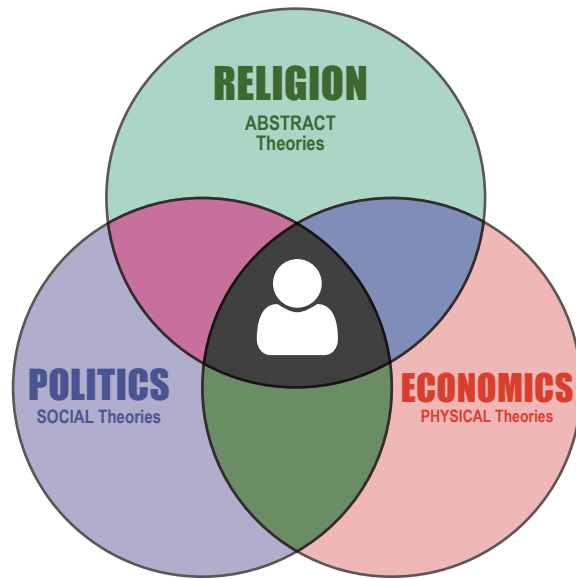


# BIG



# HISTORY

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## EXECUTIVE SUMMARY

1. The primary building block of society is the division of labor. Individual genius exists through a shared understanding and cooperation similar to an assembly line.
2. Ideas rule the world and fall into three broad categories: abstract, social, physical.
3. Organizations are built around these ideas: governments, non-profits and businesses.
4. Money is make-believe but a common denominator for regulating people and materials.
5. Modern finance (paper money and deficit financing) began three centuries ago and spurred both political and industrial revolutions.
6. The way we handle modern money is archaic and self-defeating.
7. Inflation is the common problem and enemy of a Good Society.
8. The economy is driven by four percentages: wages, interest, profit and taxes.
9. Citizens, non-profits, businesses and government need to work from the same operating principles in financial unison, not in financial opposition.
10. Compounding these four percentages causes inflation which forces wealth to trickle up and concentrate.
11. The National Debt is equivalent to 247 years of private sector profit and acts as a pressure release valve.
12. Deficit financing could eliminate taxation and inflation if applied correctly.
13. GDP is a false and meaningless measure.
14. Central Taxation is smarter way to tax, if we must tax.
15. Corporate Income Balancing will eliminate a lot of social inequality.
16. Real estate values are the primary engine of economic volatility and social distress and can be controlled.
17. There is no free market, only the cause and effect of the laws of mathematics.

## Chapter 1: Introduction

Forty years ago I graduated with a degree in history. Since then I have continued to read, observe, participate and question. A fair amount of effort has been spent unlearning what I was taught. I often claim that half of what we learn in youth is a lie, and our education is complete when we know which half. Similarly, the university I attended also taught political science and public administration. I have described that as those who make the decisions, those who carry them out, and historians as the ones stuck trying to figure out what went wrong or right and why. I never earned a living from my history degree. Instead, I opened my own business when I turned thirty years old. Also at university are taught economics, business and accounting. This triad similarly involves making the decision, carrying it out, and figuring out what went wrong or right. Also taught are science and religion. This essay will bring all these diverse disciplines together.

Before I begin, let me share one epiphany of many. I printed t-shirts and sold promotional items. One day I had a rush order for Earth Day shirts from a local college. I stayed late that night to make screens, so we would be ready to print the following morning. As I stood at the sink washing chemicals down the drain, and the words Earth Day emerged from the stencil, I could not help but think that this was absurd. Young people would adorn themselves with the shirts as if wearing a priestly robe, so they could go pick up litter in the park, while unseen chemicals would work their way to the ocean. To share these thoughts would surely antagonize my customer and threaten my livelihood. This is just one small brick in a wall of absurd things we do in society. There must be a better way to arrange our affairs. Through a process of self-testing, I have come to see my errors as clearly as others. We are each divided by our perpetual need to buy and sell, to produce, to trade, so we can consume through the division of labor. Recently a farmer in Afghanistan said of his opium crop, "We know it's harmful, but nothing else we grow makes any money." We are all in a similar struggle to survive.

All beliefs are inter-connected and part of our daily life. The challenge of making sense of it all is to see our world as a whole with different parts, not unlike an assembly line. Creating anything, from a woven basket to a cell phone, requires a plan. I will present you with both a plan of understanding and a plan of action for peace and prosperity.

Since we live in a highly politicized state of mind, let me give you fair warning that whatever your political beliefs are, I will be challenging them, dissecting them, and generally repudiating some part of them. I am post-partisan. My interest is only the truth. If I am wrong, then I will eagerly change my

view and am grateful for the correction, and I will incorporate new wisdom into a fuller view. Many people are emotionally invested in half-truths and fear new ideas and being wrong. Do not be that type of person! Your pride is a self-created obstacle. A little humility can go a long way. Nothing is better than an epiphany.

Man has been following plans, written or not, both consciously and unconsciously, forever. The manufacturing of a good is easy to recognize. The movements of individuals and the parts used create a final assembly. There was a plan, the plan was executed, the result is tangible. Creating the Good Society works similarly, but the components (people) themselves each have the power to think abstractly. When you put a screw into an automobile assembly, you do not have to convince the screw to do its job. To manufacture a Good Society, however, everyone has to understand and be willing to do their job. Because of different perspectives, some people think sabotaging other people's work is their job. This can be horrific as in war, or criminal theft and violence, or it can be banal, like competitive capitalism fighting for marketshare and survival. All competition is a system of cost shifting. Rather than assembling a product, we sabotage somebody else's progress, which also wastes our own time. Mutual enlightenment is needed for both an assembly line and a Good Society. Many hands make light work, but only with a shared vision. The basic needs of humankind have not changed for eons. Enlightenment does not change the people or the process significantly, only the results. We can have a renaissance, if we choose it, and if we act to make it happen.

