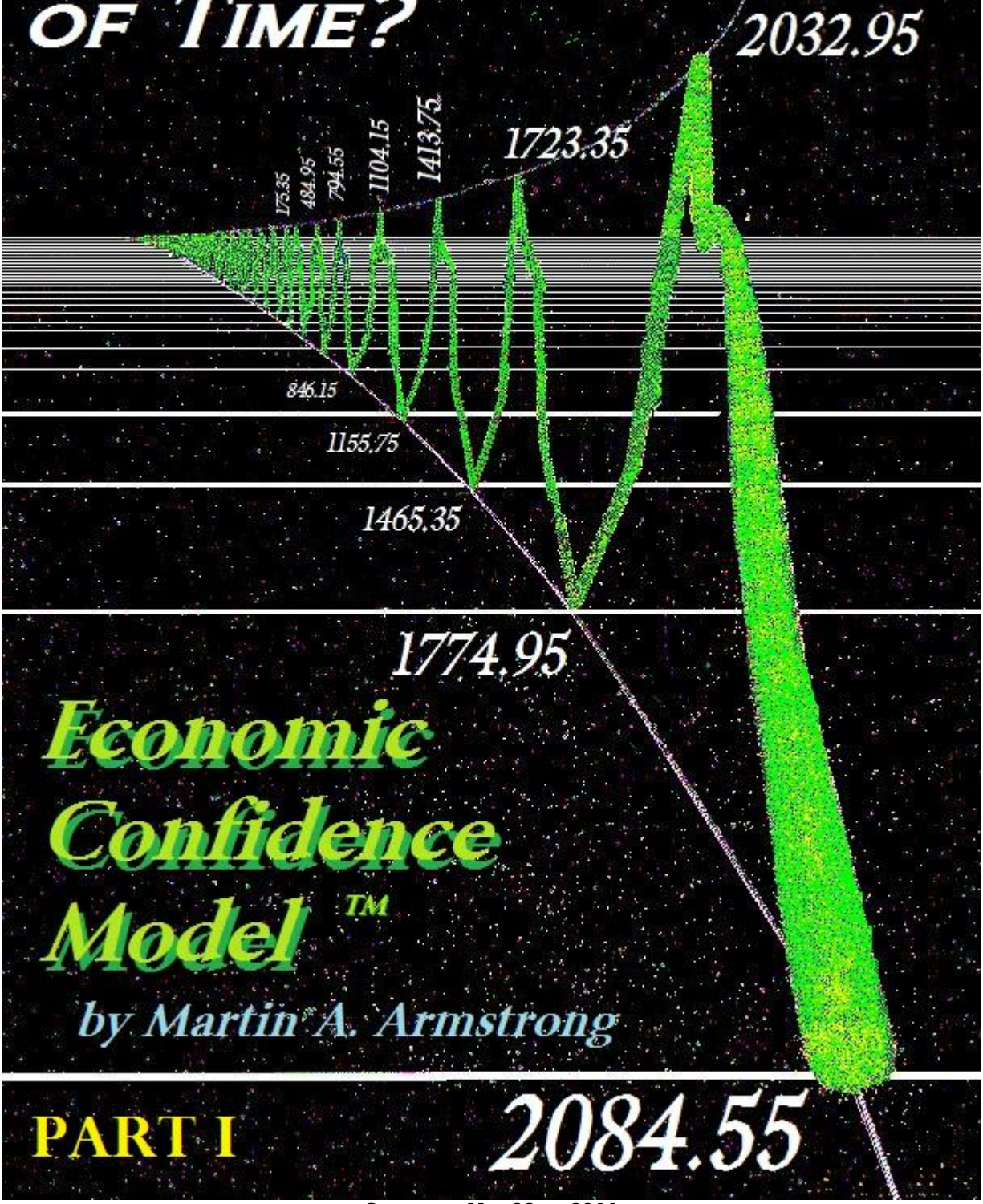


# THE END OF TIME?

*Armstrong Economics*



## *Economic Confidence Model™*

*by Martin A. Armstrong*

**PART I**

**2084.55**

## **DEDICATED TO**



## **IDA ARMSTRONG**

I have been told that my courage to stand up for what is right has been inspiring to many. We are truly the product of our upbringing. I would like to thank my mother who has taught me above all others, to stand tall. This report is dedicated to my mother Ida Armstong who has been the true strength of my being. She has stood by me in times of trouble and in glory. She has given me the strength to face tyranny and to look it straight in the eye. When Alan Cohen of Goldman Sachs, the SEC and CFTC threatened to imprison my family unless I plead guilty, I wrote a letter to the SEC who had done the same thing before the same Judge Richard Owen to Steven H. Schiffer. They mentally tortured him driving him to commit suicide to seek peace, I threatened to do the same if they did not leave my family alone but warned I would make sure the entire world would know what they had done and I would not go so quietly. In the case of Michael Milken, they charged his brother and threatened to indict his grandfather who was nearly 90 years old to force him to plead and not go to a public trial. I came to realize that the government engages in torture not only of terrorists, but citizens and that suicide is very common and by no means is it remorse, but a desire just to seek a moment of peace away from one's captors. True criminals are cowards.

Even in Northern France, in the famous Outreau criminal trial of 2004 on various counts of sexual abuse against children, the government's star witness lied accusing innocent people to reduce charges on themself. Government always offer deals to criminals just so they can prosecute others and of course, rarely do they

ever tell the truth. In the French case, the falsely prosecuted individuals spent years in prison and one innocent man committed suicide just to seek peace from the mental torture of the police. In the United States, Peter Limone and Joseph Salvati spent decades in prison for a murder they did not commit and the government prosecutors knew they were innocent robbing them and their families of nearly 30 years of their lives. They were KNOWINGLY falsely convicted in



1967 at trial. Why is it that government prosecutors can knowingly violate people's rights and nothing will ever happen to them? Then in war they expect our boys to die for "*Liberty and Justice for All*" provided that does not conflict with a prosecutor's personal career and immunity.

Then there was the student they claimed "confessed" under torture in New York to having a radio to guide the planes into the World Trade Center. If the pilot whose radio he left in a hotel had not returned looking for the object, the student would have died in prison. When told to explain how they obtained a confession from an innocent man, the Justice Department said no court had any power to order such an investigation. And this is a free country?

I have lost all respect for government for they have abandoned the respect for the people just as they lie to us about our economic future. Congress will

not pass any bill to restore the rights to the people and end this tyranny, because political prisoners are necessary to further special interests and personal careers. Is this not what Hitler and Stalin did to their people? I thus dedicate this work to my mother whose strength has been a gift to me for she taught me well and it has been her courage that inspired and sustained me. John Stuart Mill wrote in 1859 in *On Liberty*: "we are not yet free from the stain of legal persecution." Tyranny is the curse of humanity and nothing has changed.



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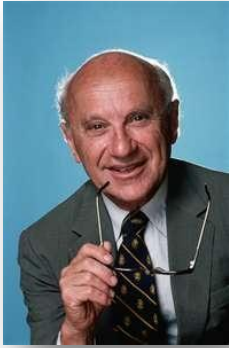
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#### **ACKNOWLEDGEMENTS**

I would like to thank all the former employees, associates, sources, and contacts for their ongoing support and efforts to contribute to the writings I have been able to continue through their great efforts. I would also like to thank those who have looked after not just myself, but my family, and shown them support and kindness.

The purpose of this report is to broaden the understanding that is so vital to our personal survival. It has been my distinct privilege to have witnessed history from a front row seat. Being both a trader and a corporate-governmental advisor around the world, such an experience opened my eyes to see everything through the looking glass of currency and individual interests of my global clients. I came to see that required analysis was substantially different around the world and that everyone acted in their own self-interest, measured in their domestic currency as the standard unit of account.

There are many who go out of their way to try to personally attack myself in order to discredit the findings. This proverbial strategy is of course a logical fallacy known as **Ad hominem**, a term that comes from Latin meaning "**toward the man**" because they are incapable of addressing the substance. Those who engage in such attacks cannot address the substance and the conclusions reached are against their self-interest so they attack me personally unable to mount an intelligent response. While I welcome debate on substance, those who prefer the **Ad Hominem** route are to me just dishonest cowards with a hidden agenda to subjugate society for the corrupt benefit of notorious investment bankers. If they have to engage in personal attacks, they are incapable of debating the substance for to do so would be against their own self-interest.



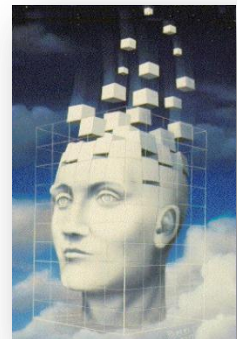
**Milton Friedman**  
1912-2006

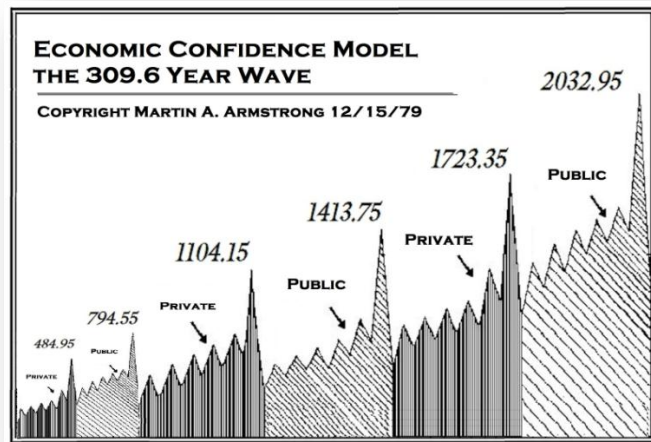
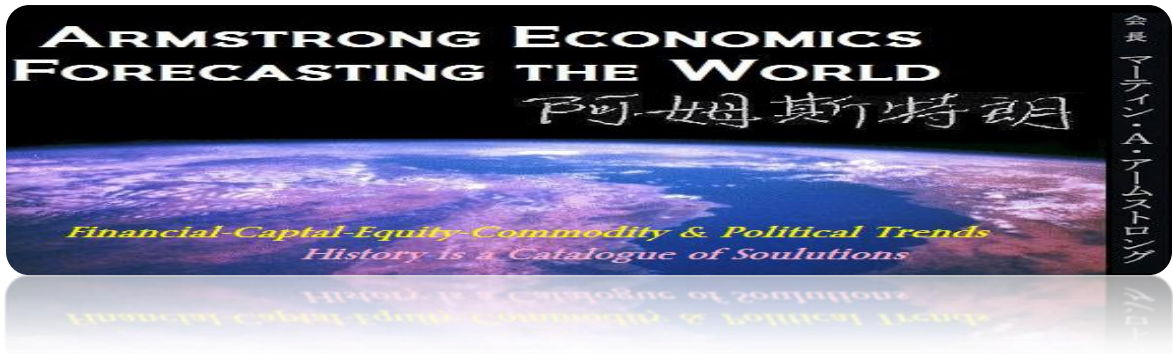
I have stood in the shadow of history in the making, and it was **Milton Friedman** who was the first to propose a floating exchange rate system in 1953 that became reality by 1971 as an emergency step in trade negotiations. **Milton** saw this as the ultimate freedom of capital to vote regarding the political fortune of every nation. It has been government that set out to sterilize its actions trying to have their cake and eat it to. While the floating exchange rate system allowed capital the freedom to move, politicians have chosen to try to manipulate the consequences of their actions rather than restrain their power. Thus, capital can leave in economic times of crisis or people can hoard their wealth refusing to invest or lend money. But the wage earner is incapable of either hoarding his/her labor or exporting it alone overseas. But it is not capital that is to blame as government engages in their own **Ad hominem** attacks, but the failure of coherent government policies. We can prosecute and hunt down capital that has migrated and erect a wall to prevent its migration. But to follow such paths will only destroy what little is left of our once proud free society.

It was **Milton** who encouraged me to write and to bring the understanding I had gained from a unique global experience to the world. **Milton**, above all others, recognized currency for what it was – another commodity. This accumulative experience I have gained may be unique for I was chosen by events and molded into who I became by my clients on every continent. This has been a long journey of learning for I have seen things that domestic analysts do not even consider. Thus, I am indebted to **Milton** far more than most would ever realize. For it was **Milton** who encouraged me to share what I had learned with the world in hopes that one day, it would reshape it much as **Milton** had tried to do himself.

We live in a **NEW DYNAMIC GLOBAL ECONOMY** where capital rushes around fleeing political changes and taxes just as it is attracted by prosperity and opportunity. All the people who migrated to the United States in the 19th and 20th Centuries came for reasons of economic and religious freedom. Today, that temple of freedom has been pillaged. The respect for the liberty of individuals has been displaced by suspicion that everyone is a potential terrorist. The days of the local police being guardians has been replaced by those whose job has become to ticket everyone being transformed into tax-collectors and the respect for the individual has been exiled by the macho presumption of guilt where the once friendly neighborhood policeman has been supplanted by a swat team. The contest between the eternal optimist and the pessimist/realist remains unending. Like the story of how both stood on the once lofty roof of the World Trade Center in New York and were suddenly blown off the roof by a gust of wind, the pessimist, immediately saw his fate and began to pray. The optimist, on the other hand, could be heard saying "**Well so far so good!**" as he passed the 4th floor.

