbers growing through the baby boom would tend to skew all kinds of political elections and popular movements, Richard Nixon for example referred to the Silent Majority as the conservative older generation backing him while the Democrats took advantage of this younger left wing demographic.

By the time the 1970s came these children were in their twenties and on the way to having their own families so there was a tendency to be growing larger family trees, many more people than usual were young with their own children and feeling alienated to some degree from their parents. As they tended to give up the revolutionary ideas and settle into Bi communities they struggled to make more money and so some became more interested in the I-O market as a way to make money.

By the 1980s the desire for growth after the more stagnant Bi 1970s was becoming more desperate as more tried to become wealthy while their parents were trying to save for retirement, this strain on the US and European resources meant many started becoming more Iv in their attitude. This meant the idea in the 1980s became more pro growth and Gordon Gekko became a symbol of this Iv-B predatory and deceptive attitude. By the 1990s and 2000s the Iv people tried to become V with enough money to pass onto their children and to engage in rent seeking, there was a pressure to drop Estate Taxes in the US while the global economy went through a V fruiting phase of conspicuous wealth. In effect these V people knew they were close to retirement and wanted to live like Y-V champions and often like alpha predators on the rest of society leading to waves of cannibalism on the economy as V-Iv people tried to get all the money they could from the poor by evading I-O financial regulations. This often led to Iv-B collapses in parts of the economy, some people managed to make enough to retire successfully and educate their children, others did not quite make it and were overshadowed by competitors at work. Because in this contest they used high leverage in real estate to speculate as well as playing the stock market while trying to live the beautiful V life like fruits and flowers on a tree many failed and collapsed in bankruptcy. This dragged down much of the rest of the economy leading many to enter retirement with their chaotic Iv-B plans failing to deliver the fruiting phase and enough wealth.

If so then some other countries might also be dominated politically in the Biv cycle by the age of their population, for example the average age in many Islamic economies is much younger than the advanced economies so this would give more support to left wing ideologies as well as R terrorism like Al Qaeda at a time when the richer economies have become more V and see R as their primary threat to enjoying their fruiting phase because R are grazing animals in nature. The Soviet Union may have broken up because of this same kind of baby boom, as people have been growing up since World War Two they started out as R revolutionaries in the 1960s preferring Khrushchev after Stalin and then moved to a Ro more team orientated but more moderate state system. Since then all the communist economies have aged and so the people have moved first to I-O becoming more aware of the benefits of Biv capitalism just as the advanced economy baby boomers were giving up their radical leftist ideas and becoming more centrist. When the West was Bi stagnant the Soviet Union was experiencing its own version of low growth under Brezhnev. By the 1980s the communist economies had joined the move to the right as many openly protested, they wanted to live a more Iv-Oy lifestyle by trying to earn more money for their families and looming retirement and it seemed the communist states would not be able to support all the retirees. This then might have led to the Berlin Wall coming down and the Iv-Oy breaking up of the Soviet Union into a new more competitive view of society embracing ideas like the Nash Equilibrium. In this competition was always supposed to be the way to wealth rather than cooperating with others, this led to the Soviet Union as well as Yugoslavia and Czechoslovakia breaking up. The Arab Spring was being felt in 2011 as many Arab economies struggled against Y-V dictatorship often being supported by the Y-V aging advanced economies to prop up their own control of the global economy. It may be then that these R-B younger people are going through a leftist revolutionary phase themselves now becoming more Bi-Ro where through mass actions like the US and Europe in the 1960s they are struggling against their own more conservative older generation.

The same may have occurred in South America, in the 1980s there was mainly an older more conservative Y-V generation trying to keep their grip on power while R-B revolutionaries with help from the Soviet Union fought against this often with help from similar young people in the advanced economies. As these younger people aged they formed more Bi-Ro mass protests and succeeded in bringing down the dictators like Pinochet and Somoza, however now that they are becoming older they have gone through an I-O more neutral phase and are coming to approve more right wing measures. It is beyond the scope of this book to cover this more deeply, a future book will compare the average ages of the populations since World War Two around the world and how the populations with bumps at different color codes could have caused many conflicts and political problems. While more difficult to analyze, there may have been similar population pressures moving the colors around the time of the Great Depression as waves of immigration from Ireland after the potato famine led to a momentum of a baby boom in the US, in the 1920s immigration was severely restricted which may also have affected the economy. So for example by this theory 1929 might have been a typical retirement age for many people, assuming this was 60 then the 1920s would have been a time of Iv-Oy exponential growth followed by an attempted fruiting phase as some tried to retire wealthy while others had risked too much to succeed and failed crashing the economy. This would then need to have these people born around 1870 to create these population pressures.

Interestingly this fits the time of the Civil War quite well, if soldiers returning home after the war had a baby boom like after World War Two as is likely then this generation growing up might have led to a similar momentum from B to V or from left to right wing in politics. This would have culminated in Calvin Coolidge’s Iv laissez faire economic policies in the 1920s followed by Herbert Hoover as being V-Iv politically. At this time also they feared the R people or red menace of communists threatening the Y-V control of the US, the Depression then spread to Europe and the British Empire where there was a similar conflict between the Y-V imperialists and the R-B communists believed to be infiltrating many countries.

These color imbalances can also relate to Modelski’s Long Cycle theory which tries to integrate politics and wars as well as economic crises as far back as the 1500s, it correlates strongly with Kondratieff waves. However one problem with theories of waves in history is they are Iv-B or Oy-R momentum because this is the nature of waves to move, often though the situation becomes V-Bi stagnant and there are no waves like a calm sea. When smaller waves are separated by this randomness then they lose connection to each other and so there is not overall wave, in Aperiomics there may be Roy and Biv connections between the Great Depression and the GFC as mentioned earlier but these are not waves but combinations of waves and positions. For example when the US economy was more Bi-Ro in the 1970s this was a time of stagnation and randomness where there was little momentum, in effect like the R-B wave from the baby boomers after World War Two had dissipated leaving the economy becalmed. Over time the Iv wave would have begun around the 1980s and lead to the boom and collapse of the GFC like a wave hitting the beach and causing destruction as it dissolves into random stagnation losing its energy. There are some connections between the earlier R-B time in the 1960s and the Iv-Oy times of the 1980s in that both were revolutionary with momentum but they were opposites in intent, for example the Iv Reagan Revolution was trying to counter the R-B tendencies of people who had grown up with revolutionary ideas in the 1960s and to some degree the Bi-Ro team nature of left wing protests in the 1970s. They are however also connected in that Oy tends to attack R people, Reagan then used secretive CIA operations against R communists whereas before the US often supported many of these R ideals after the war and even supported Russia during the conflict. The 1980s were also an attempt to change the balance of the Iv-B worker relationship, after the war B people were relatively well paid and Iv agents were tightly controlled on what they could get away with but by the 1980s this wave was shifting the other way where Iv agents were gouging B workers more and more such as with the Savings and Loans fraud. There is also arguably a connection between B workers after the war and Iv workers in the 1920s who preyed too much and collapsed the economy, B people remembered that time and helped to swing the balance back to them. So history can be viewed as cycles where waves tend to move but more like oscillating between Iv and B times where one is stronger and then the other reverses the direction. In between them there are randomized times more like where these waves crash or dissolve into randomness, at one time like in the late 1920s V wealth inequality was high before the economy in effect collapsed like a decaying tree after it seeded. By the 1950s to 1960s there was a Bi tendency in the economy where wealth inequality in the US had dropped and this randomness coincided with extra assets for the middle and lower classes. This picture is complicated by the I-O times of perhaps the late 1960s where people were more interest in social justice in a neutral way, if this is strong then it might improve the world for the better but if weak then the other V-Bi positions and Iv-B waves will be more pronounced and disconnected from each other. For example if there was a Biv cycle like this among a baby boom after the 1870 Civil War leading to the 1930s V stagnation then the results of this long cycle would depend to a large degree on the neutral feelings of the people around the turn of the century and whether I-O policing of the financial system was strong. So there may have been a B bulge in people growing up after the civil war who accumulated some wealth around the 1890s, by the time the 1920s arrived the Iv agents would have been exploiting these people’s accumulated wealth to the point of stripping them of so much money they were left destitute with high wealth inequality in the 1930s V depression. Because in those days the idea of regulating and policing the economy was not in favor, the Iv-B invisible hand of Adam Smith was in vogue, there would likely not have been a time when corruption and fraud would have been checked. For example there was a peak of 503 bank panics in 1893 with smaller panics before and after this so this indicates weak policing of bank fraud at the time, however the economy seems to have quickly recovered from each panic at the time so this indicates that it was relatively sound. This bulge then of baby boomers would have been around 30 at the time, they would tend to have families and be trying to buy homes. This would then slowly change their political outlook from being more left wing when they were poor and trying to get ahead to being more wealthy and trying to keep taxes low on themselves and shortchanging the R-B poor in the process. Bulges like this are only a small influence though because the baby booms after the Civil War and World War Two in the US are still a small percentage of the population, however they can influence politics markedly as elections and control of the US Congress is usually decided by narrow margins. For example in the 1970s the Democrats controlled the US Congress and politics even among Republicans was more left wing, this changed as Democrats grew up and became more conservative in keeping the wealth they had instead of paying taxes to help the poor. From being R-B radicals devoted to helping the poor then these same Democrats helped to dismantle much of the US welfare system in the 1990s as the political I-O center moved further to the right. Because the center in effect became Iv-Oy this made the whole political system unstable because the center instead of being neutral and fair became deceptive, chaotic, and prone to growth and collapse in its numbers. Bi Democrats became more like the V Republicans of the 1960s, often referred to as Limousine Liberals because of their desire to keep their money. A centrist issue by the 1990s then became Iv-B where the idea was to promote growth particularly by taking welfare money from the Bi community, the ideal worker was now seen as B competing with each other for greater efficiency rather than with Bi unions. At each stage in this cycle though there were plenty of people of different color codes despite the imbalance caused by the baby boom, there are plenty of R-B revolutionary thinkers in the US now but whereas before their ideas were seen as revolutionary for Democrats then they now are more of an embarrassment to be kept hidden except to use at elections. Even Bi unions have become out of favor though they still fund much of the US Democrats’ elections, more and more though they also receive more money from Iv and even V companies. For example in 2012 there seems to be a competition between President Obama and the Republicans as to who gets the most money from the same Wall Street that caused much of the GFC. In the current V stagnation then it is unlikely I-O police will be strengthened, it may also be unlikely to have another baby boom after this caused by war unless the current V stagnation causes more countries to become Roy as is threatening to occur currently in Greece, Portugal, Ireland, etc.

World War Two created different kinds of baby booms, for example in Germany there is currently a bulge of people more in their 40s while in the US the same groups is around their late 50s or early 60s. This might mean that Germany is entering an Iv phase where B workers are being exploited more rather than allowing more Bi unionism and higher wages, as they moved from an I-O balance in the 1990s for example this would have increased their productivity by exporting more with lower wages. This might then have led to trade imbalances in the Eurozone where other baby bulges have no reached the Iv competitive stage, for example in the 1980s East and West German were highly socialized with welfare and high union wages but stagnant economically. With the fall of the Berlin Wall and the arrival of the 1990s this bulge of people began to think more of providing for their own families and so lower taxes appealed more than a strong welfare state. France has a similar but more spread out bulge between their 40s and 60s, this would tend to explain their drift to the right as the wealthier older population wants to pay lower taxes. With much of the Eurozone encountering this bulge then this would tend to make the different economies more Iv and likely to split apart whereas in the 1980s and 1990s there was a more Bi to I-O tendency for coming together as a team under a stronger policing structure. In another ten years then this ago imbalance may lead to some of the Eurozone going it alone as wealthier countries and citizen vote for whatever keeps their savings for retirement best. Greece has its population bulge in the late 30s and early 40s, this might make them more Bi-Ro and leftist than France and Germany causing economic friction. The wealthier but older countries are reluctant to bail out Greece just like they older citizens are reluctant to pay for welfare and wages for younger people. China currently has a bulge in population in the 40s, this would be moving their economy from stagnant Bi-Ro to more high growth Iv-Oy but currently the focus is more on I-O policing causing it to grow more stably than many advanced economies. Japan’s population bulge is now in its 60s and early 70s so this stagnation in their economy can be from V retirees dominating the assets of the economy.