Before people can do their job, they must first understand it. Before they can understand it, they must grow and mature. Because people grow and mature, their capacity for the jobs and the roles they can assume change over time, too. The world is a battle of ideas within a cycle of maturity. Good ideas create harmony; bad ideas create strife. The generation gap, like all the other gaps, reflects a lack of stewardship and statesmanship in previous generations. There should be no divisions within a family or between families, much less between nations, churches or businesses. All the parts of our lives should be in harmony.

I could not write this book forty-five years ago when I was a student studying history and reading voraciously. I desperately wanted to understand the world, but no book explained it, not even the Bible, at least in a plain, obvious sense. The Bible contains a lot of history and has lots of wisdom told through parable, but the simple mechanics of 'love one another,' are not very clear. We can see that in all the different sects that religion has spawned. There are churches on opposite street corners. Men do not even know how to pray together. How could they possibly create a Good Society without the ability to cooperate? Let's try to figure this out.

Libertarians claim that uninhibited people doing what they want creates the perfect society. They see a certain amount of chaos and anarchy as freedom and liberty. They champion the individual above all else, and fear governments, rules, and regulations. They point to nature and claim there is perfect balance created by the free individual movement of each individual part. They point to the many failures of society and blame governments and monopolies as having caused more distress than they relieved. Thomas Paine said it eloquently in *Commonsense*, "for when we suffer, or are exposed to the same miseries BY A GOVERNMENT, which we might expect in a country WITHOUT GOVERNMENT, our calamity is heightened by reflecting that we furnish the means by which we

suffer.” It is very easy to blame the government for anything or everything. But, they do not ask, what was the plan? Why did the plan fail? And, how could no plan be better than a plan?

All success in a society is based on the division of labor. Governments are created voluntarily by the people themselves as an extension of the division of labor. This makes sense. It is more efficient to have one group build the roads and oversee their maintenance, just as it is to have a blacksmith make horseshoes and take care of his own tools. Specialization yields both higher quality and efficiency and scales according to the size of the job. That was the key idea of Henry Ford’s assembly line. More work requires more people. A permanent school organization is permanently ready to teach the next generation. The Libertarian complaint about the size of government ignores the scale of our national needs. A solitary individual with skill is no different than a large organization of individuals with skills. Quality and quantity are completely exclusive of each other. Efficiency is determined by the task needed. As an individual, we could never build housing, grow our own food, educate our kids, and heal ourselves from youth to death without a division of labor. Aboriginal tribes have divisions of labor, too. Society, not individualism, is the building block of life.

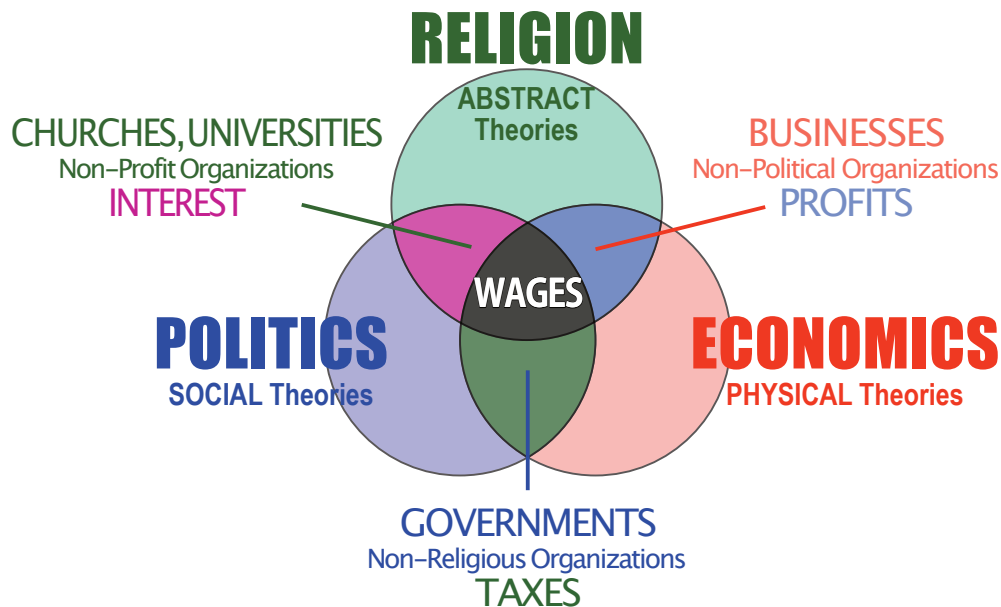
Endless disputes destroy harmony in a family, and disputes in politics sabotage public success. People come together voluntarily to marry. How do they sometimes come to divide themselves? All the issues of our private life are part of our public life. There are disputes about sex, money, respect, effort, reward, attitudes, comfort, cleanliness, intelligence, procedures, roles, decisions, and health. It is not a surprise that as divorce rates climb so does political animosity, incarceration rates and crime and other inequalities. An unhappy society has a great many symptoms.

We live in a mostly static world, but for every individual it is one of constant change. Children need lots of attention and nurturing, appropriate education for their age and talents and interests. No matter what stage in life we enter, it is new to us. At some point, we become the adult rather than the child. This is the key difference between the human race and the animal kingdom. There is no planning in nature. Their system was devised by a power far greater than ourselves. It runs on auto-pilot. Humankind, in contrast, individually, is in a state of constant struggle and change with his plans. Everything that everybody else does effects humankind too, because we are always part of a chain of division of labor. Animals do not need to worry about others. Humankind must worry about humankind. Protecting our brother is protecting ourselves. One individual can do great harm or great good for many.