I must also thank my many readers over the decades who saw the same goal, and like Noah's Ark, assisted in gathering data on everything that moved to bring together what was perhaps the greatest library of economic-financial data in modern history. I truly learned from the discoveries of our global **Artificial Intelligence Computer Model** even though I was its author. By teaching it the method of analysis rather than hard-wiring inflexible rules governing relations between markets and economies, it explored the world with the rare quality of a child, unbiased allowing the discoveries to manifest for the first time. And I am deeply encouraged and amazed how the readership of these report has now grown to 34 million worldwide.





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By: Martin A. Armstrong  
former Chairman of Princeton Economics International, Ltd.

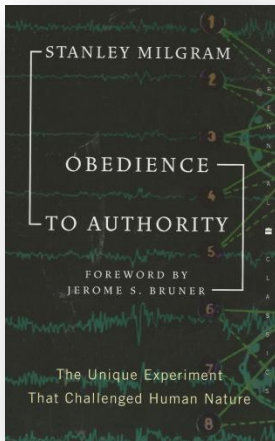
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**ELL THE WORLD DID NOT END ON MAY 21<sup>ST</sup>, BUT WE MAY NOT BE OUT OF THE WOODS JUST YET.**

Of course, whatever secrets the Bible may have, it has no intention of yielding them up for showmanship. The Rise and Fall of Empires, Nations & City States, has little to do with religion for it tends to be driven by atheistic sentiments that could care less about the moral obligations to society. Government is historically only about maintaining power even when it claims to be doing so in the name of some god. This is true historically just as it remains true about places like Iran and Afghanistan today. Government employees are always

dangerous to society because of their mindless actions. The **NUMBER ONE** excuse at the Nuremberg Trials of Nazi soldiers was they were **ONLY FOLLOWING ORDERS!** The dark side of humanity is its uncivilized barbarism. Try to deal with government; any government! What you will quickly discover is an inflexible mindless entity inhuman in every aspect, yet capable of such evil in the absence of any independent thought or compromising reason. You will encounter stupid rules that defy common sense and mindless drones who even now claim they are just following orders..



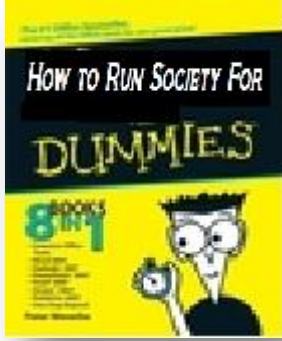
There were shocking experiments conducted by **Stanley Milgram** that demonstrated normal people would inflict excruciating pain upon subjects justifying themselves based upon this premise that some authority has instructed them to do so. This has become known as **OBEDIENCE TO AUTHORITY**. Petty government officers will carry out those rules because they were ordered to do so. This general hard-wired tendency to simply follow government orders was not merely responsible for killing millions of Jews in Germany, but between 20 and 40 million in Russia under Stalin and it is this same response that produced the Lost Decade in Japan. Newspapers report whatever the government says about anyone without independent thinking. All of this is the same collective response the same way people believe government statistics until it is too late.

Yes, we are supposed to be free thinking individuals. But that is a bunch of crap. The vast majority of the government workers will simply repeat their mantra without any free thinking whatsoever. Take the **Patriot Act**. They told all Americans they had to surrender their fundamental rights to a free society because of a 100 guys with a camel. That justified the surrender of all rights of over 300 million? People accept blindly whatever the government says and this contributes tremendously toward the collective business cycle. We are NOT the free will or spirit many believe. We will panic and create a great crash without understanding why we take such actions, based solely upon the fact that everyone else around us is doing the same.

Look at a flock of birds feeding in a field. If you start to walk toward them, a few birds will see you as a threat and take to the sky. The whole flock will panic and follow even if you stop dead in your tracks and do nothing at all. The birds act like a collective single mind composed of individuals. They need not have seen the threat themselves. The mere fact that some birds saw you as a threat and fled was good enough to scare the entire flock.

This is the essence of a panic. Selling begins for whatever reason. The press will try to attribute to it a single cause and effect. But the truth will be nothing of the sort. During the investigation of the 1987 Crash, there was no domestic reason for the crash. The dollar had declined thanks to the manipulations by the central banks under the **Plaza Accord** (G5/now G20). Foreign investors began to sell because they believed the dollar would fall another 40% and since US assets were not expected to rise by 40%, foreign investors began to dump US shares. This started a sell-off and then panic developed because of the **LACK OF EXPLANATION**. People sold because the Dow fell 500 points and nobody knew why. The prudent fund manager has to then sell because he cannot make a decision to hold for there is no foundation. Like the birds in the field, some took flight and it is assumed there must have been some threat, so the majority panic and take flight no different than the flock of birds. It appears to be a hard-wired event.





Yes we face the **End Times**, but this is in an economic sense, not in a Biblical sense. Because mankind refuses to look upon history as a guide-book upon what to do or not to do, we seem to be doomed forever to move through these booms and busts creating the cyclical aspect of society. Our future may not hold such lofty dreams of traveling to other planets populating the universe as in a Sci-Fi film. Instead, we are in serious danger of embarking upon another **Dark Age – the End of Times**. Why do I say such a thing? Isn't this as nuts as the radical fringe who perpetually call for the end of the world? It is not the end of times as in a biblical sense. Nor is this the end of times as it was for the dinosaurs. Rather, it is the **END OF TIMES** insofar as society and just as all credit collapsed with the fall of Rome, we are in danger of

experiencing the same fate. The United States, Europe, and most Western Nations are at the mercy of their creditors. If they ever panic and want to cash out, all will be lost in the blink of an eye. We are far more vulnerable than most will suspect and someone has to write that book on **How To Run Society For Dummies** or we are doomed. Personally, I am just so tired of the abuse and the betrayal by my own government to protect the corruption in organized manipulations of markets that led to the collapse of mortgages 2007-2009, I wish I could just go to sleep and wake up when it's over. Nobody thinks what if credit implodes. It gives me no pleasure to stare into history and see our fate. Those trying to keep power are tearing down our way of life in pursuit of that riskless trade. They are destroying society and nobody will listen for they are making too damn much money.

## **IT IS THE UNTRAINED EYE THAT SEES THE WORLD WITHOUT BIAS**

There is a reason why it is usually the first in each field who discovers the fundamental principles that define that field. This was true about **Adam Smith** as well as **Sir Isaac Newton** and **Christiaan Huygens**, just to mention a few. This is true because one is like a new born child who is exploring the world and yet does not understand language. Their eyes are wide open and they explore the world for the first time. The first in each field explores without beginning with presumptions and that is the key for they are just ASKING QUESTIONS rather than trying to proceed from predetermined concepts. When I began, I was just a teenager in the 1960s. The gold standard was cracking. Silver rose in value to the point it had to be removed from the coinage after 1964. The two tier gold market began in 1968 where London gold began to trade and there was the official price among nations and the free European market.

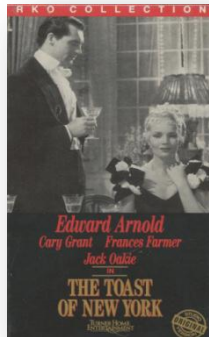
The gold window was closed by the United States in 1971 on a temporary basis. That began the floating exchange rate system. Since this was a temporary action emerging from a trade dispute rather than a designed monetary system, there was no hearing with experts. A floating exchange rate system had not existed since the Civil War in the United States and thus it was a brand new field that was born without predetermined rules or presumptions.

Consequently, I was exploring the world without rules or bias in the most non-traditional manner – pure observation. My discovery of a global business cycle during the early 1970's was by no means intentional. As a youth growing up in the 1960's, the atmosphere was anything but stable. I don't really



know if it was Hollywood that captivated my interest in history with an endless series of movies about Roman and Greek history, but whatever it was that drove me, I can only attest to what resulted.

My father had always wanted to return to Europe after serving as a colonel under **General Patton** during the war moving from North Africa to Berlin. My mother insisted that she would go to Europe only when he could afford to take the whole family. That day finally came and something inside me insisted upon being able to earn my own spending money. I applied for a job despite my age of only 14. It wasn't much, but on weekends I worked with a coin/bullion dealer. In those days, gold was illegal to buy or sell in bullion form so the industry centered on gold coins issued by Mexico, Hungary and Austria known as restrikes with old dates. I soon became familiar with the financial markets as they were starting to emerge. It was this experience that began to conflict with the formal training in school.



One day in a history class, the teacher brought in an old black and white film entitled "**Toast of New York**." This film was about **Jim Fisk** and his attempt to corner the gold market in 1869 that created a major financial panic in which the term "**Black Friday**" was first coined. In the film was a very young actor named **Cary Grant** who stood by the ticker tape machine reading off the latest gold prices. He read the tape and exclaimed that gold had just reached \$162 an ounce! I knew from my job that gold was currently selling for \$35. At first I thought that the price quote of \$162 in the movie must be wrong. After all, Hollywood wasn't known for truthfulness. Nonetheless, I was compelled to go to the library to check the newspapers of 1869 for myself. This first step in research left me stunned - the New York Times verified \$162 was correct!

For the first time in my life, I was faced with a paradox that seemed to conflict with traditional concepts. How could gold be \$162 in 1869 and yet be worth only \$35 in the 1960's? Surely, inflation was supposed to be linear. If a dollar was a lot of money in 1869, this meant that adjusted for inflation gold must have been the equivalent of several thousand dollars. If value was not linear, then was anything linear?

Matters only got worse in school. My physics teacher told me nothing was random. The economics professor said everything was random. Obviously someone was wrong! I began exploring the field of economics on my own and reading the various debates over the existence of a business cycle. I did not come across Kondratieff who was at best obscure at the time despite his interesting vision of great waves of economic activity. I was aware of Wave Theory in light and sound as well as in electricity AC v DC, and of course wave action at the beach. There was general talk about the business cycle, but the idea that it was regular and predictable did not exist. Still, there were those who believed in business cycles from the Austrian School of economics. However, such oscillations were purely random according to the general American consensus. Over the years that followed, this nagging question still bothered me. I had poured my heart and soul into history, quickly learning that all civilizations rose and fell and there seemed to be no exception.

## **I WAS NOT ALONE**

I am by no means unique in my observations of history. Many have peered into the eyes of history and come away with a deep sense of a cyclical repetitive nature. Most everyone agrees that there is a business cycle. Paul A. Volcker, former Chairman of the Federal Reserve, wrote a book entitled

**Rediscovering the Business Cycle** published in 1978, in which he argued that the cycle was about 8 years in duration. It was **Niccolò di Bernardo dei Machiavelli** (1469–1527) who concluded after his observation of history that the reason there is a cycle whereby history repeats, is because there is a common denominator. It is man himself that causes history to repeat because the **Passions of Man Never Change**. **Karl Marx** (1818-1883) looked into the eyes of history trying to ascertain the cause of the rise and fall of nations and saw a perpetual conflict between the rich and the poor, ignoring the contributions of innovation by individuals. He saw everything through only the eyes of wealth rather than power, which would prove to be the fatal flaw to his investigation of history.

**Marx** also became fixated with the concept of value of a commodity or a manufactured product. He saw that nothing would have value except for labor, even if it required picking berries. This idea had emerged in France by the physician to the King, **François Quesnay** (1694–1774) who became a French economist founding the **Physiocratic** school. He is known for publishing the "**Tableau économique**" (**Economic Table**) in 1758, which was the first thesis to attempt to describe the workings of the economy in an analytical manner post-Dark Age. This theory effectively also inspired imperialism for it grew out of the age of feudalism where people contracted to be farmers and worked the land in return for a percentage of the crop and a house to live in. Therefore, the **Physiocrats** believed that **ONLY** agriculture produced real wealth. A blacksmith would shoe a horse, mend a wagon, and perhaps even create the plough. This was seen as a parasite living off of the product produced by the farmer. This was the seed from which **Marx** would see that labor was true wealth, but perhaps he did not articulate the origin of his ideas.

Still, many have stared straight into the eyes of the past hoping to catch a glimpse of the seeds of destruction. **Oswald Spengler** (1880-1936), was one of those who dared to stare history in the eye. He wrote his work **Untergang des Abendlandes** (1918-1922) and thus his **The Decline of the West** (1926-1928) that was published in two volumes. **Spengler** perhaps more than anyone else, approached this subject in a very unbiased manner. He engaged in a general observation of history seeking to answer the riddle why there was a rise and fall behind nations and empires.