There would also be smaller waves series like this corresponding roughly to such as Kuznets and Juglars, however it is often difficult now to discern waves except in retrospect because so many Iv-B traders use arbitrage to neutralize the momentum of these waves for profit. Trying then to determine clear waves now is more difficult with so many computerized trading algorithms looking for any deterministic pattern to take advantage of, the result would be more like a choppy sea of many chaotic smaller waves pushing on each other in a bubble or crash and then calmer seas with smaller chop in a stagnation such as after the GFC. More momentum waves and random positions might be found in history but these are unlikely to be useful for predicting a future that is random and chaotic.

This is not the same as the waves Schumpeter discussed but it fits the GFC date quite well, the baby boomers were just over 60 when it hit leaving some as Iv-B winners with a high wealth inequality and some ruined completely from over leveraging. At the end of this cycle the Biv plant is decaying and stagnant like a maturing tree, new trees as businesses find it hard to regrow in this situation because of the overhang of dead wood where people are struggling to retire. They also have to compete with the baby echo of their children now in their 40s who are trying to pay off homes, many of them are now overshadowed by this V phase where so much money went to the Iv-B winners and so they find their financial future under a cloud or in effect under the V leaves of the older generation. The problems with imports in the advanced economies may also be related to this, the older generations might favor the cheaper imports that give them more value for their money at the cost of hurting the future of the younger generations losing the higher wages from manufacturing jobs their parents had. This younger R-B generation then is usually a victim of older people, they are like the bottom of the food chain in some ways because they will pay taxes to give pensions to those older than them, to buy a house at higher prices than its cost of manufacture they usually need to take out a thirty year loan, the unemployment rate for younger people is usually higher and the wages lower than older and more experienced people, their naiveté often costs them money from older and wiser people such as Iv-Oy agents, and so on. Drug laws might affect younger people more as Ro-R while older people as Y-Oy want the streets safer against what they see as a contagion. As this younger generation ages they tend to form a Bi-Ro community to protect themselves, for example on social media they might swap tips about Iv-B pitfalls to avoid. Eventually however as they get older with a family they become like the older generation they feared and often despised to prey themselves on the young to get enough to retire on. This is like in the Roy animal kingdom where older animals might not be able to catch grown up prey and have to concentrate on the very youngest Ro calves for example. Aperiomics waves like this would usually be more confused as they overlap waves from other influences, however a baby boom creates a bulge of people that in some ways act as a color code and then go through the colors as they grow up.

This is not for all young people however, some for example might become Iv-Oy right wingers, salesmen, etc and learn early on to use their extra youthful energy to be predators on the older generations such as often happened with subprime lenders like Ameriquest and FAMCO on elderly African Americans in California in the 1990s. it might be for example that younger people are R-B and the elderly go through a Y-V fruiting phase perhaps in their 60s but after that become like older Ro animals in a herd targets for predators again as their minds weaken from age. After a process of being exploited like this they might even go through a Bi-Ro phase where community organizations help them and get them to warn each other about predatory practices like Iv-Oy salesmen as happened with subprime lenders. There can also be more clear cut criminals to contend with such as Oy petty thieves stealing purses, robbing their homes, etc and Iv agents overcommitting them by staying in the law but still ripping them off. From this point of view after the Iv-Oy GFC collapsed into a Y-V stagnation where some wealthy now act like alpha predators in the market to maintain their winnings with rent seeking. Some also however end up becoming R-B prey themselves as they get older having to contend with Iv-Oy agents ripping them off like prey as the color wheel comes full circle. Women can also form separate Aperiomics waves to some degree, for example they are more often preyed upon and have more Ro-R views in supporting higher wages for their families, often abortion and contraception, being tougher on crime and making the streets safer for them, and so on.

The waves that Schumpeter discusses then are usually either small and exposed in V-Bi where they can be exploited in the I-O market safely or they become larger and disconnected from the market creating more damage with a boom and bust. However this does not mean that Iv-B waves are good or bad, they are just a feature of an economy when the I-O policing and market is weak. It is better in nature for I-O to remain strong to prevent this momentum building up as it wastes resources, however that does not mean they can be stopped because many profit personally from these waves though they may be bad overall.

### Kondratieff Waves

These are supposed to occur approximately every 54 years, the Spring or expansion stage is like when Biv plants are growing creating revolutionary disruptions in a Biv society, they are also like in the Roy animal kingdom where R animals might have their young in the spring causing disruptions in the amount of grass available for food as well as the number of Y-Oy predators that take advantage of this. In the next phase it is like Summer where there is a feeling of affluence or stagnation, this can be like in a forest where the plants reach the Bi stage of storing up resources for later growth, it can also be like in Roy where predators have plenty of food from the R prey growing up and might be adding to their own numbers. This leads to a plateau period where a feeling of normalcy develops, in Biv this can be like where plants reach the V stage of maturity and concentrate on becoming stable, in Roy this can be where the food chain tries to stabilize itself with Ro prey and Y predators focusing more on being conservative rather than trying to grow too much and starve later. While this is often different to a boom and bust in an economy it is more like what happens in nature, the difference is the I-O police are usually weaker in an economy leading to less stability. After this there is a period of decline much like in a forest where plants might start to age and die, in an economy this can be a recession or depression. This can also occur in the Roy animal kingdom because each animal has different birth rates and lifespans, sometimes then there can be a larger cycle where Ro-R prey might get older and easier to catch resulting in more Y-Oy predators who then starve, at other times the predators might tend to get older and find it harder to catch prey, they might then starve more while the prey numbers increase until they overeat the grass and decline themselves.

It may be these waves are more pronounced because there are some larger innovations which start a larger cycle, in nature by contrast there are fewer changes in plants and animals and so their cycles of growth and decline remain staggered with each other more stably. For example there have been five Kondratieff cycles so far, the Industrial Revolution of 1771, the age of Steam and Railways of 1829, the age of Steel and Electricity of 1875, the age of Oil and Mass production of 1908, and the age of Information Technology of 1971.

Each of these can then be like a revolution which perturbs the color codes, this can be like in nature where there were revolutionary leaps in kinds of plants and animals such as with the Cambrian Explosion that took some time for its effects to reach a random equilibrium, this meant that the exponential energy from the revolutions had dissipated leading to stagnation and decline. In that case it may be the stagnation and decline show a market for more revolutionary inventions which then leads to more research discovering something that triggers the next wave rather than one wave somehow producing the next. For example it is unlikely that Steel and Electricity induced an age of Mass Production to occur just as they stagnated, instead the stagnant overcapacity around 1875 might have led many to think of resolving this with mass production. However there are also chaotic connections between these to some degree, steel and electricity would tend to create a momentum that led to oil as an obvious substitute for coal, this then would lead to cars being more efficient with oil and mass production being an efficient way to make so many of them.

This is then similar to the Iv-B and V-Bi disconnect, first there is Iv-B growth from an innovation such as with the Industrial Revolution and this reinforces itself with a feeling of certainty until it reaches a crisis and collapses into a time of certainty with V-Bi stagnation, normalcy, and stability. Then this stagnation makes people realize growth is needed, this gives researchers a chance to promote their ideas many of which might have been available and ignored for a long time, the situation now however is more suitable for an Iv-B boom with Steam and Railways that becomes self reinforcing until it needs to the next crisis and a new round of V-Bi stagnation. For example steam was nothing new nor were railways, however the mood of the economy made it much easier for Iv-B innovations in them to grow. If so then the current V-Bi stagnation after the GFC will give a better environment for growth after people become tired of the safer but lower growth phase after the collapse. We may be seeing this for example with the rise of many new computer startups looking for the Next Big Thing which may start another Iv-B cycle.

Just as when plants grow and sprout B roots and Iv branches so too do momentum waves in the Biv economy, this can be seen in Kondratieff waves as well. For example in the B roots different innovations combine together to form a new synthesis in Biv, this is like how the B roots of plants link up together giving their nutrients to the Bi upper roots system. It is also like in a family tree where a family might have ancestors like the roots which provide different genetic materials like nutrients, some might be superior genes and lead to their family tree sprouting into different branches of scientists, artists, craftsmen, etc in the future. The age of Steel and Electricity then also had many roots back to the Industrial Revolution and beyond, for example the discovery of how to make iron, how to make a compass, the discoveries of Michael Faraday and Nicola Tesla, and so on combined in this age to give added value to each individual innovation leading to more stable growth than if for example electricity had been discovered by steel had not. While these B innovations combine in a Bi community, for example villages and town used more steel and electricity to create machines and use street lighting than individual B farmers might have been able to do on their own, they also produce Iv branches of subsidiary inventions such as different kinds of steel, different types of electric motors and generators, alternating current from Thomas Edison versus direct current from Nicola tesla for street lighting, and so on. Each then created other Iv branches in sometimes deceptive competition that sometimes grew chaotically in new growth or collapsed such as Edison’s use of direct current for street lighting. At some stage then these Iv branches might themselves have inventions which connect to the roots of another cycle as they converge to a new Bi combination of inventions, for example electricity eventually combined with refining of silicon to create transistors which lead to a branching of different kinds including the integrated circuit and computer chips. George Boole’s discovery of Boolean Algebra formalized this system of roots and branches into logical statements which then became tree like patterns of electronic circuits where different signals are sent by switching between one roots or branch and the other including with logic gates. These different versions of computer chips now represent more Iv branches as they expand into different niches in a computerized color system, at other times they might combine as B roots into a Bi synthesis which is how a database works. For example a computer might play chess as Iv-B in a way that is similar to a Roy predator and prey relationship by creating branches of different move variations as Iv and then looking in its database of previous positions as the roots it tries to combine into Bi information. The subject is too complex for this book, in an upcoming book I intend to describe who various technological innovations might combine in the future to give a way to predict how they might evolve and how they might spawn Iv-B revolutions in the future. Some of course can be dangerous if they become Roy such as forms of Artificial Intelligence. Ray Kurzweil for example describes the exponential growth of computer technology in terms of S shaped curves like from Carlota Perez where these phases are placed on a logistic or S curve, Perez uses labels instead like the beginning of the revolution as B irruption, the ascent as Iv frenzy, this leads to Bi synergy and V maturity as the tree completes itself. This is different though as in many cases this maturity is replaced by panic and collapse, it depends on how strong the I-O section is in the center with a connection to the market and policing as to how well the maturation process completes.

### Henry George

George believed that the price of land was an important part of Iv-B bubbles, for example the Great depression and the GFC were both preceded by speculative real estate bubbles. Land in this sense is a Gb commodity because it represents private property, G public property however can also be land such as with parks, nature reserves, etc. usually the amount of Gb land is relatively fixed because this is property that has value, for example G desert land might be hard to use as private property because of its low value and its being hard to live on. However some land around Gb property can be made private as an economy expands creating roads, providing more telephone, electricity, sewerage, etc. In an Iv-B bubble this can result in poor quality G public land being used for housing subdivisions, when the bubble bursts this land might be found to be not economical to live on perhaps because it is too far from work opportunities. It might then fall into disuses almost to the point of becoming G public property, for example some suburbs in the US after the GFC have many abandoned homes which makes the whole experience of living there much more problematic. For example the local government might not be able to afford to fix the roads, have police patrols to prevent crime, fix power outages, and so on. This can make people want to move out and the real estate values can then decline even further towards being G public property no one wants.