The Libertarian suggestion that man can forgo planning and get great results is absurd. If it were true, it would have already happened. It did not, and can not, so we need to ask why planning is so difficult. We are abstract thinkers, and not well-suited to survive in nature alone. We must cooperate and plan in order to thrive. We have thousands of years of empirical evidence to explore, but the last 300 years offer the most. The population has exploded to 8 billion people, because the division of labor and the rise of new technology has made it possible. None of it could have occurred without planning and cooperation, at both the individual and government level. The government is no more an enemy of the people than your hands are the enemy of your head. But, people do constantly make themselves enemies of each other. A division of understanding cannot coexist with a division of labor. We must operate from a shared understanding. The structure of animosity is the same structure as cooperation. This is what I call Big History.

## Chapter 2: Big History

# IDEAS, ORGANIZATIONS & MONEY



The Individual resides at the center,  
where all ideas and organizations overlap.

The Big History division of labor can be represented in this Venn diagram. The three circles represent three categories of ideas: abstract ideas we can call Religion, social ideas we can call Politics, and physical ideas we can call Economics. Combined these three circles represent all of human knowledge and experience. Where two circles overlap, that is where organizations form. There are three places of overlap, representing government, church and business. Governments are a combination of Politics and Economics. Businesses are a combination of Religion and Economics. Churches are a combination of Religion and Politics.

Note that whichever two ideas overlap, the third idea is excluded. For example, government combines social and physical, and excludes abstract. Business combines physical and abstract, and excludes social. Churches combine social and abstract and excludes physical. This may seem confusing, and one might recall a government dominated by religious thought, or a church making scientific proclamations. Please bear with me for a moment. It will become more clear.

To recap, there is the bigger idea level (the full circles), and there is the smaller organization level where the separate ideas combine (area where two circles overlap).

The ideas correspond also to our heads, our hearts and our hands. Reason, emotion, action.

IDEA LEVEL - Three separate circles

Abstract Theories - RELIGION: questions of God, morality (Head)

Social Theories - POLITICS: questions of process, rights, freedom (Heart)

Physical Theories - ECONOMICS: questions of nature and science (Hands)

ORGANIZATION LEVEL - Two circles overlap

Church: Combine Abstract and Social: not physically oriented (Reason)

Government: Combine Social and Physical: not abstract oriented (Emotion)

Business: Combine Abstract and Physical: not socially oriented (Action)

The organizations have a different purpose for existence, with different goals, different expectations, and different definitions of success.

At the center of the Venn diagram, all three circles overlap. This is the individual that draws from all three idea circles and all three organizational structures and can create any variety of possible systems unique unto themselves. Everybody is controlled by the three types of organizations. It is our society. Together, we the people, as individuals, create organizations and establish “the system.” It makes no difference how the final system is settled. What matters is that the populace understand and cooperate within the system it chooses or inherits. The world has witnessed a lot of variety, but it is always just a division of labor system with the same underlying structure.

Society is impacted by unique individuals who made significant discoveries, invention, or created impactful organizations. That individual can imagine a government that is heavily influenced by religious thought (Taliban), excludes it entirely (Bolsheviks), or is somewhere in between (America). The agency of change can be a violent revolution or peaceful reform. Similarly, one individual can invent something that everybody wants to use. They create a business organization that becomes popular and may achieve near monopoly status. Inventions change the life of everyone, and the world has seen many such inventions over the last three hundred years. New physical ideas create new social and abstract ideas. While some claim history repeats itself, I think it is moving in a straight line into a future we can barely imagine. The elements of the future will always be the same as today and yesterday. New faces will be dealing with the same issues regarding how to organize and understand the division of labor.

The different organizational realms can easily coexist or conflict. It depends upon the issue. The key issue, for our purposes, is whether people are self-aware of what they are choosing. Wisdom, ultimately, is about self awareness; that is the mark of maturity.

Earlier I stated that the structure of cooperation is the same structure as animosity. This is true both WITHIN an organizational group as well as BETWEEN organizational groups. Examples of a “within” animosity are: government divided by liberals and conservatives; the soft drink business between Coke and Pepsi, Churches between Christian and non-Christian. Examples of a “between”

animosity are: businesses fighting government over taxes or churches fighting businesses over manufacturing intoxicants.

I use the term ‘fighting’ loosely, of course. This is a battle of ideas primarily. Ideas rule the world, actions follow the beliefs. We “make real” what we believe. A Good Society is animating good ideas that generate wide consensus and cooperation. A bad society is animating bad ideas and perpetual conflict. The results should be as obvious as the shiny red convertible at the end of the assembly line. If everybody is housed, fed, safe, educated, healthy and happy, then we have established a Good Society. We have a long way to go, but it is not hard to get there, as you will see.

Every organization follows the idea of an individual, even if not all of its members agree. In fact, the head of the organization is constantly changing their beliefs, too. It is important to recognize that the model represents a system in perpetual flux. People are always growing, experiencing, maturing and changing their ideas. Reputation, perception and the actual state can be vastly different. Understanding and trust are critical to a Good Society. We all understand and trust ourselves, even when we are full of doubts or contradictions. That must be the baseline in how we understand others, too. Just as we can ‘believe’ any unique combination of ideas, so can other people and organizations. Just as people can disagree, so too can organizations. We all need to understand ourselves and one another better. Virtue and maturity can be defined as recognizing our mutual humanity and choosing cooperation and harmony.

Big changes in society can occur, for good or ill, once critical mass is reached by individuals for the same ideas. For decades, America has been in a state of perpetual stalemate. The Good Society requires a division of labor but it has stagnated because of a DIVISION OF UNDERSTANDING.