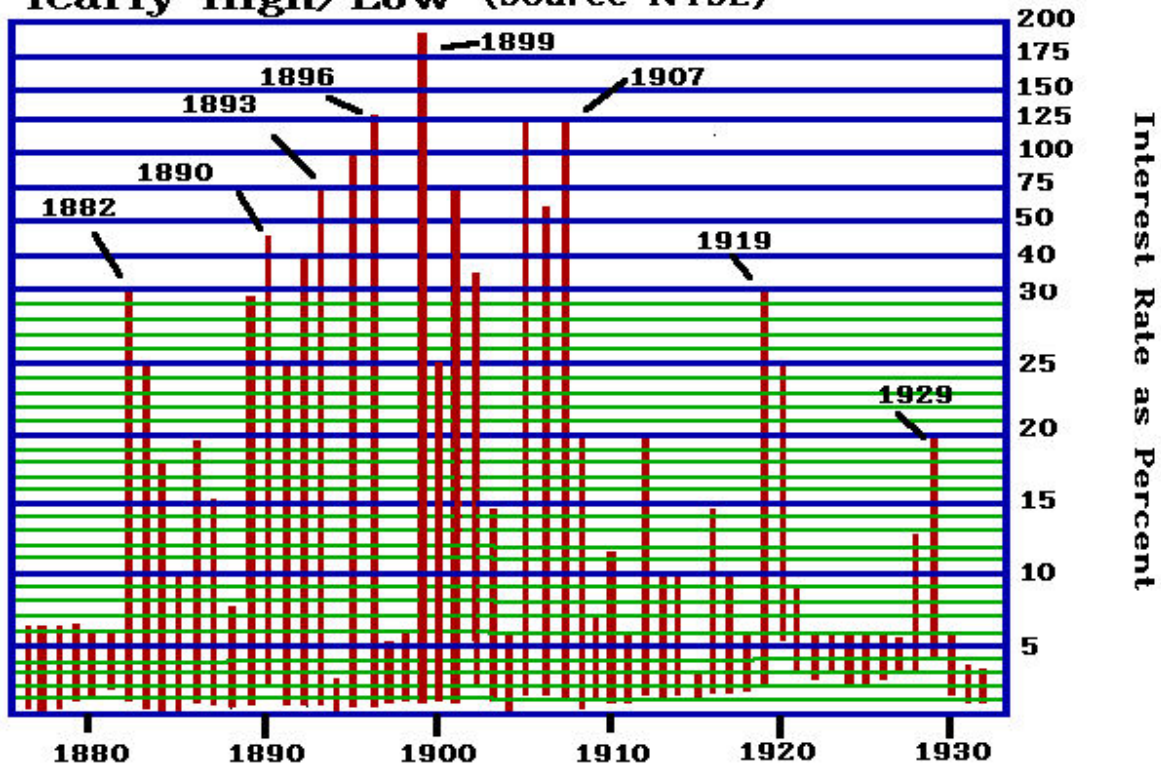
"The Decline of the West"  
Oswald Spengler (1880-1936)

**Spengler's** approach was to develop a pattern of phases through which society progressed, grew, reached its zenith, and then collapsed and died. It appears that **Spengler** reached this approach after years of study. It was not predetermined. What he saw looking into the eyes of the past, was emerging patterns. **Spengler** thus concluded that all civilizations progressed through a transitional phase in its life cycle that was universal no matter what the culture.

**Der Untergang** is a study of the philosophy of history itself. **Spengler** reached his conclusion that all civilizations pass through a life cycle that requires the historian to reconstruct that past but he can in fact then predict the future by observing the cyclical nature and patterns of development. **Spengler** then concluded that the phases within civilization included the "**spiritual forms, duration, rhythm, meaning and product of the still unaccomplished stages of our Western history**" that he viewed as an evolutionary process.

## US Call Money Rates 1876-1932

Yearly High/Low (Source NYSE)



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**Spengler** believed that the "West" had in fact already passed through what he defined as the "**creative**" stage of culture and was moving into the next stage of reflection and material comfort that was the beginning of the irreversible decline and fall. From that perspective, **Spengler** was correct. The zenith of our European culture peaked just prior to World War I. The United States had been bankrupt in 1896 requiring a bailout no different than Greece. **J.P. Morgan** (1837-1913) became famous for putting together a consortium of banks to lend to US Treasury gold. Much of that came from London, which was the **Financial Capital of the Western World**. This US credit crisis was reflected in the historical high in US interest rates that took place in 1899.

By 1929, the United States was now held the largest gold reserve in the world among nations. Britain lost its status as the **Financial Capital of the Western World** and with that, the commonwealth began to break apart. Clearly, **Spengler** was correct in his analysis of history that Europe had in fact peaked just before World War I. Hence, the title of his book, *The Decline of the West* captured his cyclical analysis of world history and by reviewing the stages and patterns of how a civilization grows and matures; he was able to then see a pattern of repeating phases that applied to all civilizations.

**Arnold Toynbee** (1889-1975) also looked into the eyes of history seeking to ascertain the answer to the same riddle. *Why do countries, nations, empires and civilizations rise and fall?* **Toynbee** viewed that civilizations and cultures were usually "apparented" to older cultures. In 1922, **Toynbee** observed that

Bulgarian peasants were wearing fox-skin caps that were the same as described by the troops of **Xerxes** (519-465BC) the Persian king of Babylon who invaded Greece. These caps were described in ancient time by **Herodotus** (430-420BC). **Toynbee** thus observed the same type of cap was still in use in Bulgaria. This led him to see history through the eyes of shared cultures, but this stood in contrast with **Spengler** who tended to see that the spirit of culture can never be transferred to another culture.

I believe that there is a great distinction between shared technology and actual culture embodied within a particular society. As technological advancement appears in one culture, through trade, communication spreads that technology as a contagion to others. Thus, within a matter of years, the invention of state issued money spreads throughout the whole region. This does not alter civilization of each community nor their culture. Nevertheless, this is more evidence of contagion that can be for the purpose of advancing society and civilization, just as it can be to destroy it in the Blink of an Eye.

**Toynbee** studied the rise and fall of 26 civilizations throughout the course of human history. He also reached a conclusion that there were stages and patterns. **Toynbee** concluded that civilizations rose by responding successfully to challenges under leadership that was supplied by creative and dynamic minorities composed of elite leaders. He postulated that civilizations declined when their leadership became unresponsive creatively as we have reached today. Civilizations would then simply begin to fall apart sinking due to the sins of nationalism, militarism, and the tyranny of a despotic minority (petty government employees). Effectively, what **Toynbee** had described was the phase of corruption that leads to the breakdown of the **Rule of Law** that is essential to maintaining civilization. Once justice gives way to despotism, then surely the end is near for the entire purpose of coming together has now just vanished. Society cannot survive without defined rules of law that defend the rights of the people and secure the impartiality and equal protection of the law. Once that gives way, it is simply all over.



**Arnold Toynbee (1889-1975)**

Yet **Toynbee** differed from **Spengler** insofar as he did not regard death of a civilization as being inevitable. **Toynbee** believed that civilization may or may not continue to respond to successive challenges. **Toynbee** also differed from **Marx** in that he saw civilization shaped by spiritual influences rather than greed that was the view of **Marx** who saw capitalism as doomed and an emerging state of communism. **Toynbee** was greatly influenced by his own religious zeal. While religion had a component factor in directing conduct within a given civilization, it was certainly not the driving force that caused it to emerge in the first place. For example, even **Edward Gibbon** in exploring in the decline and fall of Rome, placed far too much weight upon religion provided economic incentives for those in power to act in a certain manner based upon the religious wars in England that highly influenced his work. In this respect, I believe that **Spengler** provides a less biased approach to the understanding the rise and fall of nations than **Gibbon** or **Toynbee**.

Some have gazed into the history of man and seen the mechanism that propels progress over the centuries. Yet to do this motion, it requires two opposing forces at a minimum just as there are longs & shorts in markets. **George Wilhelm Friedrich Hegel** (1770-1831) looked into the past and came away with that realization of dynamic forces. Generally, his philosophy has been reduced to a dictum that "***the rational alone is real,***" which means that all reality is capable of being expressed within a system of transcendental idealism. This is what is commonly referred to as Hegelianism that has emerged from his writings including "***Phenomenology of Spirit***" (1807), "***Logic***" (1816), "***Encyclopedia***" (1817), and his ***Philosophy of History*** in 1820.



**George Wilhelm Friedrich  
Hegel (1770-1831)**

**Hegel** developed what is known as his **Dialectical Scheme** whereby the progress of history and thinking of mankind emerge from thesis to antithesis and hence this merges into a higher and richer synthesis. To some extent, **Marx** relied upon **Hegel** as well to assume that the system could emerge into a hybrid he argued would be a new state of communism. **Hegel** indeed applied his **Dialectical Scheme** in detail to religion, politics, logic, aesthetics, history and ethics. Yet **Hegel** had taken the position that all previous philosophical speculation had failed to give any clear view of reality, since lacked this insight that reality could only be understood as a totality that he referred to as "***the truth is the whole.***" **Hegel** thus took the position that any attempt to understand the apparently unconnected and individual phenomena of nature, history, and the development of human life and society through any sort of separate categories of thought is utterly mistaken. While I would disagree with this position, there is some truth to it insofar as there is a ***collective adaptive system*** that creates the whole. Therefore, we are capable of group behavior, but we are also capable of individual behavior. Thus, there are always two opposing forces that coexist at all times. **Hegel's** views may make sense at the macro level, but are still a simplification of reality. There is a deeper complexity that exists and not all systems will merge into a higher synthesis. In many respects, the system at the macro level will remain in a state of swinging back and forth between these two opposing forces and there will never be a synthesis that allows a new compromised state to emerge.

A common example of **Hegel's Dialectical Scheme** is the subject of **Liberty**. A savage has complete liberty insofar as he can do as he likes, provided he is also just a nomad. He comes to surrender part of the liberty in return for its opposite, to live in a collective society under rules. The synthesis emerges insofar as the savage now has greater liberty in a collective society. While this example may in fact confuse evolution of society at one level, it does not deal with how that collective state then collapses or why. **Hegel**, in my view, correctly saw the swing between opposites, but there is **NO** permanent state of synthesis at the macro level. What is possible on the individual micro level is strikingly different for we have free will and reason. Once we act collectively, we devolve into a mob state of mind that is not always rational and logical. We are capable of getting caught up in the moment. We retain, however,



**Karl Marx (1818 - 1883)**

that personal free will and the ability to reason. Thus, we are individually capable of joining or leaving the mob. Ultimately, this is the source of the two opposing forces that always exist within a collective society.

When **Karl Marx** (1818-1883) looked into the eyes of history, he saw only a battle between the rich and the poor. He believed that labor was the only true wealth and that capital in no way created wealth. He effectively reduced the entire social structure by dehumanizing civilization. His **Communist Manifesto** included a 10-point plan that he decreed would create "**despotic inroads into the rights of property.**" The socialist policies of the United States and Europe still followed **Marx**, but only relented to the simple

extent that it allowed private ownership of property, just that the state would heavily tax such property and still regulate it to restrict its use in every possible way that might displease the state. Thus, the central thesis of his **Manifesto** was:

- (1) Seizure of all property for the benefit of public purposes,*
- (2) Progressive income tax to even the playing-field,*
- (3) Abolish the right to inherit property of any kind,*
- (4) Nationalization of all banks,*
- (5) Confiscate all property of rebels and illegal aliens or emigrants,*
- (6) Nationalization of all industry and production of any kind,*
- (7) Nationalization of the press and all transportation,*
- (8) All people have an obligation to work,*
- (9) Redistribute the population to end the distinction between country and towns, and*
- (10) Establish public schools abolishing child labor.*

There is not much that the so called "free" societies did not adopt at least in spirit. Income taxes became **progressive** to the point that they reached 90% in the United States during the 1960s. Many nations nationalized industry and most public transportation is quasi-governmental. Inheritance taxes reached so high that this forced small farmers to sell their land just to pay taxes furthering collective big corporate farms. Of course, the hatred of aliens is still with us, and public schools have led to widespread union costs that drive up property taxes forcing people to sell their homes and relocate since they are unable to retire in the homes that they raised their children.

**Marx** saw the cyclical trends within history and misconstrued what caused them and then tried to destroy them and the patient along with it. **Marx** advocated that the state become the owner of all property, but what he failed to see, was the very rich he hated so much, were in fact those who controlled the state directly or by oligarchy. **Marx** thus sought to dictate to the economy, not understand its nature. **Marx's** version of economic was thus **Fiat Economics** - absolute dictatorial power.

**Marx**, nonetheless, was certainly not alone in this style of *Fiat Economics*. The earliest record of a communistic state was Sparta who despised the arts of Athens and material wealth creating a world of where the state dominates over personal freedom. Sparta was founded in the 9th Century BC and its political system was that of a rigid oligarchic constitution. This system was maintained for centuries where two kings would be co-rulers and arbitrated in time of war. During peace, there was a Senate composed of 30 members. Especially from the 5th Century onward, Sparta was devoted to war, diplomacy, and power. It deliberately rejected philosophy, arts, and literature. Its military mentality and devotion to the state produced the most formidable army in ancient Greece. Its communistic life-style precluded any real incorporation with classical Greece. While Sparta defended Greece at the time of the Persian invasion with the famous 300 who held-off the entire Persian Army at the **Battle of Thermopylae** in 480BC, the Athenian naval victory at Salamis revealed a rival in Sparta's eyes. After the Persians were defeated, eventually the Peloponnesian War in which Sparta defeated Athens in 404BC.

Sparta then over-extended itself and eventually antagonized Rome that led to the conquest of Greece in 146BC.



Thomas More (1477-1535)

The socialists, who have embraced **Marx** without acknowledging where their ideas come from, have never read **Marx**. If they did, they would see the hatred that pours out. Yet **Marx** was also inspired by Sir **Thomas More** (1477- 1535) who wrote what became known as the "*golden little book*" he entitled "*Utopia*" taken from the Greek "*ou-topos*" meaning "*no place*" that was a pun on "*eu-topos*" meaning in Greek a good place. More created a world that did not exist. It was a pagan communist city-state where the policies of the state were all based upon reason.