An Iv-B boom can then affect real estate like this as an effect of the exponential growth and collapse of prices in something, for example the tech bubble would have increased some real estate values from speculators and company employees making money from it. However real estate is more vulnerable to Iv-B tipping points because it is usually bought with a small deposit and so a decline in values can easily wipe out a home owner’s equity in it. As money goes into any bubble it drains money from other areas of the economy causing them to contract or to constrict their economic activity, with real estate then this can affect employment around the bubble causing it to burst earlier. Real estate is also a much larger investment than others such as stock and bonds for most people, because of this an Iv-B collapse will affect more people with more losses. As mentioned earlier these collapses also cause more inefficiencies, for example people with negative equity cannot easily sell and move elsewhere, a suburb might cost more per house to service if there are greater than planned numbers of vacant or empty homes, and so on.

### Ayn Rand

Ayn Rand is not actually an economist but she arguably influenced economic thought as much as many economists, most noted perhaps for her influence on Alan Greenspan. Her ideology however cannot be easily understood without looking at her childhood in Ro Stalinist Russia. Her parents were relatively wealthy and seen by Ro-R communists as Bourgeoisie, her father being a pharmacist. They had their Gb private property taken by the Ro collectivist state and converted in G public property, this gave her a hatred of collectivist thinking that permeated her book. Before the Revolution her parents would have lived a more V-Iv lifestyle where the talented people earned more money, however World War One would have impoverished the country as the Ro-R people rose up against the Y-V aristocracy and Czar. The situation then was similar to the French Revolution where the King Louis 14th spent so much on wars including aiding American independence that the Ro-R people resisted and finally deposed him. While Karl Marx thought that communism would be first tried in a more advanced economy like Germany, the Russian experience was similar to the French revolution which influenced him so much. Later though Germany did come close to R communism in the 1930s though it became a Y socialist or collectivist country under the Nazis.

Ayn Rand then got a visa to come to America to visit relatives and stayed, she became a forceful proponent of individual Iv-B rights and said that the Roy state had no right to take people’s Gb property. Her viewpoint then perhaps shaped by the Ro collectivist communism was to take the opposing Oy-R view and in a Biv society this became Iv-B.

For example in the book Atlas Shrugged the V talented people are seen as carrying the world on their shoulders, this is like the role of V leaves and fruit which nourish the whole Roy food chain. Communism was intended to take over an advanced economy and in effect to feed off its technology and wealth in making this transition, it was then in some ways like the dream of R and Ro animals to control the V means of production or food supply and rid themselves of Y and Oy predators they saw as capitalists and imperialists. Bureaucracy is not portrayed as law enforcement like I-O but in making rules which tied up or slowed the pace of innovation, in the book this was symbolized in building a new kind of bridge. This then is more like Bi and sometimes V where the team aspect tries to make business more conventional and normal, deviant new ideas then are often suppressed. Dagny Taggart, tired of this interference, was approached by John Galt who tried to get her to go to a secret place with other talented people and let the world collapse without them.

Her writings then make a forceful impression that the individual is responsible for innovation and that collectivism is an evil which must be fought, these ideas have blended with others in an Iv-B philosophy along with libertarianism. Instead then of in Aperiomics, where the V-Bi and Iv-B systems work best by combining together with I-O policing and the market, Ayn Rand’s ideas try to dispense with the ideas of team behavior completely. This is like in the animal kingdom where animals would be better off being alone in Oy-R interactions rather than ever working together as Y-Ro teams. Opposed to her ideas then are Ro collectivist communism and later Y Nazism and Fascism. In Biv politics this becomes more like Bi Democrats that are supported by unions representing collectivism for wage bargaining and V Republicans representing the collective nature of capital as shareholders teaming up in a company. V-Bi is an overtone of Y-Ro and so it has many of the features that Ayn Rand was against, her ideas then being against V-Bi became more Iv-B though usually this was the Iv side of individual rights rather than B left wing workers.

A philosophy like this then tends to widen the split between V-Bi and Iv-B be setting them as opponents, this tends to weaken I-O policing and the market which seeks to find a middle ground between them. Her influence on economic theory then was very strong, for example Alan Greenspan believed in this view of individuals versus collectivism and helped to weaken I-O policing or regulation when he became Chairman of the Fed. Even when this resulted in an increasing Oy-R contagion with subprime fraud he still resisted allowing it to be effectively policed and criminals punished, instead he believed this kind of Iv-B market would be self regulating. Clearly it was not as in large part the GFC resulted from this weak I-O regulating of the financial sector, like with Oy-R predator prey relationships and Iv-B desert plants there is no way for this interaction to be stable. When people become loners opposed to collectivism there is nothing to stop them using this privacy to their own profit by becoming deceptive, this is how poker games have evolved. With this individual rights then and privacy so sacrosanct it tends to exclude I-O police from investigating criminality properly until it becomes very obvious, for example in the US the police cannot usually enter a home or stop a car without due cause because it invades people’s privacy. Random stopping of cars such as for drink driving tests tends to be seen as V-Bi collectivist thinking because it places society’s needs over the individual, in the same way the government buying someone’s house to make a path for a freeway can be seen as also trampling on an individual’s rights. The problem then with Ayn Rand’s philosophy is it eventually breeds more crime because it can be hidden, it also tends to give people an incentive to use fraud in business for the same reason. As long as people are honest or at least can be penalized for dishonesty however her ideas are a good counterbalance against too much V-Bi transparency and the subsequent pressure to be normal and conventional.

Iv-B then tends to grow in booms and busts where the growth is exponential but then so is the collapse, Alan Greenspan in believing in this personal innovative ability also developed the belief that bubbles should be allowed to grow and burst without interference from I-O regulators. This can work well in nature sometimes, for example in the Roy animal kingdom Oy predators and R prey might regularly grow to much larger numbers and then decline rapidly with starvation. This also creates a revolutionary tendency genetically as discussed earlier, R prey for example might become faster as the slower ones are overeaten. In the same way allowing businesses to grow into bubbles and collapse can spur innovation, for example in the tech bubble many businesses created revolutions in computers and the internet even though many were also hurt by the tech bubble collapse. If there is an underlying series of Iv technological branches or combinations of different inventions as B roots then this growth of bubbles can still be valuable even if it collapses at times, for example railroads went through the same process in many countries and are still useful today. This technological growth is still Iv-B exponential in many ways as Ray Kurzweil points out in his book Transcendent Machines, the resulting series of booms and bust in computerization then can make people believe that Iv-B is innately innovative in everything not just when there are these technological branches. For example the computerization tree is still growing though many of its branches break and fail at times, different software programs might become successful while others quickly fade and disappear with their workers becoming like humus for the more successful branches. In hardware the same happens, Apple for example nearly went bankrupt at one point but as of 2011 was worth about double that of Microsoft because of the iPhone and iPad innovations.

Examples like this then make it appear that Iv-B is a successful philosophy and the only thing preventing companies like this from innovating even faster is the V-Bi collectivism of the “old” economy, however this deregulated Iv-B system while creating many useful products also caused the GFC and nearly a world wide economic collapse. There were some useful innovations in finance which drive the Iv-B bubble such as different kinds of derivatives, Credit Default Swaps, subprime bonds created like a conveyor belt from liar loans supposedly reducing risk, different tranches of subprime bonds, computerized trading algorithms for arbitrage, etc. However these are not in most cases continuing branches of innovation like with computers and software, for example like a desert plant the Iv-B subprime bond system has now practically ceased with little desire for most participants to restart it. Derivatives are still as popular as ever but are now to be trade don I-O exchanges reducing their volatility. Computerized trading systems are also still popular but the stock markets new provide few opportunities for arbitrage and have not appreciated much overall in the last decade as of 2011, it may be then that these programs have either reached their level of usefulness or have damaged the market with a financial contagion that still lingers. Whether Iv-B bubbles should be popped or not is an open question, Aperiomics is not about recommending one kind of color interaction over another but in investigating what happens with the color ratios that occur. In this system Iv-B tends to waste resources with booms and busts with the moderating influences of I-O policing and markets which fits in well with the lead up to the GFC.

Alan Greenspan may also have fallen for the same kinds of temptations that afflicted V-Bi Keynesian, that the future can be predicted mathematically and economic theory can fix some of the economic cycle by anticipating it and applying counter cyclical policies. The problem with this is that the future is doubly unknown, it is random so just like Lotto or a casino the actual events often cannot be predicted and just because an event is rare does not mean it cannot happen. It is also chaotic but chaos is hidden by nature and prone to sudden tipping points and collapses. it is often difficult then to determine whether Iv-B chaos or V-Bi randomness is ruling parts of an economy because there are so many interactions that not all can be monitored. The nature of chaos is that it is hidden and like a contagion it is usually underestimated, trying to predict chaos without using I-O police to randomly audit chaotic areas then is virtually impossible. In Keynesian economics then the random economic cycle was seen as being like a sine wave, however this sine wave is mathematically based on pi as is randomness. Seeing circular movements or cycles in economic data then is no guarantee that it can be anticipated any more than seeing red and black seemingly cycle between each other on a Roulette wheel is useful for making money from it.

The result of trying to anticipate V-Bi randomness with a Keynesian stimulus in recession to be paid for in better times was doomed to failure, it could only work as long as the odds were in favor of it. However once it became an economic tool Iv-B businesspeople learned to anticipate this stimulus and profit from it taking much of the benefits from it, this was mentioned earlier in this book in detail. To do the same with an Iv-B economic philosophy then is also impossible because chaos cannot be predicted even though it is deterministic, for example as a tree grows someone might be able to predict reasonably well the shape of the tree but they cannot predict how external shocks such as a storm, competition from other trees overshadowing it or stealing its nutrients, contagions such as a fungus or termites, Roy animals such as elephants knocking down trees or gazelles overeating grass, etc will cause some roots and branches to fail or even for the whole plant to fail.

The role of the gardener or farmer can be to try to maximize this Iv-B growth so that corn for example might be genetically engineered to grow quickly and put all its development into making the most seed for food, this can work because this is the same objective of Iv-B plants in general. They try to adapt to poor conditions and fleeting Gb resources not by growing stronger or storing up reserves but by faster growth and exhausting the soil. This cycle can then be helped along with fertilizer, in the same way Greenspan may have been trying to moderate Iv-B cycles by dousing them with extra liquidity when a bubble collapses on the theory that this would make it regrow quickly rather than stagnate from the aftereffects of a burst bubble. However this does not work well for the same reasons it has problems in farming, for example food crops develop a contagion with pests and weeds that need to be sprayed and watched for. This is the role of the I-O police to watch for financial contagion in an economy, to deregulate this policing then is like trying to make the food crop grow so fast that the weeds and pests can be ignored. However on farms this does not work as the weeds learn to grow fast as well while the pests also adapt to grow exponentially with the extra food available. This is what happened in the GFC, the financial contagion of fraud and excessive leverage became so great it overwhelmed the legitimate businesses and like the experience of many farmers the Fed eventually realized they had raised a field of weeds and insects rather than a sustainable economy. When there is a crash then in this situation the extra liquidity is like putting fertilizer on weeds which the grow before the new food crop has a chance to, also these weeds are usually more resistant to Roy pests and so the more honest food crop is eaten far more. In effect then the adding of Iv-B liquidity to an economy to blunt the economic cycles is eventually anticipated by more dishonest businesses in the absence of weeding them out. While adding extra resources to a crashing economy can create new bubbles without fixing the wreckage of the old one, trying to vary the speed of growth of a bubble by adjusting liquidity or trying to bring it down for a soft landing also tends to fail. The reason is that Iv-B growth is exponential and highly unstable, small changes in liquidity or tax laws then might create large changes much like the fabled butterfly beating its wings creating a hurricane. Iv-B participants tend to not have much money on hand as explained earlier, the intense competition is always shaving their profit margins and in effect keeps them on a treadmill in a rat race until it collapses at some point. Since the goal is not a mature sustainable economy but fast growth and then getting profits out before the collapse there is not a problem with this, the same can occur with the population of R rats for example exploding in numbers and then dying out.