Let’s back up and take a view of society from 20,000 feet. There are hundreds of organizations within every grouping. For example, in government, there are multiple levels: federal, state, county and town. There are hundreds of towns, multiple departments, countless procedures, habits and skills, all of which come to practical life based on similarly countless individuals of varying expertise and experience. Three inches of snow would wreak havoc in Miami, Florida, and barely be noticed in Bangor, Maine. The division of labor is always based on a perceived need and within the perpetual cycle of maturity of understanding and the demands of our physical environment. Ultimately, experience is the best teacher, but it is impossible for any one human to know or experience everything. We must rely on each other. Trust is at the heart of the division of labor. Without trust, no society can function or achieve a Good Society. There is universal agreement that what we are doing is not working, but nobody thinks they need to change their own understanding. They do! Wherever and however you place yourself in the Big History model, it is just one of infinite possibilities. The only ‘right’ answer is consensus.

Our personal life experience is drawn from all three idea levels and interacting with all three organizational levels. We move about in these three areas effortlessly and unconsciously. We take the kids to church on Sunday (religion) driving on a public road (government) and stop by the bakery after services (economics). We pay with currency (government), earned at work (economics), and enjoy the



treats in the privacy of our home. The division of labor works seamlessly to create a unique experience for everyone. When organizations exist for the primary purpose of defeating other organizations, that should give us pause. We should be seeking unity, not victory.

There are differences between right and wrong, true and false, good and bad. We want a world of right, true and good. We need to embrace and measure with intellectual honesty.

Bad choices generate a certain momentum and the inertia of slow maturity favors their endurance. The corruption in government, non-profits and businesses are all based on corruption in individuals. Why would anyone choose to spend their time making life more difficult for others? At some level, they believe that cooperation does not work, or that they will be excluded somehow from reward. A lion must eat, but he does not willfully sabotage a society of lambs. We must reap what we sow. Our forbears will inherit whatever we create. Our world does not stay static like the animal kingdom. If we are not contributing to its improvement, then we are making it worse.

To make sense of the world, we order the choices available to us in the best way we can understand. Like a stack of pancakes, we create a dominant order with one realm on top, either economics, politics or religion, and the other realms playing a supporting role. Some people are highly political, others only focus on their work, others are very religious. All three overlap, so no matter what is dominant, all three layers are present. As an individual, we should all do the work that is most fulfilling, but it is by working together that everyone succeeds. Big History is a good tool for understanding ourselves and each other and maps the division of labor. We should be wary when an expert who rises to the top of one organizational structure seeks to cross over to the top of another organizational structure. For example, when a talented business person or entertainer moves to become a top leader in politics. They are using their fame to cross over from one realm to another, but nothing in their experience indicates skill in the new area. Without the fame, they would likely fail on merit. The division of labor relies on the best people being in the best position. Amateurs should not start at the top. The head of the Church being the head of State does not work well. The division of labor works by not concentrating power. On that score, the libertarians are correct. All authority must be proportional and appropriate and fully informed by the other realms. No complaint should be ignored, but complaint alone is not proof of a fact.

Our cultural indoctrination is primarily a result of circumstance. We are born at a certain time in a certain country to a certain family with established patterns that they likewise inherited by the random circumstances of somebody else's life. In a traditional agrarian society, there was great continuity from generation to generation. For the last three hundred years, however, humanity has been increasingly mobile while experiencing dramatic changes in all three idea levels and all three organizational levels. The future is ahead of us. There is no going backward.

As a species, mankind is far more co-dependent than it has ever been in history. A Good Society based on a common understanding of the division of labor has never been more critical. Covid is just one of many ways where we can shock ourselves unwittingly into a crisis. We also have environmental calamity, nuclear weapons, computer viruses and economic collapse. Many parts of the world have

descended into warlordism and gang rule. None of these issues can be resolved by continuing on the failed path that brought us here. We need to make a big structural change. What is driving our madness? Not surprisingly, the answer is money.

### **Chapter 3: Money**

A virtuous society needs virtuous people. A definition of virtue has long been The Golden Rule, and it needs to be part of the division of labor and how money is handled. Money is at the heart of virtue because we all use it. It is a universal consensus that we can build upon.

Money has been around for so long that its most obvious feature is generally not recognized: money is not real! Yes, that may sound crazy, but it is true. Money is only an intellectual agreement. It is no more “real” than the points in a game of football. We are trained to abide by certain rules or habits. Monopoly money works fine when playing the game Monopoly. When in other locations, we ‘play’ with different money. Currency may feature different colors, pictures and sizes, but a government-issued chit is no more “real” than Monopoly money.

The first act after every revolution is to create ‘new’ money. Revolutionary America had a lot of trouble getting its Continentals accepted by its own inhabitants. The fervor remains. Parts of Massachusetts have had their own money, called Berkshares, since 2006. Now we have digital currency like Bitcoin traded internationally. It is not “real” until enough people accept it, but it is still not real even then. The goods and services we trade are real.

The problem with money is not who makes it or how it is made or where it is accepted;. The trouble is with how we handle it. More specifically, how we count, or account, for it. Virtue is akin to fairness. What is a fair profit compared to price gouging? Mathematically, there is no difference between the two.

The universal habit of ‘Buy Low - Sell High’ sets off a mathematical firestorm that has been burning humanity for eons. ‘Profit’ is not the same as ‘trade’ in the money ledgers that govern our society. If trade is 1:1, then profit is 2:1. Math tells us  $2+2=4$ . Profit is based on  $2+2=5$ . We have boom and bust cycles because if  $2+2=5$  (boom) is true, then  $5=2+2$  (bust) is as well. We must reap what we sow. Profit eventually creates big winners and big losers.

Volatility, inequality, and animosity are the man-made consequences of profit. This was once more commonly understood, but generations pass and it has now been forgotten. Adam Smith wrote: *The nation with the highest rate of profit goes to ruin the fastest.*

Profits have increased dramatically because of the introduction of paper money. Three hundred years ago (1720) there was a big structural change with the creation of paper money. This occurred in France and was the brainchild of John Law, an Englishman. It coincided with the invention of public stocks companies. (Private stock companies started around 1600, with the Dutch and British Tea companies. Those profits would later fund Yale University, as well as spark the Boston Tea Party and the American Revolution). The first publicly traded stock company was the Louisiana Company. Law was in charge of both money and the stocks and became the world's first millionaire. His invention amplified all the problems with money, particularly inflation, debt, and the concentration of wealth.