**More's "Utopia"** was a response to his observations in Christian Europe that was divided into states that were all bent upon self-interest and greed for both power and wealth he described in book I. **More** wrote this as a novel, but he

concluded that the solution was to create a communistic state in which the sins of unbound egotism consumed life would be checked. **Marx** was influenced no doubt also by **More**.

**Marx** viewed capitalism as "*Childish babble*" and while peering into the annals of recorded history he only saw "boundless greed" and forecast that capitalism would collapse and there would be a perfect state of socialism. In this very view, while acknowledging the existence of a cycle, he presumed the power to stop it. Unfortunately, today most economic teaching prefer **Marx**, not for what he proposed, but the fact he proposed that economics can reshape society at the will of government In this respect, **Marx** still failed because **YOU CANNOT ALTER HUMAN NATURE**. It would be like trying to pass a law against pre-marital sex – good luck! Many of the original Puritan states in USA (New England) still have criminal laws on their books that are no longer enforced against adultery.

## PURSUING CYCLES

While I was unaware of economic cyclical theory as a youth, that naivety was a blessing in disguise. Pursuing Cycles was an idea that I developed mostly on my own from the obvious problem of linear thinking in social science. My awareness of cycles was purely one from physics since in economics they insisted that there was no cycle and that the economy was entirely random lending itself to manipulation.

**Christiaan Huygens** (1629-1695) was a Dutch mathematician, astronomer, and a physicist. This is the man who has been lost to history, perhaps overshadowed by **Newton** and **Einstein**, yet whose work has had long lasting impact upon society to this very day. **Huygens** is not merely the man who founded Wave Theory of light, but he discovered the true shape of the rings of Saturn and made original contribution to the understanding of complexity or dynamics in science - the study of action by force upon bodies. His accomplishments do not end there. His keen interest to explore and understand with an unbiased mind's eye as an astronomer, led him to perfect a far superior telescope with a new method of grinding and polishing lenses. This not only allowed him to clearly see the rings of Saturn in 1659, but he had discovered Titan the moon of Saturn in March 1655 and was able to distinguish components of the Orion nebula in 1656. His genius did not end even there. He began to explore TIME ("**horo**") that led him to try to accurately measure it where it had been the "**horologe**" that was the primary tool – a sundial. This pursuit of the accurate measurement of time led him to the discovery of the pendulum as a regulator of time and reshaped the world we live in even to this day.



**Christiaan Huygens (1629-1695)**

**Huygens** was a man of many talents. He grew up during the day when everything was new and this led often to a dynamic view of the world. His father was a diplomat and friends were **Rene Descartes** (1596-1650). This led his father to introduce his son to **Descartes'** philosophy which he published in 1637 entitled "**Discourse on Method.**" **Descartes** set forth four rules for acquiring knowledge that would serve us well to follow today:

- (1) Accept nothing as true unless clearly recognized as such;
- (2) To solve problems systematically by analyzing them part by part;
- (3) To proceed from the simple (seed) to the complex; and
- (4) To review everything thoroughly to ensure that nothing is omitted.



**Huygens** was thus taught well at a very young age. This formed the foundation for his rejection of some of the work of Isaac **Newton** (1642-1727). **Huygens** also met **Blaise Pascal** (1623-1662) while living in Paris between 1666 and 1681. But his lifelong friend would be the German mathematician and philosopher **Gottfried Wilhelm Leibniz** (1646-1716). It was while he lived in Paris that he published in 1673 his *Horologium Oscillatorium*, which was a brilliant work that many relied upon, but history has ignored his credit. This was the first theory in mathematics of curvatures, and offered a complete solution in the spirit of **Descartes** methodology of dynamics as the derivation of the formula for **TIME** and its oscillation of the simple yet important pendulum - the oscillation of a body about a stationary axis. This was the birth of the laws of centrifugal force for uniform circular motion. **Huygens'** complete proofs were published after his death.

In 1689, **Huygens** visited London where he now met **Sir Isaac Newton** and he was invited to lecture at the Royal Society on his theory of gravity. Newton had published his Principia in 1687 and his life was filled with conflicts with others and **Huygens** was one of the casualties. **Huygens'** correspondence with **Leibniz** survived and it reveals that while he respected **Newton's** math, his theory of gravity he regarded a devoid of any mechanical proof in the spirit of **Descartes**, and this was simply unacceptable from **Huygens'** perspective.

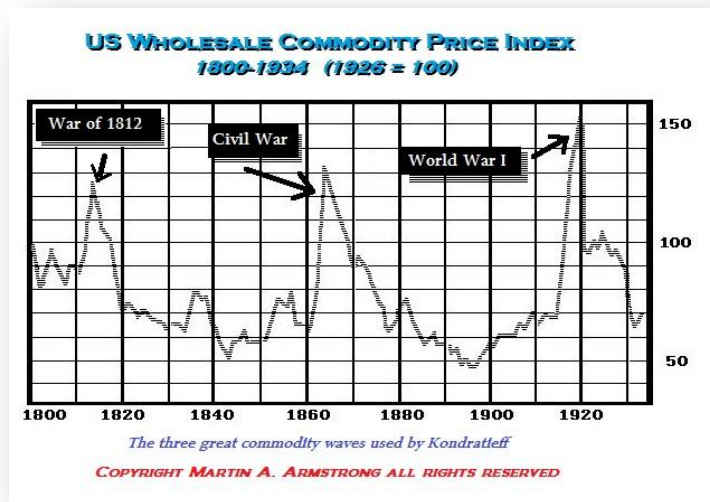
**Huygens'** work on gravity dated back to 1669. He was prompted to publish in 1690 his rebuttal in the *Discourse of the cause of Gravity*, with his mechanical proof built upon Cartesian vortices. He also was moved to then publish the same year in 1690, his *Treatise on Light* that he had completed back in 1678. So again we find his mechanical explanation of light that established **WAVE THEORY**, for it was his Principle in optics, which was the key source to this discovery. He explained that the points of light on a wave front may be thus regarded as new sources of wavelets that then expand in every direction at a rate depending on their velocities. This forms the principle for understanding various optical phenomena.

The surface tangent to the wavelets constitutes the new wave front and is called the envelope of the wavelets. When the medium through which the light passes is homogeneous allowing light to travel at a constant speed, a three-dimensional envelope of a point source will be spherical, otherwise it will be ellipsoidal. This explains everything from rainbows to crystals and the reflections of light that are enhanced by various cuts in a diamond. This was the discovery of cyclical behavior. What **Huygens** discovered was not just that light traveled in a wave formation, but this was how all energy travels right down to sound waves. If energy travels in a wave formation, we begin to see that everything has a cyclical beat from your heart right down to the boom and bust cycles within the collective social structure we call our economy. There are cycles in weather and there are four seasons in an overall climate.

**Nikolai Dmyitriyevich Kondratieff** (1892-1938) was a Russian economist. Following the 1917 Russian Revolution, **Kondratieff** was an economics professor who was called upon by the new government to create the first *Soviet Five-Year-Plan*. **Kondratieff** was thus given the opportunity to draw the economic plan for Russia based upon a blank slate. **Kondratieff** explored the past to gather empirical data upon which to construct the new economy. What he observed was the cyclical nature of society through its booms and busts, and that knowledge would later cost him his life.



**Nikolai Dmyitriyevkh  
Kondratieff (1892 - 1938)**



**Kondratieff** published in 1926 his conclusions after investigating history. He entitled his work, "Long Waves in Economic Life." **Kondratieff** discovered that there were progressive wave formations running the span of 50 to 60 years in length. He was reviewing the time span beginning with 1789 up to the date of his publication in 1926. He described three great waves with highs about 1820, 1864, and 1920. Of course, these also centered on wars that has produced inflation

since Roman days. However, we must also keep in mind that during this time period, the economy even in the United States was largely about 70% agrarian. Even by 1929, the United States was still about 40% agrarian. This naturally provided an undertone to his work.

Even without war, adding the maximum time frame of 60 years to 1920 brings us to 1980, the peak in OPEC oil and gold. **Kondratieff** effectively reached his conclusion that the economy was driven by cyclical activity and thus this was implicitly against **Hegel** and **Marx** insofar as that the new government would not be able to reach some perfect state of synthesis. For this reason, **Kondratieff's** work was seen as a criticism of **Stalin's** goals. He was arrested in July 1930 and accused of being a member of a non-existent "Peasants' Labour Party" and he was sent to prison for 8 years. **Stalin** wanted him dead and expressed that in a letter dated August 1930. When his 8 year sentence was complete, he was put on trial again with new charges during the "Great Purge" and sentenced to 10 years in prison.

However, upon sentencing September 17th, 1938, he was taken outside and then shot to death at the age of 46. **Kondratieff** died for his research as a political prisoner for his research was something that the government did its best to destroy and to prevent from influencing anyone.

**Kondratieff's** work was compelling and contributed greatly to the Austrian School of Economics that first began to develop the concept of a business cycle. While the general central principle of the Austrian Business Cycle Theory is concerned with a period of sustained low interest rates and excessive credit creation results in a volatile and unstable imbalance between saving and investment. Within this context, the theory supposes that the business cycle unfolds whereby low interest rates tend to stimulate borrowing from the banking sector and this then results in the expansion of the money supply that causes an unsustainable credit source boom that leads to a diminished opportunity for investment by competition. Therefore, at the top, this causes speculative misallocation of resources that manifests into a bubble-top. The decline unfolds as a "**credit-crunch**" creating the speculative bust and recession. This contraction in credit shrinks the money-supply complete the cycle to return to its prior state.

This theory is merely an observation of a single slice of the complex dynamic adaptive system that constitutes the economy. It is not correct for interest rates will rise during the bull cycle phase. There is no empirical evidence that supports the theory from a quantitative formulae perspective. In other words, the real true operation of interest rates is that people will continue to borrow even when rates rise depending upon their expectations of profits. It is not the simplistic direction of interest rates nor is it an easily defined sustained level of what is low or high. The problem is merely attempting to reduce the entire complex system to a single and simplistic cause and effect.

Nevertheless, **Kondratieff** had a huge impact upon exposing the existence of a business cycle. Today, we create economic statistics that are "**seasonally adjusted**" meaning the cyclical nature of the business activity is being smoothed. Perhaps the greatest proponent of **Kondratieff** was **Joseph Alois Schumpeter** (1883-1950) who wrote "**The Theory of Economic Development**" in 1911 followed by "**Business Cycles**" in 1939. **Schumpeter** followed this with a more controversial work, "**Capitalism, Socialism, an Democracy.**" in 1942 where he disputed **Marx** arguing that the attempt to redistribute income would destroy the business cycle eliminating the ability of innovation that is driven by entrepreneurs. **Schumpeter** sought to explain **Kondratieff** waves in terms of innovation that would lead to spurts of economic expansion. He did see that big business would also reduce entrepreneurs who are free to make the decisions to risk their capital. This was an observation that was correct insofar as you see startup companies being bought by big companies incapable to creating new technology. Yet, what **Schumpeter** saw in the eyes of history, was the driving cyclical nature behind civilization.



**Joseph Alois Schumpeter**  
**(1883-1950)**



**William Stanley Jevons**  
(1835-1882)

**William Stanley Jevons** (1835-1882) was another accidental economist. He was studying natural science at the University College in London. He left school in 1854 and took an exciting job as an assayer in Sydney, Australia, in time for the big gold rush. **Jevons** thus was exposed to the real world and this experience in the bullion field with wildly fluctuating prices, exposed him to trends that were not yet even talked about in moral philosophy since there was no course on Economics until **Marshall** in 1903 at Cambridge.

The gold discoveries in Australia in 1851 down in Victoria set off a gold rush coming following the California discoveries in 1849. This dramatically now increased the quantity of money creating an inflationary boom since gold was fixed, then prices rose in response to the increase in supply. This led to the Panic of 1857 that produced a global Contagion that caused Jevons to return to England in 1859.

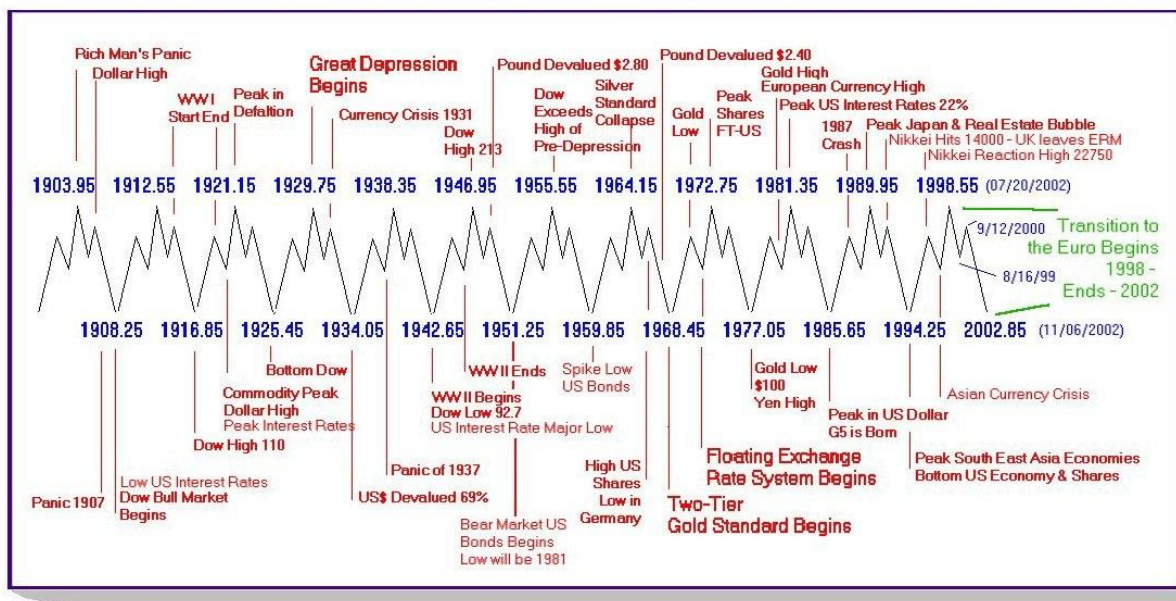
**Jevons** began to see the world economy in terms of a cycle with its rallies and the inevitable fall. He wrote his observations in 1862, the *General Mathematical Theory of Political Economy*, which he followed up the next year with *A Serious Fall In The Value of Gold*. It was Jevons who created indexes and mapped out inflation. This was the first quantitative analysis of money and prices.

