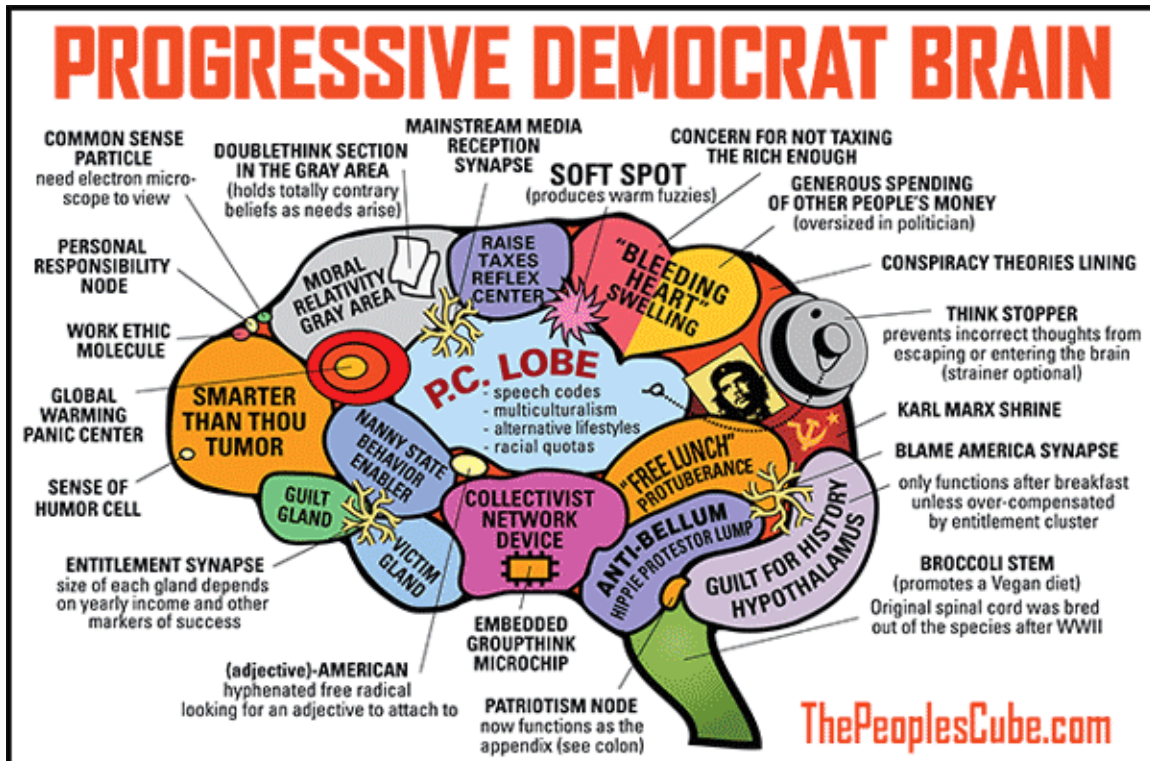
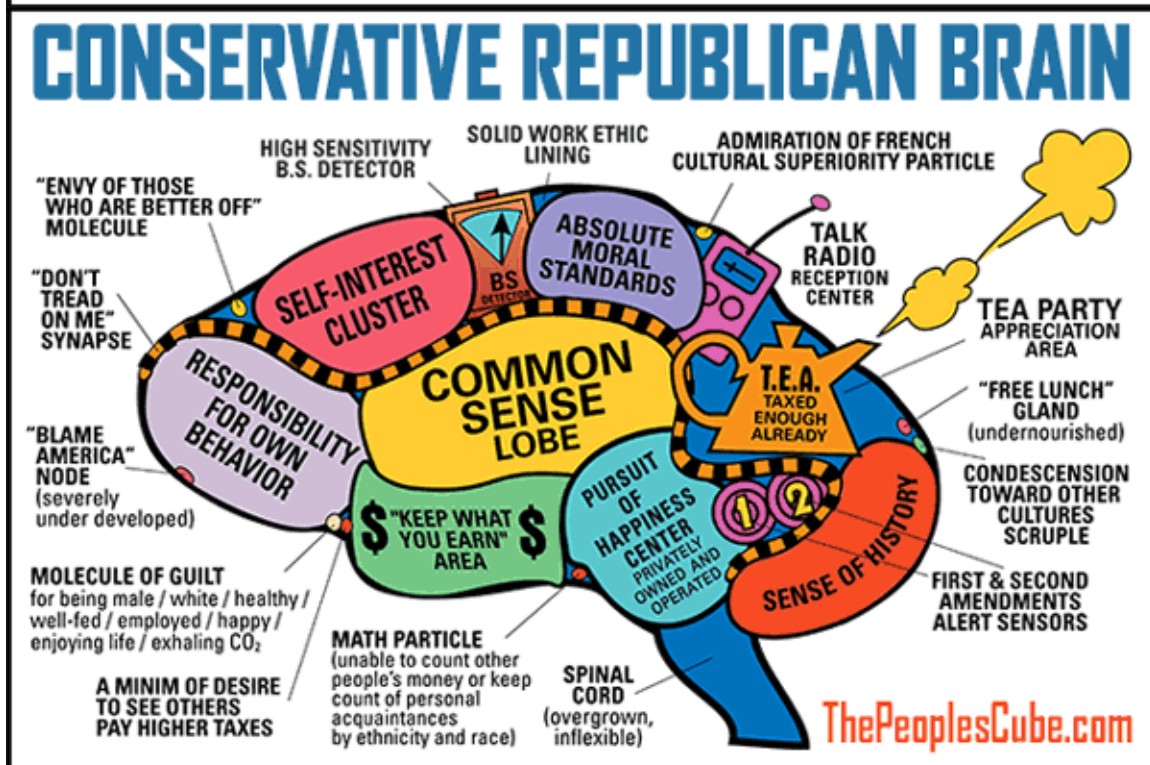