John Law's goal was not to become rich. He was seeking a solution to the problem everybody has with money: CASH FLOW. He believed that there was not enough money in circulation to sustain the economy. The well-to-do can clumsily survive on credit, but as Ben Franklin warned (and would later be quoted by Osama bin Laden) is was best to *"neither a borrower nor a lender be."* The poor were literally poor because there was no money to pay them to work and they had no credit. With paper money, there would never be a shortage of monies to invest in new ventures. Paper money would get the economy flowing and everybody could be busy and self-sufficient. It worked at propelling society forward! It created the world's first economic boom. Governments have been doing it ever since. It also created many busts, including the sale known as The Louisiana Purchase one hundred years later, the former assets of the Louisiana Company. Paper money was perhaps responsible for both the American and French Revolutions, too. The merchant class finds it difficult to live with the consequences of their own behavior, and they blame government rather than themselves. This is a typical between organizations conflict that the Big History model illuminates.

It is hard to know if paper money caused the Industrial Revolution or if it coincidentally arrived at the same time. Either way, the last 300 years are unlike any time in history. The global population has grown from under 1 billion to 8 billion. The division of labor, with more hands, and the assist of machines and technology, and the settlement of new lands by Europeans, has changed the world dramatically.

Both the old world and the new each had a long history of advanced civilizations. However, where Europe and Asia used money, in the Americas, money was not used at all! The division of labor can exist with or without money. The past is also proof that we can create any society we desire if we are willing to cooperate. For us, the key is handling money differently. All the Renaissances of history are the result of changes in attitude about money. The price of things matters a lot, and it cannot be left to a fictional marketplace and invisible hands.

Modern finance and the industrial revolution put an end to feudalism, but it is also clear that money was behind feudalism and centuries of wars. What people call capitalism today might be called "Feudalism 2.0." The role of serfdom has changed slightly, but we still have wars and great inequalities.

Democracy has not lived up to its promise of peace and prosperity for all. We are now serfs with greater mobility, often carrying debt for forty years or more past adolescence, businesses and workers alike. Slavery and child labor have been mostly eliminated, but mercenaries and prostitution flourish in various forms. In Karl Marx's day, slavery, serfdom, child labor and indentured servitude were all common. His ideas are not very different from Adam Smith's in opposing high profits, cronyism and corruption. They both missed the most important part of business: its math.

The big question before us is: what is it about the MATH involved in money that both solves and creates problems? Covid provides a tragic example of how compounding numbers are insanely powerful. At one point in time, only one person had the virus, then two, then four, and then eight. The number infected followed a geometric progression of doubling until such point that almost 500 million people were infected in two years (with 6 million deaths). This represents only 52 steps of doubling, averaging a step every two weeks.

At the beginning, a doubling is a small amount, but as you get farther along the progression, doubling becomes phenomenal. Financial literacy education often instructs people to save and invest to take advantage of compounding. It is promoted as a shrewd wisdom, not as a social danger. It is not just personal wealth or savings that is doubling constantly. Debt and inflation are doubling, too. Einstein called compounding interest, "*the greatest mathematical discovery of all time.*" Like The Bomb, compounding can be just as destructive.

Double-entry bookkeeping originated about 600 years ago, it tracks every transaction as a debit and a credit. That is the beauty of math. It must balance.  $2+2=4$ .  $4=2+2$ . Profit is recorded as  $2+2=5$ . Buy Low - Sell High. That extra percentage of profit, whether it is 1% or 100%, combines and doubles eventually. The question is only how quickly. As Adam Smith cautioned, the larger the percentage, the faster the rate of doubling. Paper money has made debt and wealth and inflation all infinite.

Many libertarians complain that the government creates fiat currency. It is actually the private sector that created the government that created the specie used as money, and it is the private sector recording of profit, that drives the volatility of inflation and debt. The math must balance. Deficit financing, which is now \$30 trillion in the United States alone, is the pressure-relief valve for this mathematically absurd accounting routine. Think of the National Debt as the cumulative profits created over the last 247 years. It is entirely the fault of private enterprise! I spent years being self-employed. I know I am the cause. Businesses create and perpetuate the system. We must have the goods to survive. But, the banality of profit is the root of the banality of evil.

We are reaping what we sow. As the cost of living goes up, the standard of living goes down. This has been masked somewhat because of advances in industrial capacity and technology. Efficiency has covered up a lot of pain. The industrial revolution also shows the effect of compounding. We continuously build upon new inventions and discoveries. But this is still not the whole story.

Compounding profit causes the wealth to concentrate and trickle up automatically! Somebody has to get lucky and make more transactions than everyone else. It has nothing to do with skill or the product, it is a mathematical phenomenon unrelated to the goods in the market. Compounding profitable transactions creates the winner of the game Monopoly. The dice rolls and math determines the inevitable result, not cronyism and corruption. Blaming the rich is not entirely fair. People are born into their advantages or disadvantages, and into a world where all the rules and wealth are controlled by the previous generation.

Warren Buffett started investing when he was 11 years old, younger than when most people start to invest. He had the opportunity to compound his wealth without adult expenses. Bill Gates, similarly, was lucky. Even though he made an actual product, he was fortunate enough to establish an almost perfect monopoly of a new technology that cost very little to manufacture and distribute. He generated huge profits because there was no moral restraint to set the selling price relative to the cost of production. Unfortunately, charging what the market will bear exploits others to the point of collapse. The government was both a huge customer of Microsoft, and a protector of its monopoly and price gouging. Deficit financing enables infinitely compounded earnings, delays any economic collapse, and allows businesses to charge any amount for anything.