Because **Jevons** was in the real world, he saw firsthand what was taking place. He caught a glimpse of cyclical behavior and that was much more akin to the catastrophic movements rather than the Uniformitarian views. A few years later, he wrote *The Coal Question* in 1865 in which he provided a forecast that the supplies of coal in England would decline and that prices would undergo a dramatic price rise.

**Jevons** became fascinated by the rise and fall of economies and markets. He witnessed firsthand the first real Global Contagion in 1857. He thus saw a world that was interconnected even back then. It was also a period of turmoil in science. The theory that light itself moved in waves (cyclical patterns) was first established by **Christiaan Huygens** (1629-1695), who was over-shadowed by **Sir Isaac Newton** (1642-1695). However, it was **Thomas Young** (1773-1829) who rescued **Huygens'** work and so by 1850, it was **Huygens** who was now accepted as being correct, not **Newton**. This created a vibrant world of inquiry regarding the sun and it is to Jevons that the theory of a possible link between the behaviors of man may be influenced by sun spots. **Jevons** was curious and explored this avenue is being perhaps a cause behind the human emotional movement in the economy.

What I mean by arguing that there is a *Collective Intelligence* is demonstrated not merely by movement in the economy and markets that become clear with hindsight, but that our knowledge base builds as well constructing it upon the shoulder of those who have gone before us, just as someone in the future will take this and build upon these words arriving at another understanding. This is how knowledge progresses.

# Princeton Economic Confidence Model



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## MY OWN INVESTIGATIONS

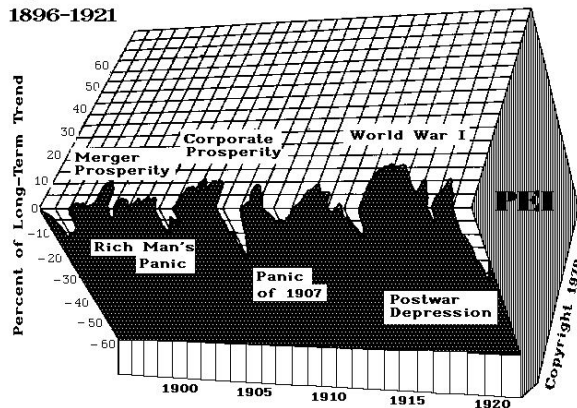
Before I was aware of anyone else's investigations, my stumbling around through history, which was truly a love, I had not yet become convinced that a business cycle was actually definable with regularity. It was obvious the economy was certainly not linear. Working in a bullion shop during the inflationary boom that peaked in 1966 was exposing me to the rise and fall of prices. It was not just the stock market that peaked in 1966, everything from real estate to collectibles. I recall going being told that if a customer wanted a rare coin, the price could be slashed even up to 50%. Some coins never reached those prices again until the early 1990s.

I had made good money speculating as a teenager. My father was very conservative and he was concerned for an ancestor had lost a fortune in the commodity crash out of 1919. My father convinced me to invest in mutual funds, and I ended up buying **Fidelity Trend** mutual funds at the peak and watched it crash to about 15 cents on the dollar. I asked my father if this *was the way conservative people made their money?* It convinced me that commodities seemed much more manageable compared to stocks. I was just 16 when I took this loss. But it was worth every dime it cost me. It opened my eyes further to the boom-bust cycle within investment. Some may try to pretend they are the greatest trader and are always right. They are merely someone who has not yet paid their dues. **Knowledge is furthered NOT by success, but by loss!** The truth is, success is celebrated and never reviewed. It is the excuse to pound the chest as if it were some primitive sparring match. A loss inspires investigation and in that human reaction we find knowledge.

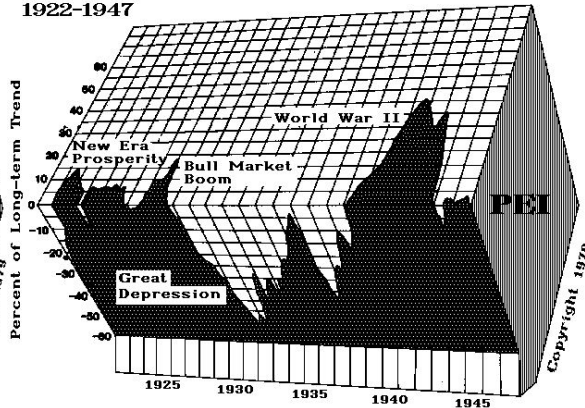


The 1966 Crash does not look that bad from the Dow Jones Industrials, but it was as devastating as 1929 from the Mutual Fund perspective. These funds were listed and as a result, they were being bid up and down based upon expectations, irrespective of asset values. The reform that emerged was to delist these funds and today they simply publish their asset values. As you can see, the market rallied into 1968 forming a near double top. This was on the back of the first crack in the gold standard where gold was to begin trading in London. The decline that you see into 1970 also saw gold fall on London to **BELOW** the official prices of \$35. Real estate also collapsed into 1970. Thus, I grew up during a wild period where it mattered not what market I looked at, there was the boom and bust cycle exposed for the viewing in every field.

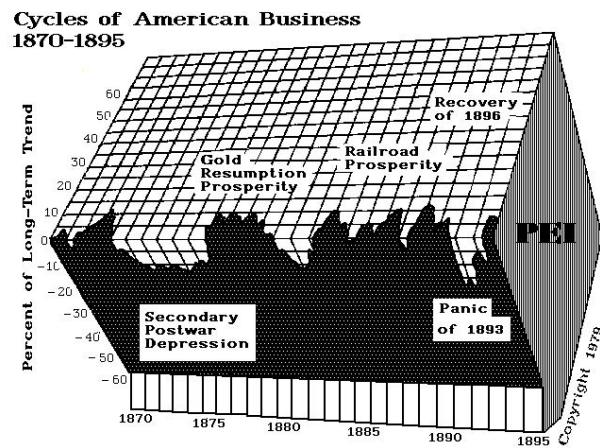
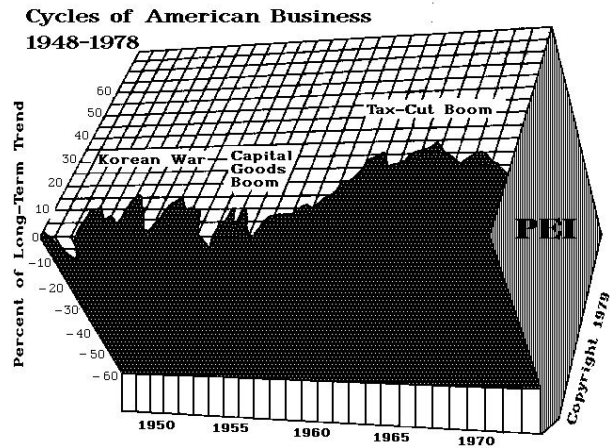
Cycles of American Business  
1896-1921



Cycles of American Business  
1922-1947

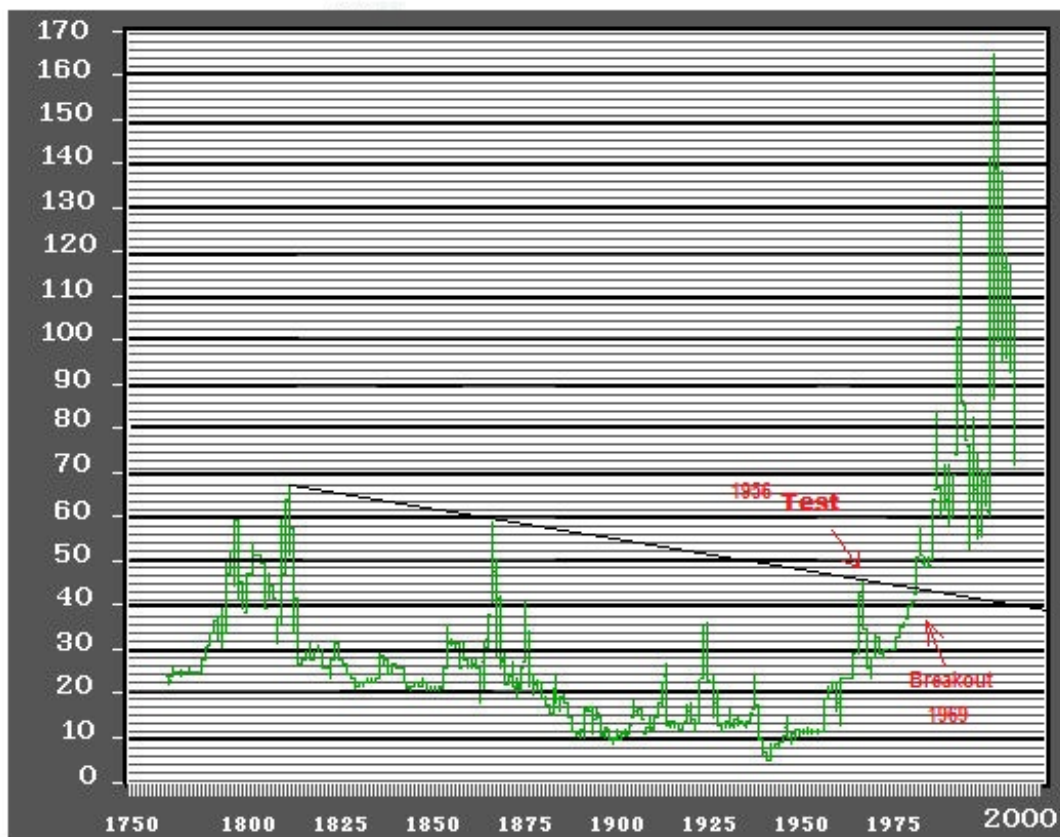


Cyclical or Wave theory was **NOT** even a subject for study in school. So I was unaware of people such as **Kondratieff** and his work. The theory of cycles that I was exposed to was from physics class with discussions about how light and sound travelled. Economics was being taught on the implicit theories of **Marx** without mentioning his name insofar as that it could be manipulated and controlled for the better good of mankind. This was also the message of **John Maynard Keynes**. There was some discussion about the booms and busts, but not from the standpoint of a regular cycle. That would defeat the premise that economists could put together a plan to create **More's Utopia**.



Obviously, one cannot look at the history of the economy in any time period without it becoming painfully obvious there is no straight line. Additionally, there are booms and busts where the high of a former event may not be exceeded even in nominal terms for decades. For example, while gold has exceeded in recent times its 1980 high of \$875, silver has not exceeded its former high in nominal terms of \$54. Therefore, the boom bust waves do **NOT** even progressively exceed the previous. Consequently, there is a broader non-linear aspect event to history of boom and bust events.

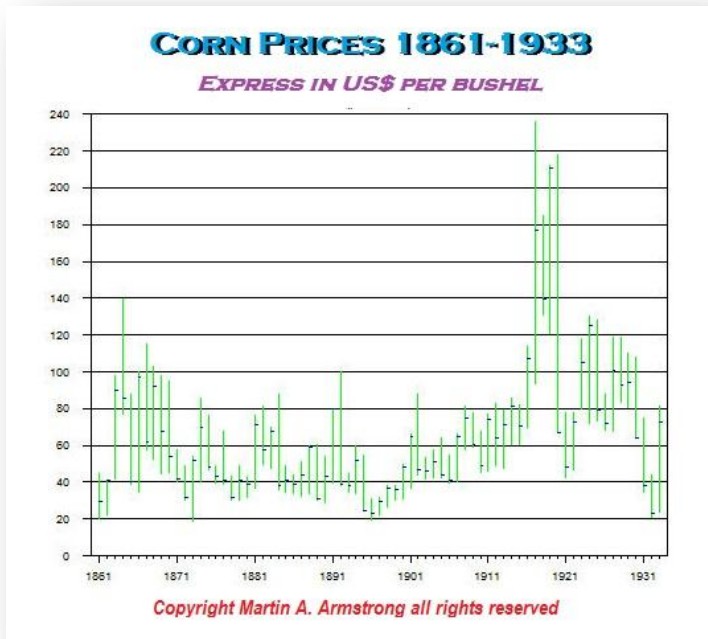
### CASH COPPER (1775 - 1993)



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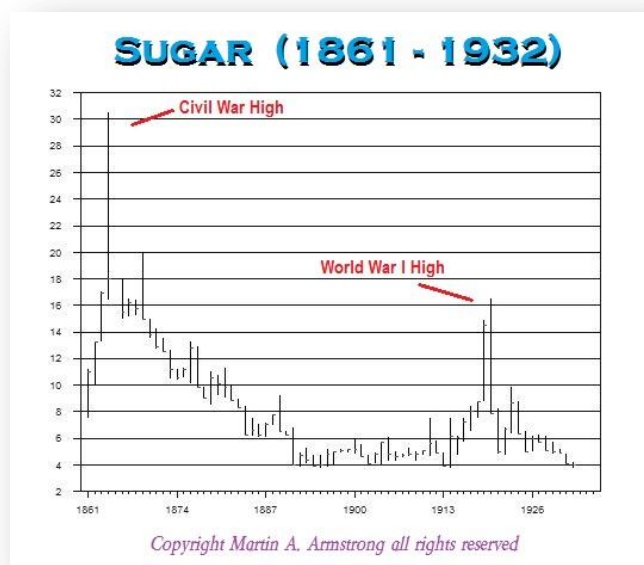
Looking at copper from 1775 to 1989 distinctly illustrates how there were booms and busts; however, there was a downward progression of these cyclical events that was progressively diminishing until the major low was reached in 1932. This helps to illustrate that there were other trend involved beside the stock market that clearly contributed to the Great Depression low in 1932.