It means however that trying to make a bubble grow is difficult because exponential growth looks very stable or even stagnant for a long time and then suddenly grows quickly in a short period of time. So trying to manipulate the economy like this can have already planted the seeds of an Iv-B bubble and disaster even though the economy barely seems to be moving, by the time the exponential growth starts to look dangerous it is often impossible to control or predict like a hurricane. Adding extra stimulus to an economy might change the bubble in unpredictable ways so it cannot be easily used as an economic policy, the best way is still I-O policing where random audits look at how the chaos is growing without invading too much of its privacy. When a bubble looks dangerous or is collapsing it is also difficult to use monetary policy to control it any more than to control a hurricane by injecting a wind at various points because the accumulated momentum is too strong, however it may have been possible at some point in the early growth of a hurricane for different heating of parts of the ocean to radically change the end result.

With this high momentum in a boom then to change it substantially the Fed would have to exert a comparable momentum but the liquidity they inject usually has little momentum or velocity, instead it has a chilling effect. This is because the Iv-B economy is moving so quickly it is like a finely tuned machine where small amounts of money are available just in time to keep the house of cards growing and fixing parts of it that collapse, the stimulus is often as likely to shake the table and make the cards fall down. As mentioned earlier when a crisis approaches many companies are just trying to get their money out by anticipating a crash, adding a stimulus can wreck their timing and make them reenter the market and be caught later.

This can also become like a Greenspan Put where Iv-B traders assume the Fed will pour on liquidity to ease a crash and so they have more incentive to grow recklessly to prepare for the bubble bursting. In the same way weeds and pests eventually evolve to take advantage of the fertilizer and weaker pesticides used unless these also change like I-O police should to keep up with them. If so then this is a logical continuation of the Keynesian anti cyclical experiment, when this resulted in V-Bi stagnation then Iv-B economics was touted as the solution but then this ran into the same problem of not being able to anticipate the future. When the I-O police are not used to minimize uncertainty then the temptation then is to use this one sided energy certainty to try and remove the effects of future unknowns on the economy.

### Eugene Fama

More modern economics has tended more to Bachelier V-Bi instead of this Ricardian Iv-B competition, Eugene Fama for example also believed in laissez fair and more deregulation with weaker I-O policing, however he thought the markets were a random walk and that all information was available to all participants and so was rational and efficient. There is a contradiction here between the idea of transparent markets and deregulation because this weaker policing allows more insider trading and using secret market information infecting the random walk with chaos. In Iv-B there was also a problem with deregulation, when businesspeople are allowed to be knaves, then as said earlier they can become ever more criminal until they cannot be doing the public any good as the Mafia in Italy and the US demonstrates. Other regulations are however a more grey area and this is why I-O police need to compromise between the needs of Iv agents and Bi consumers, some may suit one but not the other. Regulations might keep a market very transparent, for example Iv insider trading might be severely punished and no one might be allowed to trade on information not known to the general Bi public. This situation is more like a game of chess where all the pieces are visible and there is no way to bluff, while the players arguably have all the information available in practice there can be moves a player forgets, openings they memorized and cannot use the books, they cannot usually have a computer help them analyze, and so on. When they make a move then there is still some Iv-B bluff because the other may think it is from a prepared variation or an opening trap. Even public information need not be immediately available to the public, for example a high frequency trader might have their software able to react to a public announcement before anyone else and reap the profits with Iv-B where the fastest wins. Even when information is published there is still time needed to analyze it and faster computers might determine an arbitrage situation before anyone else and makes Iv-B profits. Randomness is inherently unpredictable but so is chaos, because the future is unknown then this unpredictability of the markets can be Iv-B as well as V-Bi. Arbitrage can work with these small lags in public perception, for example if a commodity is cheaper on one exchange than the fastest trader to recognize this can buy in one exchange and sell in the other.

The situation then is a time energy uncertainty, in a V-Bi market it is presumed that momentum or the speed of trading is irrelevant and this is also like Fisher’s theory where the V-Bi output times the price relates to Iv-B monetary velocity. For example when the market is analyzed in V-Bi then everything is presumed to be random and transparent, deviations in price should then relate to a normal curve and so if there is a momentum in one direction like Fisher’s velocity of money then it should reverse itself. This is also like entropy where heat tends to spread itself evenly instead of concentrating in one place, when stocks have some momentum after a public announcement then this energy should be dissipated by it moving to its correct price. Looking at economic data the output of goods and services times their price for industries with their periodic disclosures, the stock exchange indexes, and overall for the GDP should then be enough information to make wise investments because the monetary velocity will even itself out in random deviations above and below the correct price. It was however clear in the lead up to the GFC that there was important market information that either some people knew and profited secretly from such as those shorting subprime bonds. This information was generally available to anyone who took the trouble to examine the mortgages in these subprime bonds but few people ever looked. The reason for this was not the lack of transparency but because of so much deception around the market, Iv agents were saying the bonds were ok and so they were believed instead of being I-O policed to be truthful. B workers took out liar loans and they were believed instead of people checking their loan applications, often they were absurdly implausible and obvious forgeries but again few checked. In Aperiomics V represents I Can and Bi represents I Can Not, this is the dynamic between them because what someone can do is what is possible but it does not mean they will do it. So the market can be V-Bi and transparent which means anyone can look at any public information and to this extent it is random, however this is only when they do look and they do not have to. In chess there is no hidden information but just because someone can analyze a particular move doesn’t mean they will, sometimes people forget or are too lazy or untalented and so make blunders. Iv represent I Will Not and B I Will so this makes those colors deterministic, for example Iv agent in the stock market need to make decisions on what they will do just like in playing poker because in this secretive and deceptive situation there is little option for exploring the possibilities. For example in poker the different players might all be bluffing so working out the possibilities or probabilities from their actions can only lead to the wrong answer, at best the odds of particular cards being held might be worked out from those seen but this would make a person a poor poker player. Probability then is excluded when the situation is I Will or I Will Not, instead this is chaotic and deterministic.

It is difficult then to tell the difference between V-Bi transparency in some areas and distortions in the data, this can be like for example mirrors or windows with uneven surfaces that change the shape of objects viewed with them. They can also hide some areas and make it appear they are visible, like the saying smoke and mirrors. People can usually find these distortions by looking at all the data, but the distorted shape might deceive them so they don’t bother. V-Bi however led to the Efficient Market hypothesis but such a market to be efficient also has to be stagnant so this secretive and deceptive information doesn’t disturb its randomness. For example if the mining sector of the market had many discoveries of minerals as well as some discoveries turning out to be wrong then the price changes will follow the distribution of minerals in the ground. If they are distributed randomly then the prices will change randomly but if these minerals are situated around faults then a gold vein might suddenly appear without warning from the soil around it and then it might end suddenly instead of continuing and petering out slowly. Oil has similar characteristics as it can be trapped by faults in pools hard to predict, instead of it being distributed everywhere randomly mineral wealth is then concentrated by chaotic cracks into areas that can be deceptively ordinary. The information coming from these discoveries will then make prices move chaotically even if it is transparent to all, this is like Fisher’s velocity of money which will quickly move into shares that announce a new discovery, the overall output of these mines will not be important until the ore body is mapped out transparently and then production can be estimated.

Other companies have a similar Iv-B chaotic nature even if their announcements are published, for example a new discovery might be secretly researched and patented so no one suspects the company has it. This allows them to beat their competitors more easily, if for example they had to publish all their research and patent applications then the share prices might be more random but the market would be more stagnant because no one would do the research only to have the ideas stolen by others. However these discoveries can also be spaced at random intervals so when the data about them is analyzed they might appear random like a Geiger Counter with radiation. This is because dependent variables in chaos and independent variables in randomness must be interlinked as the difference between dependent and independent is often a grey area. To resolve this in between status of information then the I-O market is used to determine whether there is a pattern in dependent variables to take advantage off, if there is then this is quickly used up leaving randomness. If a situation appears chaotic but is actually random then systems promoted by Fama might be superior such as the size or value of companies predicting how their shares will change over time.

A share price then might move at a random time if these announcements are independent variables, for example an announcement about a new patent might have no relation to one about a new oil field, but the movements can then be chaotic in this random walk and this can produce changes in the tail of the normal curve. For example a new oil field might be discovered randomly and affect the smaller random walk of the share price but in making it grow with a strong momentum, an announcement of no oil might lead to a chaotic panic and sell off that makes both movements tend to be more than random deviations would predict. There will always be a suspicion of secretive trading so when a share moves suddenly even without announcements some will also buy assuming there is a reason for it, this also affects the normal distribution of share price movement. The result then can be a combination of chaos and randomness overall that makes the normal curve taller and the tails fatter than probability would allow. This has also been shown by Nassim Taleb and Benoit Mandelbroit in that shares do move chaotically at times with fatter tails or black swans. Robert Schiller also showed that stock prices have more volatility than a normal curve should allow, this means that rare events can happen more often than chance should dictate. His work involves behavioral finance where the psychology of investors is analyzed to explain the market, Aperiomics however includes psychology as part of its color codes so the various human motivations that move shares are the same as those that motivate animals, plants, and people. For example Iv and B people tend to be loners and more secretive in investing, even in a crowd they can still act chaotically because they are each looking to follow the others if there are profits to be made or to scatter in panic when others seem to be getting out. This is like schools of R fish that do not have the strength of Ro to stay together against predators like tuna might do, they then try to stay near each other to watch for signs of food or panic. If there is food they might get closer together so as not to miss out on it, if there is a panic then they might scatter to a greater distance but still watching each other so as not to be separated from the others who act as eyes for them. In the same way then Iv-B investors might tend to move like the others do as the market goes up, when they see others buying they might assume there is secret information there and buy the same way. If they see a sudden sell off then they try and distance themselves from the others and might sell off in a different way, for example as people try to get into a theatre they tend to line up at the main door but when they try to get out of a burning theatre they scatter to the different exits. When the market starts to sink then the sales start to break up as each Iv-B investor watches the sales to gauge when they should panic. This can result in a bear trap, for example the market might rise a little and the Iv-B investors crowd together again buying the same way though it may be a ruse caused by someone manipulating the market. When there are profits then it is not a disadvantage to follow the others in a deterministic way but when there are losses it is better to escape the stock in a deceptive way. For example a large investor might not want to spook the others and make the price crash so they might slowly sell off and even do some buying to make this deceptive, if each investor is doing this then the price drops will be more fractal like. When the price recovers a little or remains stable then an investor will take a piece out of it with a small sale so each steady period will have more of these smaller dips in price. If the stock recovers then the investors might watch each other and jump in more quickly causing the price to surge exponentially as in feedback theory. Like in poker the deception each Iv-B trader uses tends to convince some of the others and then his deception comes back to him bolstering his beliefs like a confirmation bias. There is also a sense of biased self attribution as Shiller puts it, like poker players tend to credit their skill for wins and bad luck for losses the traders tend to see chaos as a way to make money and when the market turns random this is when they lose. For example in Backgammon there is always a struggle to create a winning strategy despite the randomizing dice throws, if a player does not succeed in overcoming this randomness then it is no better than any other player. In the same way a poker player needs to do much better than the odds to make money, traders also have to do better than Fama’s random market or they are liable to be fired if for example they are agents of a hedge fund. Iv then is looking for chaos in the market to construct a deterministic series of steps that make him money, for example buying stock and then looking up old customers and persuading them or their friends to buy something. Bi people however depend more on randomness to protect them so they might pass on a high pressure sales pitch because another random deal is likely to come along when they are ready. When people who profit from chaos then find others like them they need to compete with them or in some case form distant alliances such as shoals of fish to watch and steal their ideas. A bubble then forms when these Iv-B people start to watch and learn from each other, because the V-Bi random people usually give them small profits they prefer to ignore their advice for more chaos. This is why bubbles form, not just because they might represent an opportunity but because for people who are looking for nonrandom opportunities it gives them a way to work out a sure thing sometimes.