Recognize two things: First, the National Debt is the profit of all transactions in history. Second, all wealth migrates to those at the top of society automatically, just like in Monopoly. No matter how much you help the poor, the money all trickles up.

High profits, the very thing that Adam Smith warned about, drives society. A rising tide can never lift all boats, as John Kennedy claimed, because debt and inflation travel together leaving others behind. Volatility, opulence and poverty, vanity and animosity, have a mathematical root. Every prophet in history has warned about profit because profit must come at somebody else's expense. Capitalism is inherently anti-democratic if unregulated. Math and luck drives the social divide, so class warfare is inappropriate.

The dotcom booms and the dotcom busts have now taken us into the absurd world of digital currency, where the chit itself is changing value. This portends that a huge crash is coming. Rather than coping by creating more National Debt, why not fix the problem? By working together consciously and cooperatively, businesses, government, citizens and non-profits can have a shared division of labor that works successfully for everyone. All it takes is for people to write down different numbers with a different understanding.

## Chapter 4: Reform

The Big History model demonstrates the intellectual and physical ways we organize ourselves around the division of labor. The same model also explains all the CASH FLOW of society, too. All money is one of four numbers: Wages, Taxes, Profit or Interest. These four numbers explain almost everything there is to know about economics.

A worker's revenue is called Wages, the government's revenue is called Taxes, a business' revenue is from prices, and the leftover after expenses is called Profit. A non-profit's revenue might be called a donation. They do often sell a service for a price, but since they are non-profit, this should be categorized as Interest. It fits the situation of their large endowments, and non-profits are some of the richest and oldest organizations that exist, because of compounded interest. Compounding is the key to understanding money and society. These four numbers compound separately and simultaneously.

The four numbers can have any value. A wage can be \$7.50 an hour or \$75 Million. Taxes, prices and interest rates, can also be any number at all. There is no logical system being followed. Every number is equally arbitrary. We have assigned a money value to everything. Wherever pricing starts, compounding begins. It is of paramount importance to understand what we are doing to ourselves.

The division of labor is a global supply chain. Everything we consume comes from a planet that itself has been producing the needs for all life daily for billions of years. Our challenge is simply to harvest this miraculous Earth through our mutual cooperation. That is what God intended. We should be able to move resources from one part of the planet to another very easily and inexpensively. We have the technology and experience. To do it inexpensively, we must cooperate in our accounting methodology, too. That is missing in the modern world. Our ideas about pricing are both archaic and wrong, and we are also collectively bound by them. Only by working cooperatively can we fix this problem.

By investigating the possible price of a single item, we can understand how every part of the entire system works. The same mathematical virus is everywhere. Focus should be placed on percentages and how they compound. I am going to use an apple for my example, and trace its price from tree to table. Note that could be any product or service, at any time in history. If money is involved, something similar is always happening.

A geometric progression is based on a doubling value (x2).

$$1 \times 2 = 2, \quad 2 \times 2 = 4, \quad 4 \times 2 = 8, \quad 8 \times 2 = 16, \quad 16 \times 2 = 32, \quad 32 \times 2 = 64$$

Using the above example, a farmer picks an apple, and then sells it for 1 cent. Everybody in the supply chain doubles their cost (x2) to arrive at their selling price. By the time the apple reaches our table it would cost 64 cents. Note that whoever eats that 64 cent apple pays the profit for the entire supply chain. In business, a doubling of the price would be a 100% Markup.

Let us see what happens when a 50% Markup is used instead (x1.5). Every business multiplies their cost times 1.5.

$$1 \times 1.5 = \mathbf{1.5}, 1.5 \times 1.5 = \mathbf{2.25}, 2.25 \times 1.5 = \mathbf{3.3}, 3.3 \times 1.5 = \mathbf{5.0}, 5.0 \times 1.5 = \mathbf{7.5}, 7.5 \times 1.5 = \mathbf{11.4}$$

The same exact apple costs now only 12 cents because the businesses used a different markup percentage. It went through the same exact supply chain and is the same exact apple.

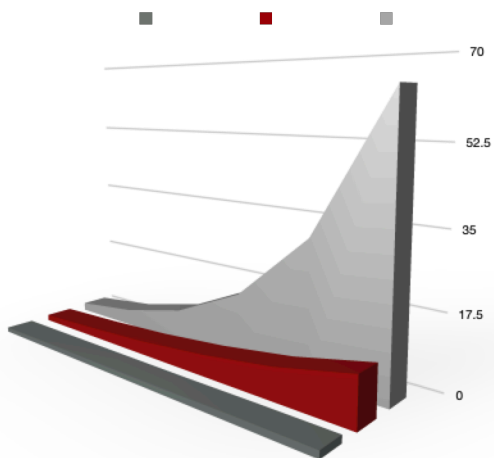
In the first example, if the farmer wanted to buy an apple, it would cost him 64 times more than what he earned. It would be a lot easier for the farmer to buy his own apple in the second example, but he is still paying ten times more than what he earned. This is why Adam Smith warned about high profit margins. Disparity in wealth is created by our accounting markup percentage habits. The person at the end of the chain makes the most profit, but he did not do anything different than anyone else.

For our last example, we will use a 10% Markup (x1.1)

$$1 \times 1.1 = \mathbf{1.1}, 1.1 \times 1.1 = \mathbf{1.2}, 1.2 \times 1.1 = \mathbf{1.3}, 1.3 \times 1.1 = \mathbf{1.4}, 1.4 \times 1.1 = \mathbf{1.6}, 1.6 \times 1.1 = \mathbf{1.7}$$

Wow! The apple has traveled from farm to table and has not reached 2 cents yet! The farmer can easily afford to buy his own apple. In fact, everybody can afford everything in society, because whatever they produce it is enough to trade with everybody else. Remember earlier I wrote that trade is 1:1? The lower the percentage markup, the closer we get to trading equally.