We can see from this chart that while copper did rally out of its 1932 low, it retested the downtrend line from the early 1800s going into '60s, but it did not blast through this downward progression until the floating exchange rate system that began in 1971. It broke out after the 1968 beginning of the two-tier gold monetary system

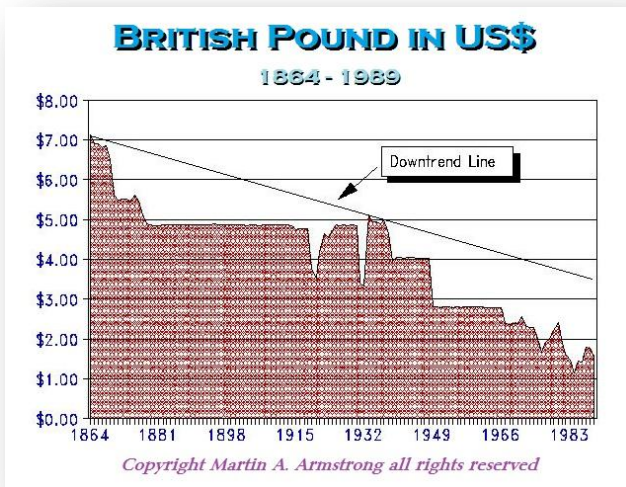


This observation was what had struck my interest. It was the confrontation of how could gold rally to \$162 during the **Panic of 1869**, yet be at \$35 in 1966? There was a much deeper complex world that could not be explained with a linear view of prices, or even cycles themselves. Each cycle will **NOT** produce higher highs or lower lows. The behavior was truly a complex and dynamic adaptive system. Here is a chart of Corn from 1861 to 1933. In contrast to copper, the agricultural markets rallied with the highest highs taking place in 1919. It was becoming important to understand that everything had its own cycle frequency.

Here is a chart of wheat from 1861 into the major Great Depression low of 1932. There is a lot going on within this chart for there were two major wars not to mention the US going virtually bankrupt in 1896 and then we have the US\$ rising during the **Monetary Crisis of 1931**. It is impossible to extract these external influences from the price movement of wheat. Any model construction, must correlate wheat to these factors in order to provide any hope at forecasting future price movement.

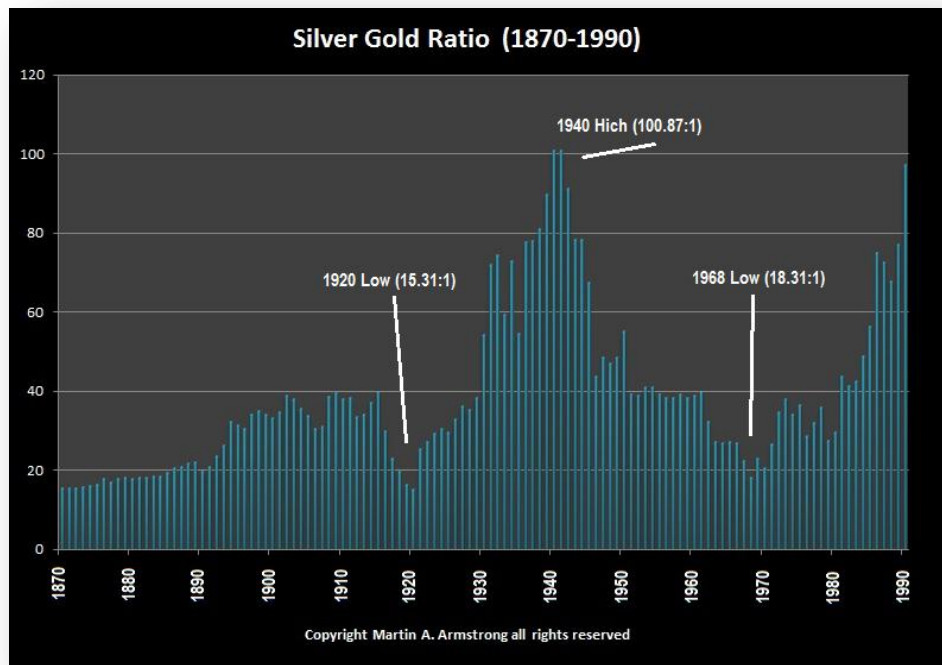






Currency has a great deal to do with price of any instrument. The trend of the underlying currency is significant for it reflects another dynamic aspect that is most often misunderstood. The British economy was the **Financial Capital of the Western World**. It lost that status officially after World War I. Yet the decline and fall of the British pound was underway from the American Civil War. This downtrend in the pound reflected the shift in investment from Europe to America. Thus, we must understand this event to comprehend US domestic trends in every instrument.

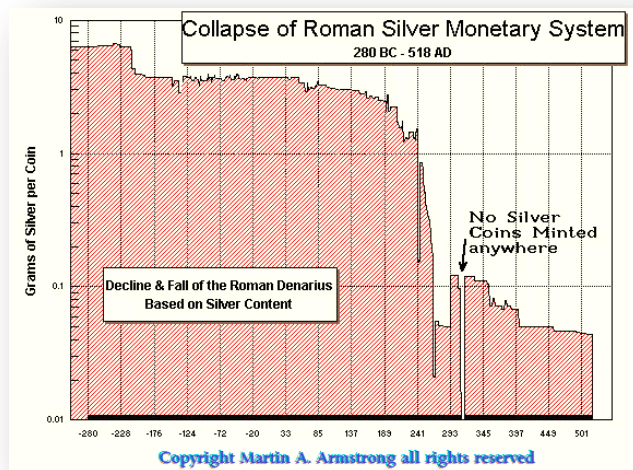
If we look at the more complex **Silver-Gold Ratio**, the modern average tends to be about 40:1. When gold is at \$1500, silver fair value would be \$37.50. The high on the ratio at about 100:1 took place during war for nickel was more important than silver. The US 5 cent was made of pure silver in WWII. Yet, this ratio has been as low as 9:1 in ancient times and hundreds to one during the Dark Age where there were no gold coins minted from about 750AD to 1252. There is a far more complex network of trends that manifest preventing isolated analysis.



As we can see, trying to comprehend the inner workings of the economy is more than interesting, it is highly complex. It requires massive amounts of data just to hope of achieving some degree of consistent success. Those in the field of economics, who prefer to see the world as merely random, do so to justify their ideas for creating Utopia. After all, if the business cycle could be defined, then perhaps man's intervention would not be successful. Clearly, there was a large degree of self-interest in discouraging any attempt to define the business cycle. It is a question of retaining power. I knew from my study of history that a non-professional German industrialist took

Homer and set out to disprove the academics who argued that Homer was merely a story for children. In the end, that untrained believer in Homer discovered Troy and just about every other famous Greek city that was not supposed to have existed beyond fable. Academia tends to resist change and often formed biased presumptions.

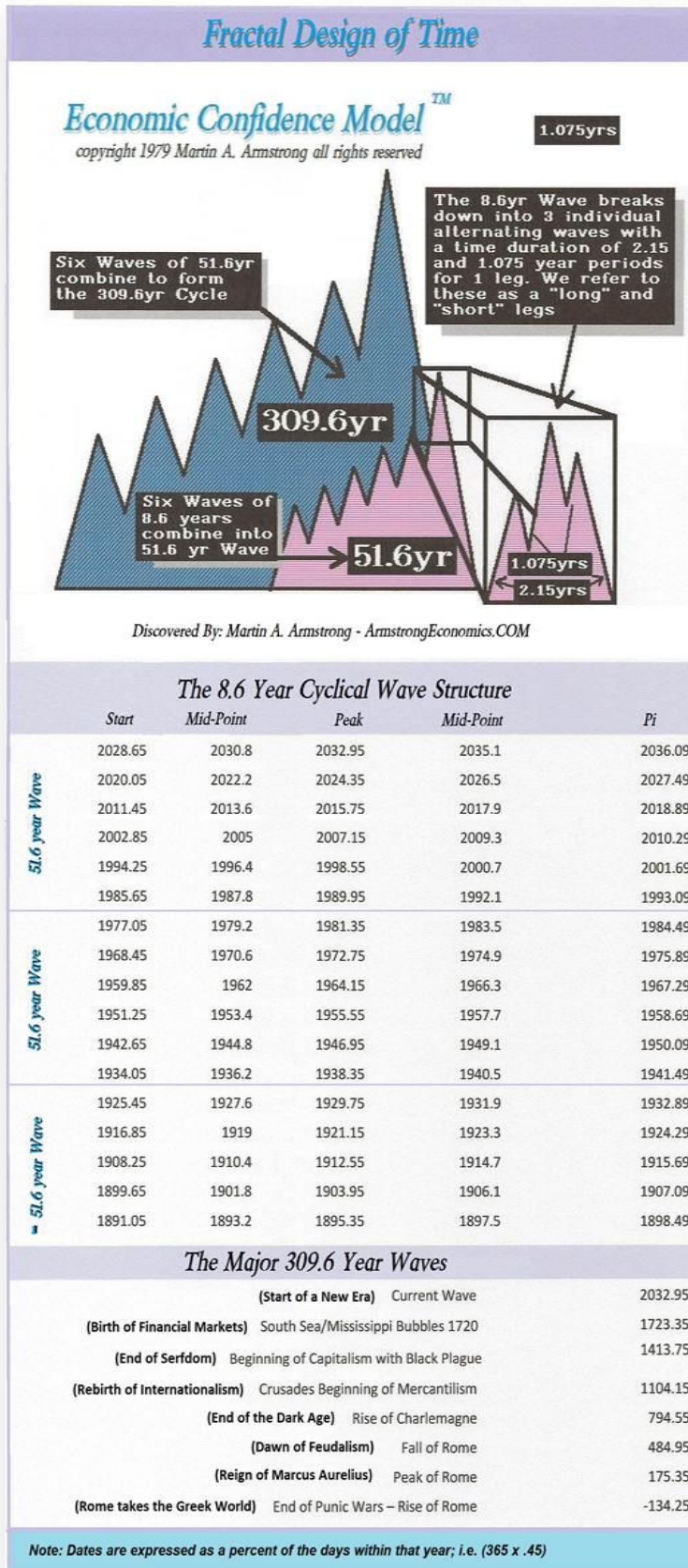
I didn't know how to go about such a quest to find if the business cycle was indeed definable. This was not even a goal I set out to do. I was influenced by these panics, not by the economic trends. Admittedly, I began with the very basic naive approach of simply adding up all the financial panics between 1683 and 1907 and dividing 224 years by the number of panics being 26 yielding 8.6 years. Well, this didn't seem to be very valid at first, I explored through history to see if there was a connection to the rise and fall of empire, nations, and city states. Therefore, by starting point was completely different than that of the 3 waves described by Kondratieff, who at this point I had never heard of.



Armed with a love of history, I could see Panics throughout the millennia. I knew that during the elections in Rome of 53BC, there had been so much bribery, that interest rates rose dramatically. I was familiar with the debasement of coinage in Lydia caused by the invasion of the Persians. I was even aware of the dramatic debasement of coinage in Athens caused by the **Peloponnesian War**, 431 to 404 BC, where the silver Athenian Owl had been reduced to bronze silver plated. The **Punic Wars** involving Rome and Carthage produced massive debasement as well.

There were clear patterns of the same dramatic financial panics caused by war in every century. I began to notice that this 8.6 year frequency was not precisely just economic, but encapsulated financial panics, which is the list from which I began.