As the bubble grows then the Iv-B deceptions around it grow, this is mainly intended for them because they believe it is true and so they might also try and hide this by now nonsensical theories about the market. For example they may have decided by a version of deceptive Chinese Whispers that the real estate market will keep going up forever, it is irrational but so many other Iv-B people are saying it that they decide it must be true for some reason such as globalization, growing markets in emerging economies, and so on. Some other people might be mainly V-Bi and so believe in random luck in investments but are also vulnerable if they meet a lot of apparently separate people who believe the bubble will continue. They conclude there is no collusion between these Iv-B people as they all seem to be loners and the most likely explanation seems to be they have all stumbled on some nonrandom evidence for this belief. These V-Bi people then usually loan money to Iv-B because while it is usually higher risk sometimes it pays off big, this is why plants loan more resources to roots and branches to bring back nutrients and for example how V-Bi venture capitalists back small internet startups hoping for the next Google or Facebook. So just as the finance money flows into these subprime businesses, Wall Street V companies and banks loaned subprime lenders huge amounts of money, some V-Bi people also decide to take more risk than usual and start O use leverage to speculate in housing too. This creates a much larger impact on the market because while Iv-B are often chasing speculative schemes V-Bi people usually just want security such as paying off their homes. When their money flows into the bubble then it shows that the Iv-B deceptions have become so common that they are mistaken for transparent conventional wisdom. This is because like in the scientific conferences mentioned it is assumed by many that if something was not true then it would have been debunked already. This then is like the efficient market theory as an efficient information theory where it is assumed that for example the knowledge in Wikipedia is correct because otherwise someone would have fixed it.

In transparent V-Bi parts of the economy then there are few ways to hide deception, Wikipedia works because mistakes and false information cannot be hidden and in the same way people assume that the market must be correct because some smart trader would have already taken advantage of any new public knowledge.

This kind of knowledge evolves, new information is added to the old sometimes contradicting small parts but the edifice of Science grows from Iv branches of specialist scientists and B roots of looking up information in databases, knowledge then becomes like a Gb resource and these knowledge trees evolve in it. The market to V-Bi people then is like this, analysts in various Iv branches come up with various theories about the market or research on stocks and this is published and debated in V transparency so all the truth is realized. The history of the market can here be like where B roots go into it and researchers look through previous announcements of companies for missed information which is then published in Bi. Resolving all this information in a transparent environment then is supposed to be a perfectly efficient market for stocks as in Science.

However there are also revolutions in Science as in stock market trading, for example Edward Thorp pioneered many of the ideas in arbitrage from mispriced stock options. This created a revolution in trading as people mined the public information for missed opportunities until any arbitrage opportunities quickly disappeared, this was supposed to mean the market was now even more efficient because for example of one stock was priced differently on two exchanges then someone would quickly notice this and the difference would disappear. However as explained earlier many publicly listed companies have secret information such as patent applications or oil fields that will have a sharp effect on their share prices when published, others also might be hiding losses in off balance sheet investment vehicles leading to a sharp downward correction in their share prices if the information becomes public. I-O police then are needed to reduce this fraud, much of the systemic risk in the GFC came from hidden losses like this and hidden patent applications often mean that the V-Bi conferences and journals do not know about the latest revolutionary theories and inventions. Rumors of inventions like these might then be heard at V-Bi conferences, this can be like rumors about share prices or self reinforcing rumors about a real estate bubble continuing to grow. Trying to verify them transparently is difficult, it seems so many have inside secretive knowledge that the evidence is anecdotal but seemingly correct. Sometimes then this Iv-B knowledge might be correct, there may indeed be new inventions being patented and rumors might be coming from workers at the Patent Office or the companies involved. Often though rumors are started as speculations by some and then move around the Iv-B people trying to deceive each other, then they hear other speculations and like conspiracy theories in politics the ideas become viral like a contagion. If they are bad then people might be panicked by them, for example in 2011 it may seem like many know the US government is planning to impose Martial Law after an economic collapse when it is likely to be rumors feeding back to people. A derogatory rumor about the market might lead to a sell off which convinces many the rumor was true and so many of these become self fulfilling prophecies. A rumor about profits to be made can cause a bubble to grow such as with real estate, eventually though the deceptions and distortions in this information will become obvious in V-Bi and it will be debunked bursting the bubble. Often though before this the bubble bursts chaotically as rumors of impending problems start to cause a panic and the rush for the exits causes a fragile bubble to burst. For example the GFC was in many ways caused by this panic as much as the fragile economic edifice built with leverage, if it could have been deleveraged with enough liquidity and the I-O police had been preventing fraud from becoming systemic then it would probably have deflated like the tech bubble.

This stock market chaos extends into the theory and its adherents, for example it is assumed that the market is transparent and so all theories about the market should also be transparent as there are no hidden variables to base alternate theories on. This then means that rival theories are themselves random deviations to build up some momentum and then be discredited just like movements of share prices return to normal. This then leads to the team nature of adherents to this theory and so papers become more orthodox or normalized while fringe ideas with more chaotic interpretation tend to be ignored by them as being obviously wrong. The same occurs in the V-Bi nature of mainstream science where it is presumed that the open team nature of journals and conferences disseminates all correct information so the mainstream scientific community is always right and the fringe of science is mistaken. Occasionally this community will discover something new and this is like a company announcement going into journals and conferences instead of stock exchange announcements. Others have an Iv-B view of science such as researchers trying to find new ideas and keep them secret, these companies then might have a lot of scientific knowledge completely unknown to the mainstream, they might keep it secret to deceive other companies with submarine patents that no one knows have been lodged. Even a decade after this patent is filed it might be still pending in the US, the idea is to keep it secret until another company starts making the product and then threaten them with it to make royalties as a patent troll.

This kind of knowledge then is Iv-B and it loses its value when published as V-Bi, it is another kind of efficient market because companies profit from it and so announcements from research companies can be highly chaotic though treated as random in the Efficient Market Hypothesis. In the same way mining companies might withhold results of drilling to allow them to acquire more leases around an ore body and so its announcements may not imply a random future pattern of information but a secretive and highly deceptive sequence perhaps years in constructing. For example a company might deliberately not drill an ore body though it is confident about it, instead it might announce much poorer results which are technically true but incomplete to give it time to attract more financing, avoid appearing to be good for a take over, or for the directors to get more stock options. The same situation can happen with actual investors, often they have secretive or deceptive reasons to make investments that lead to chaotic chains of events. For example an investor might sell their house and invest the money on the stock market for retirement, the sale of the house might depend on growth in the US economy leading to enough equity for it to sell. Then a lump sum might go into the stock market but this is not a random series of events as the stock investment is dependent on the house sale which is dependent on the economy recovering, and so on. An investor might plan to exit the market for their holidays, if many others do this at the same time then quiet times are found. This can also be random to some degree, for example a Poisson Distribution might show how random holidays might form patterns that cluster together. However if other investors are taking a break over Christmas then the market might be quieter and so it is advantageous to take a holiday at the same time as it may be busy later if a random holiday time is taken or companies may make more announcements then.

### Economic History

History can sometimes be a valuable guide to understanding the economy, it can also be very misleading like for example recording all the bets in a poker game and then trying to work out from that what cards there were in the pack. We might assume the pack was standard but if we did not know then we might assume from the pattern of bluffing from the cards on the table that there were many more higher cards than it really had or that the pack was rigged such as with marked cards. In the same way looking at economic history runs into the Iv-B and Oy-R problem where people often only disclose the minimum they need to because information may give a competitive advantage against them. What information they do give might well be designed to mislead others, this can be seen for example in the many discrepancies between self written memoirs of famous people and biographies done by others with different agendas. A field of economics then might be able to cherry pick misleading and outright deceptive information to add to its prestige as well as the likelihood of its proponents getting work, tenure, publishing papers, etc.

This can be seen with the Great Depression for example, because it was an Iv-B boom and collapse the information surrounding it is often highly deceptive and much was never recorded. For example the Republicans had Ferdinand Pecora do an investigation of fraud and corruption in the collapse of the economy, if this had not been done some quite shocking stories would never have been known to history. However also important is these Iv-B stories would never have been known except by rumors to other Iv-B speculators, each tended to be secretive and trying to put others off the scent of their trading so as not to either give away their secret information or allow others to catch them in a scam. Because of this the Iv traders themselves did not know the economy was going to collapse in 1929, if they had all known the situation it would have just created a V-Bi stagnation because no one would be trading without being able to keep secrets. When for many years later economists tried to determine what caused the depression each usually came up with reasons that suited their own field, this is because the color codes that changed in the depression are the same as those that make these economic fields grow and decline. Austrian economists then will look at the Iv-B parts of the collapse and find V-Bi links to blame it on, also to blame V-Bi insurance for propping up businesses that should have quickly collapsed to regrow like desert plants. Because chaos theory is not as developed as probability Austrian economists are disadvantaged mathematically however they speak the language of chaos with letting parts of the economy collapse quickly so it can regrow. Because Iv-B is so secretive the Austrians in part don’t even try to analyze the economy too deeply, they can treat it like the actions of invisible hands that we can’t see and so we can’t interfere with what they are doing without causing trouble. This would be like in a poker game trying to make it run more smoothly by making comments about people’s cards out loud so everyone hears, a government usually intervenes in the economy as V-Bi because it needs to justify its actions with statistical randomized data. Also V-Bi tends to be the mainstream because of the normalizing influence of the Gaussian Curve, those in the center tend to be regarded as more likely to be right while those on the edge such as the Austrians as more dubious because they are deviant to this normality.

Keynesians have an easier time because they usually monitor V-Bi parts of the economy and these are more transparent and honestly written about, when people are in teams there is little point trying to be secretive and deceptive as it disrupts the working of the team structure. They also tend to find that probability works well on their data, anything else is regarded as fat tails or a skewed distribution for unknown reasons but the rest tends to support their V-Bi ideas. Keynes himself wrote a book on probability which shows what his ideas were based on mathematically. This then led to different schools of economics that hardly spoke to each other drawing different conclusions from the depression, this is appropriate because any field of knowledge will tend to develop into twelve groups with different color codes and then interact according to the laws of Aperiomics. However the real problem of the great Depression was the color imbalance and these later schools of Economics would naturally tend to have a different color balance because their numbers have little to do with the economic situation of the 1920s. For example Iv-B economics was much more in favor then but is out of favor now with V-Bi Neo Keynesian economics in response to the Iv-B GFC. In the 1970s Austrian economics such as with Milton Friedman was more in favor because it was apparent that V-Bi Keynesian economics was causing stagnation. At that time Iv-B economists got away with giving few details of their economic ideas because of this mysterious working of the market, it was not working because of some unknown meddling that likely scared off some secretive business and so a more hands off approach was needed. This was then an appeal to return to Iv-B instead of V-Bi and not a stronger I-O market where honest secrecy is encourage while penalizing criminal conspiracy and fraud.