A chart of these prices would look like the following. Everybody is doing the same job of transferring the apple along the supply chain, but their income differs vastly based on the common mark-up used and their place in the supply chain. Higher markups create inequality automatically.



Economists study business and explain the marketplace. The Gross Domestic Product (GDP) is often mentioned by both economic experts and pundits. GDP is a statistic that purportedly measures

the economic activity of a nation and is often used in public policy debates regarding what is good or bad. Using the examples above, a nation that sold one hundred million apples could have a GDP of \$64 million, \$11.4 million or \$1.7 million respectively. The economies would be the exact same size in terms of apples. Only the value accounted for is different. This means changes to the GDP is a completely meaningless statistic. We have professionals describing a mathematical illusion. Many parts of economic orthodoxy are as untrue as flat Earth theory, the Sun revolving around the planet, or alchemy. We have been repeating that part of history where masses of people believe a falsehood for centuries. Changes to mark-up percentages do not equate to changes in the real world.

These same examples also challenge the long-held faith in the Supply and Demand theory of pricing. All pricing is a ripple effect. If one person in the supply chain is greedy, the behavior of charging extra cascades through all the pricing. It has nothing to do with supply or demand, only with greed. This is why pricing needs some regulation. Debt works the same way. One bankruptcy also ripples through the supply chain, forcing either a price increase to cover the loss, or a reduction in the rate of savings. Savings is another type of pressure relief valve, but it can be miserly hoarding in the extreme, too.

The part of Supply and Demand theory which is partly true is that if a consumer does not buy, because of price, need or interest, the entire supply chain collapses. Merchants might then lower prices in an attempt to save themselves, but all they have really done is alter their profit margin again. There is a lot of variety in business, and businesses financial circumstances can be very different. Some have a few customers and sell an expensive item, others sell inexpensive items by the millions. While regulation is a challenge, it is easy once we understand the math. Pricing should be stable and uniform. There is no point to workers battling each other on an assembly line.

The apple example reveals that we want the tax rate to be low, the profit margin to be low, and the interest rate to be low, simultaneously. To some degree, every person's complaint is right about 'the other guy,' but wrong about themselves. Everybody is a hypocrite when it comes to money. Only by trading at close to zero percent can we solve this conflict. "Buy low-sell low" should be the predominant behavior. The Bible states this clearly in Leviticus 25:36. "Do not take any interest or profit." Everybody is both buyer and seller in the global supply chain of the division of labor. We need to work towards a jubilee, and also understand that jubilees release mathematical pressures. If we do not do change consciously and willfully, then jubilees happen as a byproduct of war.

The world has witnessed many revolutions and invasions. Leaders soon discover that they have the same unsolvable problems as before. They do not know how to tax, the workers want to get paid, the businesses cannot survive, and the bankers who set interest rates and control the largest hoards of wealth because of people's savings, are not much help either. Malfeasance returns. History repeats itself. "Buy low-sell low" will prevent war and revolutions.

Looking at the Big History model, notice that only businesses sell items. What happens with government and churches who are spending but are not actually part of a standard supply chain? All of those workers need wages. Those organizations need to pay businesses for whatever materials they consume. Endowments earning zero interest will eventually consume themselves. A government needs revenue to function.



It makes little sense for a government to create a currency, and then attempt to collect it back, only to then spend it again. Maybe this was why money was not used in the Americas. If the aboriginal chief was already coordinating people and materials, the use of money was an extra layer. I am fairly certain that people do not want that type of society. Freewill in the marketplace, and letting people be individually creative and productive has worked out exceedingly well. We need to break the last strings of feudalism and make trade easy on an open market.

Eliminating inequality and volatility ensures that every endeavor will be a success. Necessary things should be easy, like road maintenance, clean energy, housing, education and healthcare for everyone. There is no material shortage or labor shortage. We have a poorly managed assembly line because of our accounting norms. The best solution is to continue to use deficit financing, but in a very different manner.

John Law's original idea was right. Unfortunately, his new money was consumed by inflation and debt. People still thought money was real. We know money is not real! We are just printing money so we can play the game of life. Money is an excellent tool to measure demand and acknowledge quality variation. People will always need to work, but all the worry and dispute about money can be eliminated. The skills to run an organization are still required. Democracy can oversee deficit financing. Even an intellectual agreement needs checks and balances.

A plan to fix the four numbers of money is required. Even with a 10% mark-up, the business community will still seed an eventual collapse. Wages, taxation and interest rates all become part of the price of goods sold. Therefore, taxes should be at zero, and borrowing should be at zero interest, too. It can not get any more simple than that.

We have two numbers left, wages and profit. How do workers and businesses co-exist? We need wage and price controls, but in a radically different way than has been considered previously. We should focus on percentages and relative differences. Our current system needs a transitional path, too. We cannot separate these two issues. The peaceful path is jubilee, but they have not endured either. A plan for the day after jubilee is necessary, too. We need to ease into a jubilee, and then transition to a new economy based on our successful and proven experience. Maybe money will become obsolete like we see in science fiction. For today, we need to get our house in order.

We should start with taxes, because taxes were the original seed of revolution, and we are clearly no better at it than the Crown. I suggested taxes should be zero. How do we get there? First, let us look at how badly we tax today. Workers pay taxes on their income, but businesses pay taxes only on profit. What a huge discrepancy! To be equal, people would only pay tax on their savings. Some corporations have billions in revenue and profit, and still pay no taxes! Let's not forget that the consumer is paying for all the profit in the supply chain, including any taxes and expenses the business pays. The business community sets the prices and the wages, and indirectly the tax policy. The business sector dominates society, with the bigger businesses nearly omnipotent. America is an oligarchy, even if unwittingly or more benevolently than others. The only challenge a business has is with other businesses. It is their own pricing habits that wreak havoc.