# THE FRACTAL STRUCTURE OF TIME



**The 8.6 Year Cyclical Wave Structure**

	Start	Mid-Point	Peak	Mid-Point	Pi
51.6 year Wave	2028.65	2030.8	2032.95	2035.1	2036.09
	2020.05	2022.2	2024.35	2026.5	2027.49
	2011.45	2013.6	2015.75	2017.9	2018.89
	2002.85	2005	2007.15	2009.3	2010.29
	1994.25	1996.4	1998.55	2000.7	2001.69
	1985.65	1987.8	1989.95	1992.1	1993.09
51.6 year Wave	1977.05	1979.2	1981.35	1983.5	1984.49
	1968.45	1970.6	1972.75	1974.9	1975.89
	1959.85	1962	1964.15	1966.3	1967.29
	1951.25	1953.4	1955.55	1957.7	1958.69
	1942.65	1944.8	1946.95	1949.1	1950.09
	1934.05	1936.2	1938.35	1940.5	1941.49
= 51.6 year Wave	1925.45	1927.6	1929.75	1931.9	1932.89
	1916.85	1919	1921.15	1923.3	1924.29
	1908.25	1910.4	1912.55	1914.7	1915.69
	1899.65	1901.8	1903.95	1906.1	1907.09
	1891.05	1893.2	1895.35	1897.5	1898.49

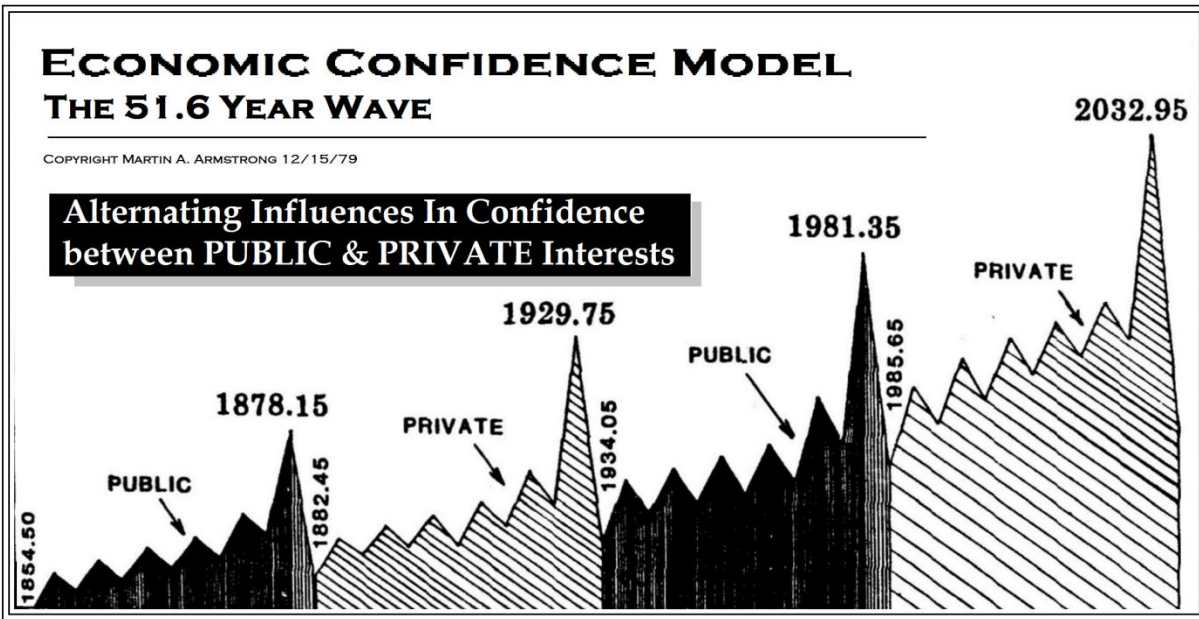
**The Major 309.6 Year Waves**

	(Start of a New Era)	Current Wave	
			2032.95
(Birth of Financial Markets)	South Sea/Mississippi Bubbles	1720	1723.35
(End of Serfdom)	Beginning of Capitalism with Black Plague		1413.75
(Rebirth of Internationalism)	Crusades Beginning of Mercantilism		1104.15
(End of the Dark Age)	Rise of Charlemagne		794.55
(Dawn of Feudalism)	Fall of Rome		484.95
(Reign of Marcus Aurelius)	Peak of Rome		175.35
(Rome takes the Greek World)	End of Punic Wars – Rise of Rome		-134.25

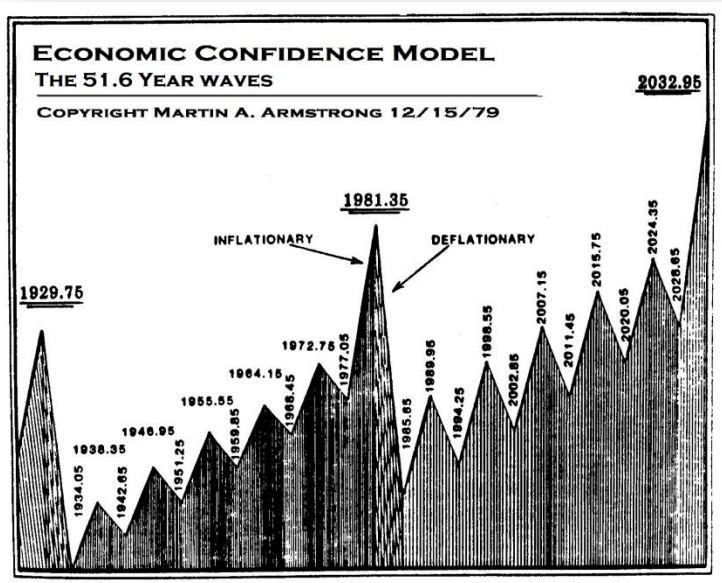
Note: Dates are expressed as a percent of the days within that year; i.e. (365 x .45)

Not only did the 8.6 year frequency mark minor changes, it would build into major waves of intensity grouping six such waves building into 51.6 year events. I began to notice that such events would delineate history quite shockingly. For example, there was 51.6 years separating the end of the Second Punic War (218 to 201 BC) and the beginning of the Third Punic War (149 to 146 BC). While Rome was growing in power, Greece the once Financial Capital of the World, was declining in power from 135BC collapsing after the end of the Third Punic War as Rome now turned to conquer Greece.

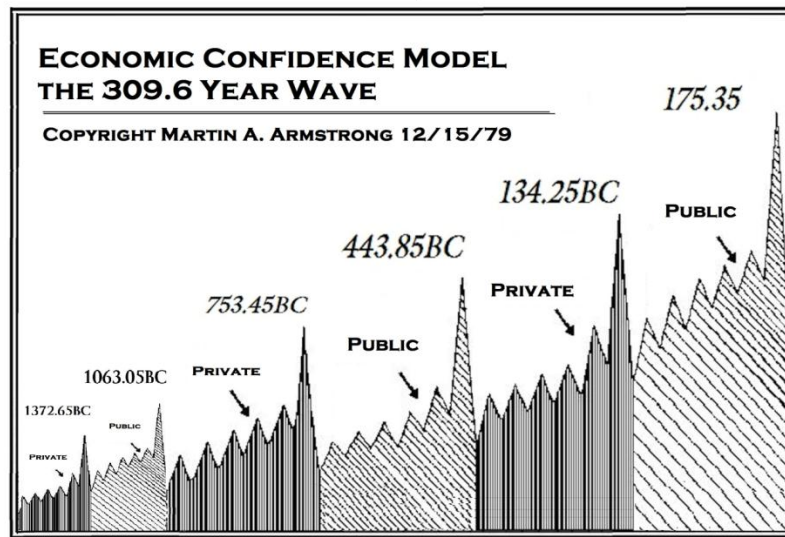
It soon became clear that there was a fractal structure to history and time. The same patterns were present on each level of time. Just as the core structure of an atom resembled the solar system and numerous solar systems put together formed galaxies and multiple galaxies constituted the universe, this same fractal structure was present within time and history.



The more I began to back test this 8.6-year average, the more accurate it seemed to be. I spent countless hours in libraries reading contemporary accounts of events around these dates. It soon became clear that there were issues of intensity and shifts between **Public** and **Private Confidence**. During some periods, society seemed to distrust government and after a good boom bust cycle, sentiment shifted as people ran into the arms of government for solutions. Politics seemed to ebb and flow in harmony with the business cycle. Destroy an economy and someone like Hitler can rise to power very easily. If everyone is fat and happy, they will elect to ignore drastic change preferring not to rock the boat. It was clear that even the Romans saw flight from the cities as taxation rose. The Latin word for this migration was suburbium.



The issue of **INTENSITY** seemed to revolve around periods of 51.6 years, which was in reality a group of 6 individual business cycles of 8.6 years in length. Back testing into ancient history seemed to reveal that the business cycle concept was alive and well during the Greek Empire as well as Rome and all others that followed. It was a natural step to see if one could project into the future and determine if its validity would still hold up.



This fractal structure of time and history appeared to build in groups of six and thus  $8.6 \times 6 = 51.6$  years, six of these waves formed a wave structure of 309.6 years. While it was clear that six of these waves established primary chunks of time defined as 1857.6 years, such a time scale appeared vast in terms of human social-economic history, but it was still just a pimple on a fly's ass as they say in terms of earth's history and the course of nature. Six waves at this level produced 11,145.6 years that seems to have defined civilization itself as the earliest known mud bricks are invented to build houses in Mesopotamia about 8500BC and pottery seems to appear 10,000-9000BC.



*Painting from Santorini Pre-Eruption*

Yet the course of our recorded history with great epics, are striking much shorter in duration. At the beginning of this last 1857.6 year wave chariots were introduced in China. The Nile River was coming under human control about 1640BC. This wave begins with the aftermath of the volcanic eruption at Thera (Santorini) about 1620BC. By the peak of the first wave, the Hittite Empire reaches its peak and its decline and fall sees power shift to the Assyrians in Asia Minor and to Mycenae in Greece who conquered Crete ending Minoan society. The Trojan War takes place about 1225BC and Mycenae is sacked ending its power by 1200BC. The Egyptians are rising, but the New Kingdom comes to an end about 1085BC with the peak of wave #2. The power now passes with the rise of the Phoenicians who invent the alphabet. The Assyrian Empire peaks 1114-1076BC. The Jews establish Israel and in China the Shang Dynasty falls yielding to the Zhou (Chou) Dynasty.

It is this Wave #3 that marks the beginning of the Iron Age (*Schumpeter's Innovation?*) that was the comparative advantage of the Etruscans that brought them great wealth. In Asia, the Polynesian expansion across the Pacific Ocean reached Samoa and Tonga by about 1000BC. King Solomon succeeds David in Israel about 962BC. The Assyrians try to regroup and for their Second Empire about 935BC. Money in Italy became cattle and bronze. These bronze lumps (*Aes Rude*) circulated between about 750BC into the late 4th Century BC. The Latin word for cattle was "**PECUS**" from which emerged the word for **MONEY** that became "**PECUNIA**." At first glance you may not see how we still use this word today. When someone has a financial interest in something, he is said to have a "**PECUNIARY**" interest. Cattle were then the valuable object that served as the **MEDIUM OF EXCHANGE** and the **UNIT OF ACCOUNT**, just as it remains among tribes in Africa who have not moved out of that phase for thousands of years. The peak in Wave #3 was 753.45BC, which marks perhaps the peak in the Etruscan Empire that emerged in Italy after they migrated there about 1100BC in line with the peak of the previous Wave #2. This was the birth and founding of Rome that is dated to 753BC.



*Aes Rude*  
Bronze money in Italy

It is during this next Wave #4, which peaks in 443.85BC, that we find the birth of this movement to overthrow monarchy, a trend that would reappear during the 18<sup>th</sup> century on a global scale once again (*localized events overthrowing monarchy occur throughout the centuries*). The **Roman Republic** was formed in 509BC and within one year the birth of **Democracy** begins in Athens. Meanwhile, Babylon (now Iraq) conquers Israel and destroys the Temple in 586BC. However, Babylon then falls to **Cyrus the Great** about 538BC out of Persia (Iran).



*Roman Republic is Born 509BC*

The invention of state issued coinage began in Asia Minor during this wave and spreads throughout much of the world right into India where we also see empire building taking place.

Wave #5 peaks in 134.25. This is the wave where the power and the Financial Capital of the World were shifting from Greece to Italy after the fall of Alexander the Great. The previous wave marked the peak in



*Athens*

Greek power and the Peloponnesian War ended with the defeat of Athens in 404BC eliminating it as the heir to Babylon as Financial Capital of the Western World. This was remarkably similar to the same shift in power from Europe to America as a result of World War I. Where the Allies defeated Germany, Britain still lost that status as the Financial Capital of the World. The Peloponnesian war set the stage for the decline of Greece and its eventual fall to Macedonian invasion and the unification into a Hellenistic cosmopolitan world.