In the same way the GFC has led to the same kinds of conclusions as from the Great Depression even though many of them had already been shown not to work with Japan’s lost decades, for example their V-Bi Keynesian stimulus led to stagnation and the complaint was that they started this too late or kept interest rates too high. Now an early dropping of interest rates and high amounts of stimulus have produced a situation similar to the 1930s where none of the policies gave a fast recovery and as of early 2012 Europe is going back into recession just as it did in the 1930s. The high amounts of sovereign debt are just as bad today as they were back then, there is now talk for example of Greece sliding back into being a third world economy while there is little prospect in Europe for unemployed people.

Economic history then can give rise to later policies that are wrong because they treat as information deceptive and secretive Iv-B dealing, economists try to use this information and create a boom and bust or many small collapses. The Austrian alternative is to say the market is too mysterious to understand and it just needs to be left alone, this can give rise to the same larger bubbles and busts or smaller collapses. When the V-Bi economists try to analyze data they assume that everything important is visible and so the secretive data is not important, they then make policies that create a stagnant economy because they leave out the parts that create growth. Only a strong I-O police and market can resolve this problem, police tend to find fraud and misrepresentation as in the Pecora Investigation as a way of getting real economic data. For example some sources say that naked short selling caused many of the collapses in the US financial sector such as with Bear Sterns, Lehman, Goldman Sachs claimed they were being taken down which is why the government banned short selling for a while. Whether the repeal of the uptick rule, that a stock could not be shorted unless it was going up, months before these collapses is important or not can only be determined by a true economic history but many of these records are private. The I-O police however by looking for fraud and other crimes can examine information like this, if they are neutral and concluded this was true then like the Pecora Investigations it would lead to either banning short selling in a crash as policy or allowing it to continue and perhaps clear out badly run companies that would collapse anyway.

The problem is determining the accurate policy here is only done by I-O while Iv-B and V-Bi economists both tend to avoid this. For example the Iv-B economists want to leave these transactions alone as the mysterious invisible hand and also deregulation is good in their opinion. V-Bi economists tend to ignore secretive data because they believe the open and transparent information gives the real reasons for the GFC. So both then tend to weaken I-O policing, this then happens in economic theory and history just as it does in causing economic problems. The role of subprime fraud is also ignored by Iv-B and V-Bi economists for the same reasons, if the I-O police are not strong enough to prove its influence then both schools will tend to minimize its role in the GFC. This then sets up economic history for other economic problems caused by weak policing because later students will read these accounts and conclude that either fraud was not an important factor in the GFC or that their school of economics does not encourage or even penalizes their trying to publish papers on fraud.

Economic history like other forms then has the same problems it did centuries ago when there were much fewer sources of data, for example when the books available on 19th century crises are so rare it is more tempting to assume they give a complete picture while the Iv-B economists can equally argue it is so incomplete a picture that the invisible hand should be left alone. The Middle Ages is an example of this kind of history, it is quite likely that most accounts from the time present a wrong view of life then. V-Bi accounts are more available and present a view of Y-Ro wars of attrition, few might record the secretive chaotic attacks that might have decided a battle as they did with Napoleon for example. A general studying military history then might get a very biased view of wars then with few accounts of spies, assassins, the equivalents of today’s special forces or intelligence agencies, and so on. One of the few tales like this would be that of Robin Hood, a deceptive group of R thieves justifying their campaigns by robbing deceptive tax collectors for the King. These kinds of stories contrast with the V-Bi histories of the day and there is no way to know how much is true, however the story is likely from the idea of Oy predatory tax collectors working for a Y king and some becoming R rebels hiding in Ro villages.

Karl Marx had a similar complaint about economic history because his views were mainly about R-B workers who suffered in the Industrial Revolution. If he and other reformers had not documented the plight and terrible working conditions they endured then we might assume that things were not so bad for them, contrast this for example with the stories of peasants in the Middle Ages where no one documented the problems they had. Much of this plight is like workers in China and sweatshops in Asia, in 2011 there were many stories of Foxconn causing its workers to suicide and Apple factories covering up their abuse of workers. So without these exposes the Oy-R exploitations of workers might not be known about and so the idea of this invisible hand of capitalism can be promoted without seeing this darker side. The problem is mainly caused by weak I-O police investigating working conditions, however Iv-B economists promoting this invisible hand oppose the I-O regulations that would come from this policing while V-Bi economists tend to ignore these kinds of stories and not significant in models of aggregate demand. In the same way there were likely to be similar kinds of Oy capitalists in the Industrial Revolution getting away with horrific conditions that no one ever wrote about, we then tend to not know the causes of Ro riots or the creation of violent Ro unions at the time because of this missing R information. A good account of this can be read in the novel Germinal by Emile Zola where the conditions of the workers is portrayed, it shows a logical progression from R workers being at the mercy of the strength of the Y mine owners to a Ro resistance and strike. Without stories like this we might only have V-Bi accounts of Bi-Ro mobs spontaneously protesting without no known or verifiable grievances to Y-V mine owners without knowing about their Iv-Oy agents who would have exploited the workers and made them angry. We do see similar situations to this today however in some coal mines in the US the last few years where there have been protests about poor safety and some mine collapses and loss of life.

The French Revolution can be a highly misleading account of the protests that gave rise to it because little was written about the R-B farmers and peasants starving from food shortages. The V-Bi accounts would make it seem the people somehow became Bi-Ro angry for no particular reason and killed off the Y-V aristocracy and king, the real causes of this would be these R-B peasants being hungry and overtaxed from Iv-Oy tax collectors like the story of Robin Hood except here they openly revolted and so were recorded properly in history. The story of this R revolution was mostly confused because it was highly chaotic, the main stories would be like Ro mobs storming the Y Bastille for example. One of the best sources for economic history can sometimes be with novels, Honore de Blazac wrote extensively about French economic life in the early 19th century with details no historian would normally have included. This then gives us along with Zola a good account of what is left out in history, many of the stories are about Iv-B deceptive business and often Oy-R criminals. Trying to understand the history of these times is important because the battle lines were drawn then by R-B Marx and Iv-Oy Adam Smith taking different sides, these conflicts persist today because each was describing actual conditions that are usually kept secret. Though V-Bi historian tends to underrate these problems they erupt occasionally in history with great crises, for example the R French revolution might not have led to much written about the R peasants but the situation influenced Karl Marx to form communism. This in turn led to events like the R peasants revolting from conscription in Russia in World War One and forming Ro mobs that overthrew the Y-V czar. Adam Smith taking the side of the invisible Iv-Oy hand in the market led to much of the development of capitalism and excusing economic crimes in many cases as somehow necessary to keep this invisible hand working properly. Examples of this are too numerous to mention, for example even today this invisible hand is used to justify many economic policies that now have the ascendency over R-B Marx. However in the cold war there were many times when the plight of R-B people though not usually recorded affected the rise and fall of nations, often with the assistance of R guerillas supported by communist countries. In other parts of these countries covert aid was given by the Iv-Oy CIA such as running secretive businesses to hide their activities. Little will ever be known about how these machinations affected the pattern of recessions in the world then but little will affect modern economic theory regardless.

V-Bi economic history was also recorded along with these secretive and deceptive accounts, for example along with R-B Marxism there grew more open accounts of worker conditions by Bi-Ro advocates such as trade unions, organizations helping the poor, women suffragettes exposing the abuse of women, prohibition arose from Bi-Ro organizations exposing the secretive drinking and abuse of families from alcohol, and so on. There is then an enormous body of Bi-Ro evidence of these team based communities trying to help each other which lead to the conclusion that welfare is a good and necessary thing as well as exposing Iv-B business as dangerous. When these ideas however create a Bi-Ro economy such as with some Warsaw pact economies after World War Two or a Ro economy such as the Soviet Union the result of all these welfare can be stagnation or the chaotic and secretive side like the R gulags just becoming a hidden history influencing as many events. Just as Karl Marx highlighted the problem of R-B workers that might have remained secret the West also heard stories of R abuses in the Soviet Union such as gulags being exposed by Alexander Solzynitsen and others, the secret police files being exposed in Eastern Germany after reunification, the secret perks of R communists, and so on. It shows then that in Oy-R situations one or the other is usually exploited in secret but will often do something similar when they have the chance. For Iv-Oy abuses we can look at death squads in South America fighting R-B communists in an often secret war financed by the West, if we look at those economies and try to draw conclusions about economic problems they had then we might see either the data that leads to stagnation or that which is misleading. The Y-V version of history often doesn’t mention the Iv-Oy deceptions that helped money to be made, without looking at these invisible hands more closely we might assume that Y-V economics is highly stable and ethical. If this then leads to economic policies that constrict Iv agents too much such as in the financial sector after the GFC then we might create a Y-V stagnation.

When the economy is well policed in I-O the economic data is more likely to be honest and so it can be better used for financial planning without leading to problems. For example R-B welfare can quickly give distorted statistics because of deception, more was covered on this in my first Aperiomics book but welfare cheats if not policed will give misleading statistics because many might be secretly working in the Iv-B black market. In the same way Iv-Oy salesmen selling subprime loans were highly deceptive in altering loan documents or taking liar loan information from R-B borrowers that was clearly false. This then led to large amounts of deceptive data along with much of the real situation being hidden. Iv-B economists would tend to ignore all this kind of data anyway because it represents the invisible hand that should be deregulated anyway, V-Bi economists tend to ignore the secret data because they assume it can be worked out by extrapolation with random statistical equations from the data they don’t realize is deceptive. This deceptive data then becomes the basis of V-Bi economic decision making, if there are protests about the level of fraud then V-Bi economists look back to previous papers and books that say fraud is not a serious economic problem compared to other V-Bi issues like Keynesian aggregate demand, etc. Iv-B economists also ignore this data so it is again up to the weakened I-O police to moderate economic crime even though it does not appear important in economic decision making and so they end up being underfunded and often ignored. It is no surprise then that economic problems seem similar to ones in economic history, they occur because of similar color imbalances but also they are written about in unbalanced color journals and book as well as leading to changes in unbalanced color economic fields. Because of this the prejudices that accompany these color imbalances become more entrenched as rival dogmas leading to weaker I-O police and then similar economic problems arise again. The observers of economic phenomena then cannot be separated from what they observe and record, what they gloss over tends to form the seeds of the next economic problem which might be V-Bi or Iv-B. Then the next group of observers see similar ideas reinforcing their own theories, gloss over the parts that don’t fit as historically unimportant and so help to create more economic problems later. Like the saying that history is written by winners in Aperiomics it is usually written by V-Bi but often created by Iv-B.