For the short term, the easiest way to fix the tax problem is to put all taxes on businesses, especially at the state level. Property taxes and sales taxes are redundant and regressive and should be eliminated. If states tax the revenue of every business, then they have taxed the entire economy. It is very simple, easy to audit, and adjusting the rate (presumably lower) can be accomplished with little effort. Every statehouse will be tasked with creating a formula for funding every town. This is Centralized Taxation.

Temporarily, the federal personal and corporate income tax could remain, but it needs to be highly progressive, and would not even apply to the vast majority of citizens. If we are to retain taxation, which is a debatable need, the federal government could tax all business revenue instead of the state, and similarly fund every state which then funds every town. It is mathematically impossible to tax the rich and redistribute wealth through tax policy. We need to stop inflation and debt and wealth concentration. That will make many routine points of contention moot. As dramatic as these changes sound, it is still not enough to create a frictionless division of labor.

There is one price that drives all the misery of the economy: Real Estate. It is the tail that wags the dog. The FIRE Economy stands for Finance, Insurance and Real Estate. It puts the "feud" in Feudalism 2.0. The more expensive the real estate, the more volatile the economy. Every economic collapse before Covid was related to real estate. We need to bring the price of real estate down permanently. Building a middle school now costs more than the Louisiana Purchase. What we consider to be normal is insane. Deficit financing protects inflation, but it can be used to deflate the price of real estate instead.

My idea is simple: eliminate the private real estate market, and guarantee home ownership to every American. WOW! Did your head explode? Do you think it is impossible? Well, ask yourself, where is everybody sleeping tonight? The planet is big enough to fit everybody. Plenty of housing already exists, but ownership is unwisely concentrated. It, too, is trickling up, and we need to reverse the trend.

Too many properties are in a state of disrepair by slumlords and owners alike. We are filling landfills daily with refuse. All the materials and labor misdirected into generating waste can be directed into the Good Society. We just need to arrange the labor and materials properly, just like on the assembly line. We need to master the accounting rather than being slaves to it.

My proposal would have every town act as real estate broker for property within its boundary. If you want to move, then you sell your property to the town. If you need to buy, then you buy a property from what is available in the town, including apartments. This way, the town can decrease real estate prices gradually. Towns will Buy High - Sell Low until such time we are ready to have a proper jubilee. The shortfall will be made up by deficit financing. This is Local Real Estate Stability.

Another gradualist reform that can have immediate impact would be to require wages within any organization to be a limited multiple between the highest and lowest paid workers, say 6:1. That means if a business pays as low as \$7.50 hr, then the highest paid, including the owner, is \$94,000.00 a year. In some corporations, the divide is in the thousands to one. This is Corporate Income Balancing.

In general, the workplace should be more democratic. Owners and leaders should be servants of the organization. Workers deserve an equal share of the reward, but also the ability to freely contribute ideas. Management is concerned mostly with finance, understandably. By fixing the finances, we unleash the best ideas without fear of their cost.

Wall Street needs to be closed. Sell your stocks. Pay off any debts. There are better ways to fund business expansion. The middle class is sabotaging itself. The unions are feeding the beast that enslaves them by keeping funds there. This is Commonsense Divestment, and will require a lot more discussion. Individuals should get out immediately. Certainly elected and staff in Congress should be banned from owning stocks.

Nobody should accept unearned income when they already have enough of a surplus that they can risk investing it. That is greed! Wall Street is a slave system by proxy, merged with a ponzi scheme, funded by the National Debt. Give the Devil his due. He is very clever at covering a wolf in the skin of a lamb.

These changes will make obsolete many jobs and traditions in the workplace, but it is better to embrace change on our own terms than wait for economic collapse. We got a taste of that in 1929 and 2008. We should never have rebuilt the same house of cards. These reforms are not exhaustive. but repair the deepest flaws of the current system.

Forgiving education debt, and universal healthcare, plans which already exist, are well advised and should not be delayed.

We need to bring the extremes together in wages, in prices, in taxes. By lifting up the bottom, bringing down the top, the middle will expand and we can live in balance with peace and harmony with each other and the environment. The power of the pen to vote must be combined with the willingness to write down different numbers. Small actions can change the world dramatically if we work together. The promise of democracy is to change the status quo without spilling blood. This opportunity could be called The Big History Agenda.

As one person, I can do little by myself. These are just the observations of a simple man. The choice before you is whether you want to amplify these ideas and give them life and help them to multiply. A virtuous society requires virtuous people acting virtuously. While only a government can manage what has been suggested, government cannot achieve anything without the cooperation and demands from a virtuous people. We must replace archaic habits with a new understanding, replace fear with trust, and replace greed with restraint.

There are many paths to a Good Society, but consensus and a definition of virtue are how we start. There will inevitably be fierce opposition to these ideas. What we are doing today with pricing is just as absurd as genuflecting to a king. The laws of mathematics cannot be defeated. We must respect them and use them to our mutual advantage: buy low-sell low is the secret formula of mutual success.

We saw in South Africa how powerful divestment was in overthrowing Apartheid. Keep in mind that it was the corporations that aided liberation because of the demands of virtuous people. We are seeing the same thing with divestment in Russia because of their invasion of the Ukraine. Corporations are no more inherently evil than any individual. Unfortunately, after Apartheid ended, the world returned to bad pricing habits. We as individuals and organizations need to imagine a more just and logical world, and have the courage to bring it to life. The division of labor will create whatever we choose to create.

Think, Talk, Share.

<https://www.behappyandfree.com/pdf/BigHistory.pdf> for the latest version of this document.

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## SUGGESTED READINGS

The Great Wave by David Hackett Fischer

Millionaire : The Philanderer, Gambler, and Duelist Who Invented Modern Finance

by Janet Gleeson