Wave #5 also marked both the **Pyrrhic War** (280–275 BC) the **Punic Wars** (264 BC-146 BC), where the former was the coming out of Rome proving it could challenge the Greek world, and the later that would propel Rome

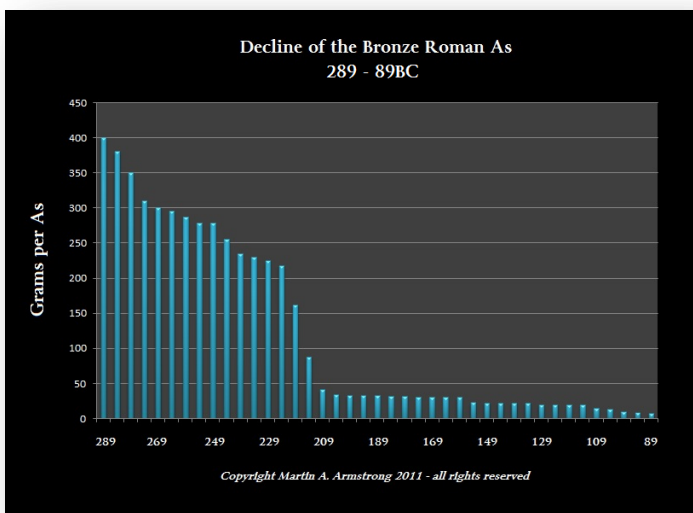


*Aes Signatum 274BC*  
*Pyrrhic War*

to the greatest power in the Western World. The **Pyrrhic War** initially started as a minor conflict between Rome and the city of Tarentum over a naval treaty violation by one of the Roman consuls. Tarentum had, however, lent aid to the Greek ruler Pyrrhus of Epirus (modern Armenia) in his conflict with Corcyra, and requested military aid from Epirus. Pyrrhus honored his obligation to Tarentum and joined the complex series of conflicts involving Tarentum and the Romans. Pyrrhus also involved himself in the internal political conflicts of Sicily, as well as the Sicilian struggle against Carthaginian dominance with great success. However, in Italy, it was a different story. This Greek invasion led Carthage and Rome into an alliance. The famous use of Roman pigs to scare the elephants of Pyrrhus, was commemorated on Roman bronze coinage in the shape of an ingot. This was the war that is the source of the expression "**Pyrrhic victory**," a term meaning a victory achieved at too high a price. It was the ancient historian **Plutarch** who described Pyrrhus' reaction to the report of a victorious battle in which he is said to have responded that "***If we are victorious in one more battle with the Romans, we shall be utterly ruined.***"

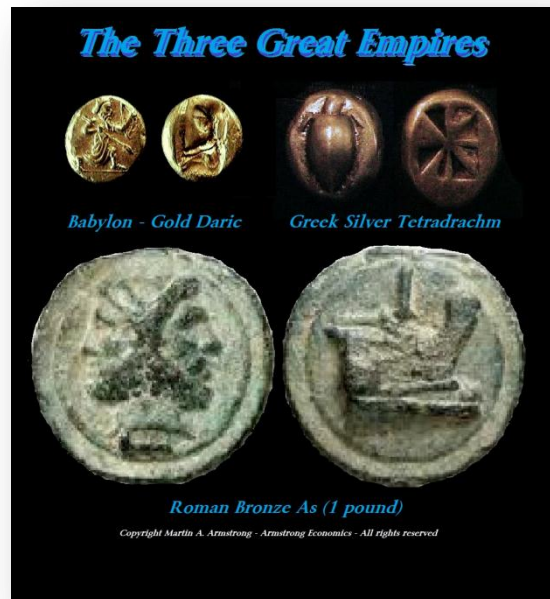
Nevertheless, it was this **Pyrrhic war** that boosted the confidence of the Romans and marked the beginning of the end for Greece as the dominant Mediterranean power of the time. This alliance would also open the door to the **Punic Wars** with Carthage, and after they were concluded, Rome took Greece ending the Hellenistic World. The power and glory had now passed to Italy with the fall of Greece in 146BC. The bronze coinage before the **First Punic War** began in 264 BC and included the first standardized coinage that appeared about 290BC. This standardization of metal that had previously traded by weight was about 300 years later that the first coins appeared in Lydia, located in modern

Turkey. The **Aes Signatum** was a bronze ingot with a weight on average of about 1500 grams, or near 5 Roman pounds. These were produced with round shaped cast coinage that was based upon the standard bronze unit of account being the Roman **As**. Everything was priced in terms of the **As**, with a weight of about 400 grams on average. The **As** in weight fell by about 20% with the **Pyrrhic War** (280–275 BC), but the cost of the **Punic Wars** forced a major devaluation in 217BC.





The evidence of Greece being the **Financial Capital of the Western World** is demonstrated that Rome issued its silver coins in 280BC based upon the Greek monetary standard. Pictured here is the first Roman silver coin with the Helmeted head of Mars facing left with the head of a horse and the inscription "ROMANO" that is a **Didrachm of 6.92 grams**. Rome was basing its currency upon the Greek standard to enable its coinage to be accepted in international trade. By 211BC, the ravages of inflation led to Rome issuing its own denomination called the denarius with a helmeted head of Roma facing right with the mark of value behind "X" meaning one silver **Denarius weighing 4.36 grams** was tarified at 10 bronze **As**. This was a reduction to 63% of the Greek weight. The passage of that title of the **Financial Capital of the Western World** had moved from Babylon whose monetary system was based upon **gold**, to the Greeks whose unit of account became **silver**, and then to the Romans whose monetary system was based upon **bronze**. Eventually paper and credit would



emerge first in China, but not until the 13<sup>th</sup> century AD.



The Roman monetary system based upon bronze was actually practical. Bronze was usable both to make a sword as well as a plough. In this regard, the Roman monetary system was indeed logical. Here is an Aes Signatum with the image of a bull. This is further evidence of the transition of the unit of account migrated from cattle "pecus" to bronze. **MONEY** did not take the form of circular coins in Italy per se until the **Aes Grave** period that that begins to appear about 289BC well after **Alexander the Great**. Therefore, the devastating inflation that appeared was clearly driven by the cost of war.

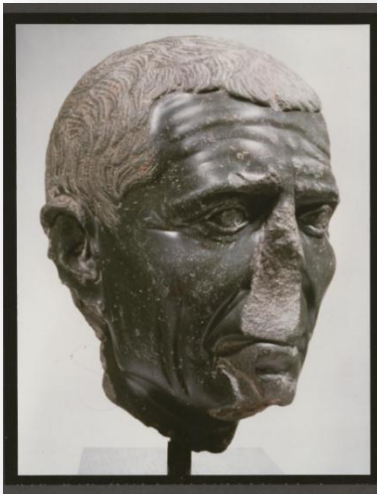


## Roman Bronze Coinage 265-241BC



Therefore, Wave #5 was significant insofar as it marked the rise of Rome and the decline of power from the Greek world and Carthage to that of Rome. This wave peaks in 134.25 BC and this is very significant for it was about 133BC when Tiberius Gracchus was assassinated for trying to introduce land reforms. His assassination eventually by the Roman conservative *Optimate* party would become the corrupt oligarchy and set the stage for the next wave of massive corruption.

**Wave #6** peaks in 175.35BC and this is the wave that marks the collapse of the corrupt Roman Republic with the assassination of **Julius Caesar** on the Ides of March, 44BC, the rise of **Augustus** in 27BC forming the first Emperor of Rome, that then reaches the peak during precisely the reign of **Marcus Aurelius** (161-180AD) who has been regarded as the finest example of a true brilliant ruler. It was **Aurelius** who



**Julius Caesar (100-44BC)**  
*Black Basalt Bust Commission by Cleopatra*

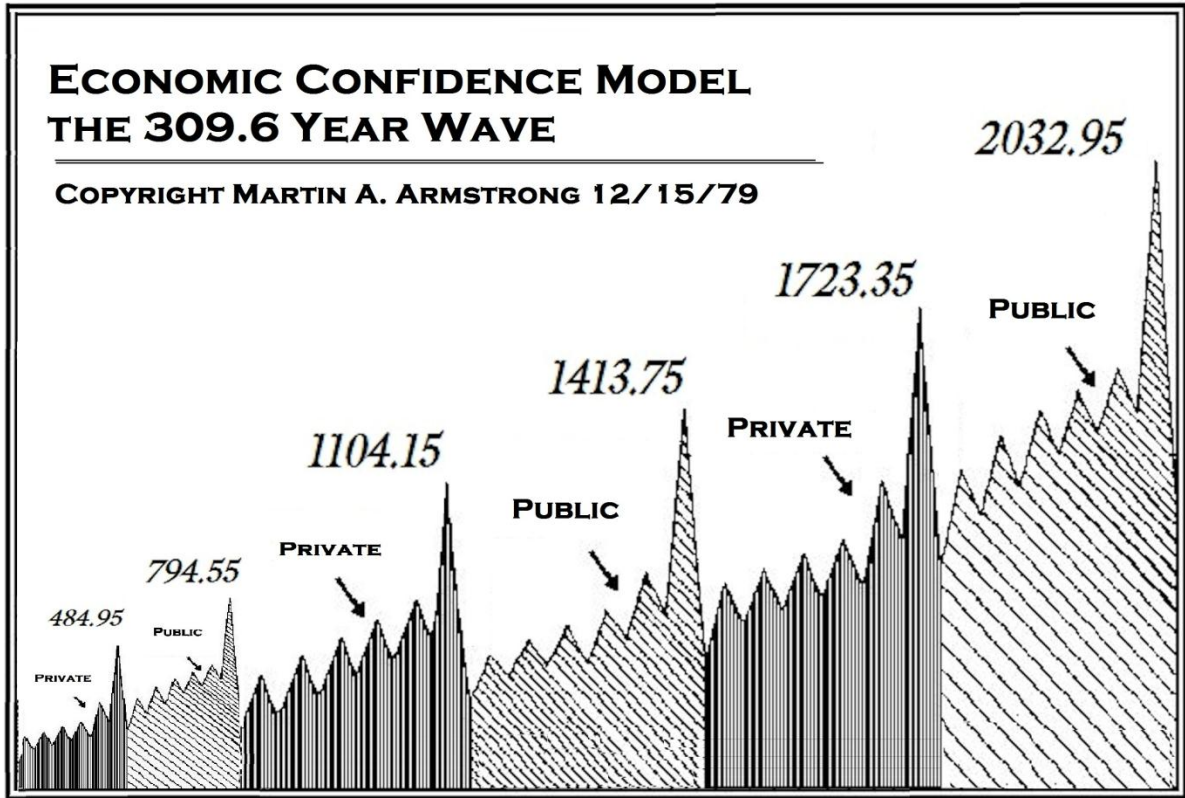
It would be **Caesar** who created Europe by his conquest of Gaul. It would be **Caesar** who was keen of mind and the second head of state it seems to deal with a debt crisis in a unique way. In Rome, as in all the other ancient republics, the poor people were constantly in debt to the rich and the great, who in order to secure their votes at the annual elections, used to lend them money at exorbitant interest, which, being never paid, soon accumulated into a sum too great either for the debtor to pay, or for anybody else to pay for him. The debtor, for fear of a very severe execution, was obliged, without any further gratuity, to vote for the candidate whom the creditor recommended. But **Caesar** solved the debt crisis and Rome was saved. He was assassinated by the corrupt oligarchy that lost money and power as the rebel forces that had been funding,

said that aptitude may be found in the understanding and is often inherited; but true **Genius**, he said, comes only from a man capable of reason and rarely from imagination.

The assassination of **Gracchus** at the peak of the previous wave set the stage for the **Social War 90-88BC**, with **Marius** becoming dictator in Rome during 87BC, but he dies within the year and **Sulla** declares himself dictator in 82BC. This is the man that caused **Caesar** to flee Rome for his life. **Caesar** would of course return. He would become wise in the political affairs of men and a member of the **Popular Party** opposing the corrupt oligarchy run by **Cato**.



**Marcus Aurelius**  
**(161-180AD)**



It is very clear that the peak of the previous major group of waves marked the peak in the Roman Empire. The next wave peaked in 484.95. Rome officially collapsed in 476AD, but the trappings of the

Roman state still remained briefly. The barbarians issued coins at first maintaining the pretense of the Roman Empire pretending that they now held the throne. Nevertheless, this gradually collapsed into the Dark Age that lasted for about 309.6 years. As the next Wave peaked in 794.55, we begin to see that on the other side of this peak, what emerged was the reunification of Europe under Charlemagne who was the first to be crown on December 25<sup>th</sup>, 800AD as Holy Roman Emperor. While this Wave peaks in 1104.15, this marks the peak in the Byzantine Empire. The gold coinage becomes debased and what emerges is the Great Monetary Crisis of 1092.



## *Debasement of Byzantine Gold 1068-1092*



The Byzantine Empire was now in its decline with the peak in 1104.02 following the **Monetary Crisis of 1092** and by 1204, the city of Constantinople falls to the Europeans, namely the Venetians and the French. Where the Romans debased the silver coinage and reduced the weight of the bronze coinage, they did not debase the gold coinage, but did reduce its weight. In Constantinople, gold had been the

unit of account and thus it was debased by adding silver. The gold coinage lost its color and by **Alexius I (1081-1118)** and the siege of Constantinople in 1090, what was once gold had been reduced to effective a silver coin. **The Great Monetary Reform of 1092**, introduced the *Hyperpyron Nomisma* meaning fine gold in an effort to restore the economy.



*Siege of Constantinople 1204*

This next wave that peaks in 1413.75 was clearly a Public Wave. This is the wave that marks the Black Death that kills up to half the population creating a very massive shortage in labor. This is where capitalism is reborn for wages emerge after this wave reaches its peak. As we then move into the next wave peaking in 1723.25, we have the birth of exchanges and the first speculative bubble post-Dark Age and the fall of Rome.

It was 1720 that produced both the **Mississippi Bubble** in France and the **South Sea Bubble** in England. The crash that developed led to the rise in discontent and the overthrow of monarchy with the rebirth of republic forms of government in the west. It is this wave that should reach its major peak by 2032.95 and that will bring an end to republicanism once again as has been the case. It is Just Time for a change for nothing lasts forever. This is true about how our society even functions.