By contrast Iv-B markets tend to ignore economic history because it does not fit well into their experiences, this is why markets often react badly to economic policies particularly after the GFC. What happens is the V-Bi policy makers don’t want to be insensitive to the market and so they try to coordinate with it by reacting according to how this Iv-B market buys stock, bonds, derivatives, etc. This is problematic because Iv-B is so secretive and deceptive that in many cases these movements would be designed to change economic policy for profit, for example bond traders might be looking more for profit in how they reacted to the Eurozone crisis in 2011, governments might adjust their austerity policies if the bond interest rates start to creep up which means that the market does not believe they will be effective. In effect then after the crisis Iv-B and V-Bi economists and traders are trying to reach some consensus on what to do in the I-O market, V-Bi policies then if they lead to a crash in share prices might be considered to be wrong in some way. Iv-B market forces might also be seen as wrong, for example many banks are borrowing from the US Fed and lending the money out overseas for speculations rather than investing in the US economy. While this might boost their profits and share prices it conflicts with the V-Bi ideas of adding liquidity to the market to stimulate aggregate demand. V-Bi and Iv-B are then often at loggerheads and this can result as mentioned earlier in creating policies that are highly inefficient. Historically however the traders will look back on the GFC as being caused by V-Bi government debt crowding out private investment, the Fed raising interest rates, too much welfare, high wages, and so on. Usually they will ascribe little blame to themselves because with such a secretive and opaque market few had any overall knowledge of what was going on and what their individual actions were causing. Because of this their conclusions will be more weakening of the I-O police and more deregulation, much of this will be followed by governments because they are afraid of the markets going down if they strengthen this policing.

### Hot Potatoes

As an Iv-B economy grows it develops specialized ways to handle the high energy and velocity of the various transaction in it, one of these can be to move high energy transaction along faster before they can cause damage by staying in one place too long. For example in an internal combustion engine the explosive power of petrol is used by moving it quickly from a cylinder after it moves the piston, if the pistons did not move then repeated explosions like these might cause damage to it. A nuclear reactor handles the extreme heat from its fuel by keeping the cooling fluids moving transferring this heat to create electricity or just to dissipate it, a breakdown of this is what caused problems at Fukushima in Japan after the tsunami. In the same way an Iv-B business has in effect hot potatoes they need to move on quickly, for example subprime lenders might make a dubious loan and they need to get it into a subprime bond and sold before the borrowers default though in some cases they can replace these loans with others as they default. Hot money might try to move in a heated Iv-B bubble to make profits even as the infrastructure is collapsing from the pressures of this money, for example capital inflows and then outflows can raise prices in an economy as well as raise their exchange rate until their exports are uncompetitive before then making it crash as the capital flees. A boom then might only be able to handle this high energy for so long, for example the US real estate bubble occurred because of the Japanese carry trade and other trade surplus economies trying to keep their money in US dollars. The US was able to absorb the high energy of this money but wherever it went it tended to damage the infrastructure of the economy as it moved in and then out so quickly. For example when it went into real estate it created too much construction which then was often toxic waste when the gaseous or steam money moved on. When this money cannot escape because of blockages like the seized engine referred to it can blow apart the system. Iv-B is usually very fragile like a chaotic house of cards so it can often take surprisingly little energy to start a collapse and then as the money flees it wrecks nearly the whole structure as it moves to each safe area. It is like for example a few lifeboats and too many survivors after a ships sinks, the people move from one lifeboat to another overwhelming and sinking it until they are all gone. For example after the GFC the fleeing capital had few safe harbors because most securities or commodities would be damaged by its buying and then selling them, if they had gone into oil as many did then it raised prices so much that it stalled the global economy and so made more chaotic losses on other investments as well as reduced the value of oil itself. AIG put themselves at risk by in effect acting as a pool of V-Bi liquidity to absorb the hot potatoes of Credit Default Swaps with its randomness, however eventually there were so many that the volatility caused the company to collapse. Toxic waste securities built up in the subprime pipeline though they were eventually fatal to the companies that held them because they could not be offloaded to others. Liquidity then acts like a coolant with these high energy transactions so when there is too much steam money there is little cooling going on and any liquidity just turns to steam itself instead of restoring circulation. For example when the US Fed had to pump money into the overheated economy in the GFC the money did not flow around the Iv-B circulatory system but in effect heated up in some areas where these toxic securities like hot potatoes were stuck, even though banks and others had more cash they could not restart this subprime pipeline to move toxic waste off their books or even to move bonds that were still performing well. The price distortions around these securities were still so large that the next stage was to move them to the I-O market where enough liquidity could sell them as long as the prices came down to a reasonable level. This was impossible however even with extra liquidity because the momentum had been broken, bonds might only be bought by an investment bank if they could sell them within minutes before they could affect their balance sheet much by their appreciating or depreciating. Instead even with this extra liquidity they might underwrite a subprime bond offering and then be stuck with them, the liquidity was not flowing around these high energy bonds down the Iv-B conduits so they could be moved out of the financial system and so it seized up from the heat creating a meltdown. This is because Iv-B works with high leverage and velocity, they usually cannot afford to hold onto assets long term because they compete against each other so much that their profit margins are too thin to allow it. Even with this extra liquidity then these Iv agents could not hold onto these subprime bonds because they didn’t make enough to do it, also the B borrowers could not afford to hold onto the houses they bought as like Ponzi schemes they often could not afford to make the repayments once the houses stopped going up. For example a B workers might buy homes on 100% credit with liar loans to make money, his liquidity comes from selling these houses for a profit and buying another one or refinancing loans. When the money stops circulating because of the steam Iv-B money is too much of a hot potato for someone else to buy the homes or refinance the mortgages the system melts down and then the B workers cannot buy any more homes or are unwilling to try. The Iv agents selling these loans need to keep the volume up because of intense pressure from their companies, for example at Ameriquest any record month became the baseline where they were expected to do better the following month. Subprime lenders like this then had no ability to hold loans themselves and as soon as the liquidity to make more loans dried up they were stuck with highly overheated loans that would either wreck their companies or if they cooled they would find that the house they loaned on was only worth a fraction of the loan amount. Both then needed to move these Iv-B hot potatoes before they wrecked their liquidity or before they cooled and created a massive loss. So the extra liquidity the US Fed added to these companies paradoxically added to the fall in prices because companies with more liquidity had less incentive to move these securities quickly and so they tended to pile up even more and clog the system. Also needed was stronger I-O policing to identify the fraud that was making investors panic so they would continue to buy more honest securities, for example if the government had guaranteed the higher tranches of subprime bonds by acting like a lender of last resort to Credit Default Swaps then it might have kept the subprime Iv-B conveyor belt going. To do this it would have had to investigate these bonds to look for fraudulent loan application both done by Iv salesmen and B workers, those that were honest might then have been government guaranteed to some degree cleaning them out of the system and giving more loan money to keep houses being sold. This moves the hot potatoes in effect by checking each one to see if they were dangerous or misrepresented, if they were safe enough to move along the system without collapsing it then it was better than in effect putting liquid money through an Iv-B system designed to handle high pressure steam money. The result then was to turn a steam like energy system into a liquid hydraulic one that could not work, for example in a high energy Iv-B system there are hot deals where someone might pick up a bargain by acting quickly or sell out of a glut by moving as quickly. When the system became too liquid though there was no high energy and urgency, companies then just got stuck with their losses and the urgency had gone in the aftermath of clearing up the financial wreckage. There was little reason to jump on temporary bargain because the chances of selling them in an opaque fragmented Iv-B market were low, investors instead wanted to wait until price movements indicated a heating up market where the momentum would indicate profits to be made.

This also occurs in the Roy animals kingdom where R prey are like hot potatoes where they either have to be eaten by Oy predators or they might multiply too much and then begin to starve upsetting the food chain. This is like in the real estate boom where houses on sale were hot potatoes that if they stayed on the books too long they might frighten off investors and so agents might have to buy themselves more often to keep up an appearance of a rising market. It is also like in the Biv forest where the B roots are also like hot potatoes, if they don’t grow fast enough then others might beat them to the nutrients in the soil and if too fast then they might collapse. They need to move nutrients quickly because if they cannot then they might become diseased or clogged. The same occurs in blood vessels of an animal, they need to keep the blood and nutrients moving because if they stick in one place they might form a clot or blockage and threaten the life of the animal, they might create an aneurysm or leakage, and so on. This risk increases as the animal’s blood moves faster, people are more likely to have a stroke for example when exercising. In the same way as the Iv-B economy heated up it needed to move the deals ever faster but this made it more likely some deals would become stuck in areas like clots and blockages making other deals back up behind them causing ruptures while after them dealers would start going broke because of the sudden lack of business. When this high energy and velocity slows suddenly this can also be dangerous, for example if a runner stops too suddenly they might pass out and so they usually have to slow down gradually. The problem in an Iv-B economy is there is no way to stabilize it because it is only based on momentum and not V-Bi positional factors, there is no way then to have enough liquidity where companies can hold onto a position in securities for a while and still onsell them to keep the financial circulation going. To do this the storage facilities need to be integrated into the system, for example an animal might be able to store energy as glycogen in the liver or as fat and then release this later as needed. An Iv-B system has no way to accumulate fat or liquidity like this because the intense competition reduces the fat along with their profit margins except for a few who become very fat and wealthy as winners. If Iv agents do make profits they usually either waste them on the high life and luxuries or have to reinvest them into their businesses for growth for fear of being overshadowed, losing market share, or being bought out. If B workers make profits from buying and selling houses on liar loans they usually either waste the money like Iv salesmen by using their houses like ATMs or buy more property to keep their profits up or cover some losses as the market begins to falter. The system also tends to encourage people to waste their money to keep them working faster, for example salesmen might be encouraged to buy better cars to anchor them to the job with higher repayments. B workers might be sold on more loans and houses by agents by making them greedy about the profits they will make, the trips they can take, the luxuries they can buy, how they will appear like heroes for their families and friends, etc.

Having V-Bi savings starts to also appear like a hot potato where people feel they have to quickly reinvest it in case they need more profits to cover other losses, because of greed for more luxuries, because of pressures to keep up appearances in their peer group of other speculators and salesmen, etc. This is where I-O policing is most needed, if these speculators and salesmen could save enough then they could stabilize the system more easily by being able to hang onto investments in a downturn rather than having to offload them in a panic at any price. By maintaining a realistic price connection to the I-O market this prevents too much speculation in hot potatoes like bargains that need to be offloaded quickly but which are more like hot or stolen goods, for example subprime loans were often in effect money stolen by fraud from unsuspecting lenders and so the companies wanted to be rid of the loans quickly. Once they were gone they could stall any problems in court and perhaps settle, the borrowers might have defaulted and appear to have been at fault, have died, and so on.

Often a major part of this hot potato was the upfront fees hidden in a loan, the higher interest rates that would reset after a few years, the higher penalty rates if people got behind in a loan or credit cards, etc. In a chaotic situation these extra penalties make a collapse more likely, for example the upfront fees made selling a house and paying out a loan much harder and often borrowers would have to refinance over and over until all their equity had been taken. A credit card payment might quickly become unmanageable with penalty rates after missing a payment making a loan more likely to default. The upfront fees might be quickly distributed to Iv-Oy salesmen as commissions, bonuses in a subprime lender, etc so this made it much harder to recover this money. For example the bonuses paid out on Wall Street each year were hard to get back from Iv-Oy agents in the GFC, once the money was paid out then it was a hot potato passed on. Taxing these bonuses or restricting their size did not work well as it produced a chilling effect on Iv-B business, Iv-Oy agents might leave companies that did this and move to others cutting the profits. Often these agents had scruples which could only be overcome with high commissions, once these had reduced or were under too much public scrutiny many did not want to do that kind of business any more. This can be a positive development if crooked business is stopped by I-O police by criminalizing paying commissions of fraudulent business, however casting a pall over all these deals just made the more honest Iv-Oy agents pull out leaving the business to those more dishonest ones who didn’t care what the public thought.

Risk in general was a hot potato that was always moved along in Iv-B, this is like where steam pipes might be fragile and so to reduce this risk the steam is moved along quickly and then the system can be idle for a time. Securitization then was like a game of music chairs where just because the risk was being moved around it was as though it didn’t exist, for example this steam might be moved around a circle of pumps only straining a small area part of the time but this does not reduce the overall risk because a failure at one point will depressurize the whole system of pipes. In the same way an Iv-B system of trying to securitize risk could not work because it consisted mainly of packaging it up secretively and deceptively to move it on at high velocity, for example just before the GFC it became difficult to complete subprime bonds before mortgages in them failed and had to be replaced. In such a situation believing that moving these bonds faster or getting credit default swap insurance before a default would be systemically safe was a deception perpetuated by all the players on each other. The problem was for investment banks that no matter how quickly they got out of one deal they had to get into others to maintain momentum, the deals they got into were then ones that others wanted to get out of faster, and so on. Trying to slice this hot potato of risk into different tranches of subprime bonds could not work because it involved trying to pass on this risk to the lower tranches as if it could be contained there, this risk however tends to grow chaotically like cracks in the financial structure and so this contagion tended to grow into the upper tranches and bring them down as well.

Risk then is similar no matter how fast it moves, this is like a desert plant trying to grow in poor soil with many defects in its structure where it needs to hold together just long enough to seed and then collapse. The intent of Iv-B deals then is the same, to hold together a deal from flying apart long enough to sell it on to someone. In the same way Oy-R predator prey relationships are also unstable, predators might sometimes be starving or have a glut of food and they usually need to hold together in the face of hunger enough to get to the next meal. R prey might have the same problem, they can be tired after being chased but need to survive even with injuries long enough to heal or at least have offspring. Both are different from Y-Ro animals which in acting as teams have more security, the male lions for example might usually let the females hunt and eat part of the carcass giving them a reserve if the males have to hunt as well in hard times. Ro herd animals such as buffalo also have more security and don’t have this urgency to contend with because they can fight back far more than they usually do if pressed.

In an Iv-B economy politicians might became increasingly handlers of hot potato issues they need to solve quickly under high pressure, this can replace V-Bi planning where there is much more time and higher margins for random error. For example in the GFC Treasury Secretary Henry Paulsen had to make quick decision where companies and increasingly the economy was days away from a financial collapse. These decisions were then like hot potatoes that had to be moved along quickly to be executed by a chain of staff such as with Bear Sterns, the fallout from not moving along on Lehman and letting the hot potato problem in effect melt down the economy, reacting to the credit markets freezing up by arranging bailouts and Fed money, etc. I-O police have a varied approach to hot potato issues, for example the complaints about Bernie Madoff were like this to the SEC because of his stature in the financial community as well as his intimidating demeanor to inspectors. Eventually then instead of keeping the investigation going the temptation was to either move on it or to shelve the complaint quickly, the same occurred in the US before the GFC with many cases of financial fraud. An open case tended to be an embarrassment that particularly when it had political pressures was not wanted by many investigators. This then is the Iv-Oy side of the I-O police, to balance this there is the Bi-Ro side where they have more patience and persistence to win a war of attrition against criminals rather than passing the buck as a hot potato.

The hot potato approach also tends to multiply into Iv branches and R roots, securitization then increased in volume but also branched out into nearly any kind of risk including even credit card and car loans. Even products can be like hot potatoes such as new plasma TVs with a limited life before they break down and people buy the new model, Iv businesses selling all kinds of electronic goods have to keep the sales volume moving because if they get stuck with an old model it will quickly become unsalable. Many companies got stuck with excess stock in the GFC as the system froze up, it was then much harder to get the system moving again with high momentum because its inertia had ground to a halt and was resisting this acceleration back to a fast economy again. Even when some areas did speed up they risked getting held up by slower areas where the roots and branches of supply chains were damaged or clogged with old stock like time bombs that would become worthless if not sold quickly. B workers and often Iv agents have the same problem with their wages and commissions, usually they need to quickly pay off bills and loans that will cause them major problems if they delay. Money then tends to burn a hole in their pockets if not spent quickly.

Oy-R war has increasingly become dealing with hot potato problems, for example drones might see suspected Al Qaeda R terrorists and politicians might have only minutes to order an attack which needs to be arranged down a chain of command to be fast enough to catch them. If they fail then the consequences might be severe if it leaks to the press for example. An R terrorist might also be captured and be a similar hot potato that needs to be quickly moved by rendition to chains of secret prisons, tortured or interrogated, and then whether innocent or guilty something has to be done with them so they often end up as a hot potato in Guantanamo Bay. While this is going on the Y-Ro war continues as of 2011 in Afghanistan which is much less focused on speed but is a war of attrition.

### Muddying the Waters

Iv-B and Oy-R work best using secrecy and deception, this then requires a suitable environment. For example in the animal kingdom Oy predators and R prey both prefer thicker vegetation or at least surroundings that match their camouflage, for example an Oy hyena might be able to get closer to the prey in thicker grass while the R prey often can hide better in it. When they are in short grass or bare ground then secrecy is more difficult and the survival of each usually comes down to speed and stamina rather than being surprised. When R animals overeat the vegetation then they can create a different kind of environment for themselves that may be more dangerous, this might mean they have evolved to let plants grow to a particular height. When the plants get too large the predator prey relationship shifts more to secrecy and deception and speed to is reduced in the heavier foliage. Iv-B plants have a similar problem, sometimes they survive best by growing very quickly like with bamboo giving them a better chance to get to the sunlight first and perhaps overshadow rival plants. A race like this can devote enormous amounts of resources to this growth instead of forming a more sustainable tree, for example much of the height of bamboo is because of this competition as their stalks have little ability to absorb sunlight. It is also much harder to move nutrients up and down such a long I trunk, they would probably not be disadvantaged much if bamboo was only a meter high for example. The I trunks are also quite fragile by comparison to most trees and easier to break. If speed is not a useful adaptation then Iv-B plants might have to use secrecy or deception to survive, for example a vine might use another tree’s I trunk for stability without it being aware of this.

In an economy Iv-B business then need to use the various attributes available such as speed or momentum, deception, secrecy, misdirection, lying, camouflage, misinformation, bluffing, hiding the truth or only telling part of it as salesmen often do, and so on. Speed of growth is often a critical way for Iv-B to succeed in business, for example the subprime lenders usually tried to have record breaking growth each month and their explosive growth eventually caused many of them to be unstable and collapse. Momentum is sometimes more difficult for Iv-B businesses because the lighter and more fragile they are the easier for them to be pushed aside by the competition. For example an Iv sales organization might be trying to make sales quickly but to get this momentum they need to deflect or overcome sales objections, also to get to B customers faster than their competitors. In the same way B workers might have to develop speed in getting to bargains before anyone else, momentum might be very example where people are rushing to bargains in a store and whether some can push others out of the way by their speed combined with their weight. This speed and momentum can cause problems in a market downturn, many Iv-B businesses cannot slow this growth and momentum because their companies are so highly geared to performance rather than storing reserves for a recession. This is like in the animal kingdom where speed versus momentum is a critical factor for survival, for example a slower R gazelle might still outrun an Oy hyena by dodging from side to side so the predator with more momentum cannot zig zag as easily. Momentum then in business can make a company inflexible, for example an Iv salesmen might have to dodge and adapt to the various objections of one kind of B client but another Iv salesman might have a high pressure high momentum approach where they don’t both much with objections and just keep going for the close.

When a market becomes more opaque then like the Oy-R animals in tall grass they can use more secrecy and deception to make money rather than speed and momentum, for example the I-O stock market in the US has little secrecy because anyone can see the stock prices and public announcements by companies are theoretically available to all at the same time. Because of this velocity and momentum are important factors which is why high frequency trading is done from computers close enough to the exchange that the speed of light is a critical advantage. Momentum trading can also be useful in this situation, algorithms in computer trading can look for a tendency with some stocks to overshoot in corrections and take advantage of this for profits. However other markets are more opaque such as with derivatives, real estate because people can’t look inside each home to compare their sale prices, poor I-O regulation causing more fraud in business prior to the GFC, etc. In this environment secrecy and bluffing might be compatible with strong I-O policing because traders and their clients have a right to some privacy, however when I-O policing is weak then this can become more dishonest and then other factors such as misdirection, misinformation, lying, and fraud can become part of the system as in the Roy animal kingdom. As mentioned earlier too much of this can make Oy-R predator prey relationships unstable and eventually collapse the Roy food chain much as happened in the global economy with the GFC.

Depending on their strategy then Iv-B businesses might prefer in effect taller or shorter grass and then speed and momentum or secrecy and deception might vie for supremacy in their competitions. To do this then Iv-B businesses as well as Oy-R criminal interactions then might also have a battle to not only weaken I-O policing but also to change the opacity of the environment. When the economy is more transparent then there are many V-Bi transactions as well going on around them, this tends to make Iv-B also more transparent because of being near them. This is like in the Roy animal kingdom where Ro elephants or buffalo might knock down trees and bushes and may also prefer to keep in open areas so predators cannot sneak up on them to grab their R young. This does not mean the I-O police are stronger for this transparency, in Roy for example the O middle of the food chain might have collapsed and there is a war of attrition between Y and Ro along with a war of speed with Oy and R animals. Prior to the GFC there was weak I-O policing and in some areas where the economy was opaque this led to deception by Iv-B business and V-Bi were more careful but still did business. In other areas the market was much less opaque and V-Bi businesses felt more secure though this did not save them from problems. The weak I-O policing then caused Iv-B businesses to grow and mutate out of control while V-Bi wars of attrition drained the economy of resources, for example in the tech bubble internet startups multiplied and mutated as Iv-B while V-Bi companies such as Microsoft and Apple fought with each other for market share. Companies the that prefer more transparency might lobby to have more public disclosure of information, for example patents might have to be published so these companies can then race to find ways around them rather than being trapped years later when they are suddenly approved and can be enforced. The information public companies disclose can also affect their strategies, for example if a mining company has to disclose more information then Iv-B business must rely more on speed and momentum to make up for the lack of ability to deceive. Mining companies then with fewer resources to hide might lobby for more disclosure while those with potentially more resources still unexplored might want the right to keep these hidden from shareholders until they are in a better chance to exploit them. Such a situation might then help more shareholders than others, when information is disclosed the fastest might make more profits but when companies have the right to withhold information then those more skilled at research might still work out whether mining resources are higher than what they are disclosing.

In the subprime business the requirement for more transparency of the terms of loans could prevent some fraud with strong I-O policing, it would then make the business more one of speed and momentum where getting the deal first is more important than trying to deceive the customer. Both situations might be profitable, though the customer might have potentially more information they can still be bulldozed into signing and the companies can still commit fraud later by altering loan documents as many did. Where little disclosure is required then secrecy and deception might become more important, many Californian subprime borrowers for example in the 1990s did not find out until years had passed how large the up front fees and interest rates really were. In this situation then it was not so important to get to the clients quickly because the ones most easily tricked would be more profitable than those who could see more details about a loan and demand a better deal. In both cases however stronger I-O policing would resolve these issues, for example this momentum could be blunted by cooling off periods just like on the roads O police might use speed bumps and radar to deter dangerous driving. When the situation is more opaque such as in parts of the road where visibility is poor from vegetation, hills, etc then O police might put more warning signs up. In the same way the deception can be countered by more requirements for honesty in transactions and stiffer penalties for fraud, also copies of contracts might be checked randomly by audits for evidence of tampering.

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