System [Rev. 20180920]

By J — Latest revision: <http://allis.foundation/System.pdf>



*1



*2

The Industrial Revolution of the Middle Ages

... As I have previously written, the Middle Ages were anything but dark. Politically, there was decentralization and multiple sources for appeal. Law was defined by custom, individualized: one could say by contract, but not quite—more by sacred oath. The king's role was to uphold the law, not to declare it.

In such an environment, as one might expect, creative and productive life flourished. There were advances in artistic and literary life; slavery was significantly reduced when compared to Roman times before (and European life thereafter); women achieved rights and status not seen again until very recent history; and there was a high level of religious tolerance and tolerance for new ideas. Such is what one would expect in a decentralized society where law and property was held in respect, and this was found to be true during the Middle Ages.

One would also expect to find technological advancements. This is the subject I will explore in this post. Through Gimpel's book, I will present the remarkable advances in industrial development during this time period...

Let's begin with the author, Jean Gimpel:

Jean Gimpel (1918–1996) was a French historian and medievalist.... In 1987 he was a founding vice-president of the Society for the History of Mediaeval Technology and Science, the British affiliate of AVISTA and the Association de Villard de Honnecourt.

Gimpel introduces his work:

The Middle Ages was one of the great inventive eras of mankind. It should be known as the first industrial revolution of Europe.... Capitalist companies were formed and their shares bought and sold...

Industry and inventiveness did not take a 1000 year pause, but continued from the collapse of Rome until the Renaissance. For example, Leonardo da Vinci did not invent from whole cloth:

Leonardo had borrowed a great many of his inventions from technological treatises by engineers of previous generations...

Energy and Mechanization

The medieval period witnessed one of the more rapid advances in the introduction of machinery in European history. This could not be accomplished without the effective taming of energy. The most common method was the mill—primarily water but also wind. These mills would grind corn, crush olives, tan leather, make paper, etc. While the Romans utilized the mill, it was not nearly to the extent utilized in these later periods. The relationship is inverse to the use of slaves in the economy—the increasing use of the mill corresponded with the drastic reduction of slavery during the Middle Ages.

Cistercian monasteries offered one such example:

Monasteries built in countries separated by thousands of miles—Portugal, Sweden, Scotland, Hungary—all had very similar waterpowered systems within almost universally similar plans for the monasteries themselves.... In certain ways the discipline imposed by Saint Bernard on his monks—the rigid timetable, the impossibility of deviating from

the Rule without facing punishment—brings to mind the work regulations that Henry Ford imposed on his assembly lines...

Despite this near-uniformity in design, the mills were capable of processing various commodities—depending on the region: olives in one region, grapes in another, beer in a third. An example of the complexity to be found in one location is offered in Clairvaux, where waterpower was used for...

...crushing wheat, sieving flour, fulling cloth, and tanning. It is possible that waterpower also activated bellows for the flames that heated the vats in which beer for the monks was produced...

Running water was used extensively for many purposes:

It was carried in lead or wooden pipes to the kitchen for cooking and washing and to the gardens for watering. It was also used to clean out the drains...and to carry away the waste so as to “leave everywhere spotless...”

The utilization of water mills, and the rate of expansion, increased dramatically beginning in the ninth century. For example, in the department of l’Aube, fourteen mills are mentioned in the eleventh century, 60 in the twelfth, and over 200 in the thirteenth... When William the Conqueror set out on his survey in 1086, he recorded 9,250 manors, with one-third of these having one mill or more. Many of these mills were still in use in the eighteenth century.

Many of these mills were owned via shares—by as many as five parties. The share price was subject to fluctuation, and shares could be regularly bought and sold. The shareholders were not always millers—the division of capital and labor was in evidence from the thirteenth century, if not earlier. Eventually, multiple dams, useful in improving the efficiency of the mills, were combined into one limited company—with the shareholders spreading the risk of profits and losses across multiple properties. Such companies would hold annual general meetings of the shareholders, with a review of the accounts from the prior year and the election of managers for the upcoming year.

The Société du Bazacle may well be the oldest capitalistic company in the world. It survived into the middle of the twentieth century when it was nationalized by the Électricité de France.

Many examples of taming water for energy are offered: cams, driven by water power, were developed to mimic the motion of the smith. Paper, despite being invented more than one thousand years earlier by the Chinese, was still manufactured by hand and foot. Once paper was introduced to Europe, the manufacture was almost immediately mechanized...

Mills were introduced under the arches that spanned the rivers. By doing so, the efficiency of the mills was increased due to the increased flow of the water through the narrower passages....

Dams were built to add height to the water level prior to the flow through the mill—again to increase mill efficiency. Of course, the height of the downstream dam also was important, and sometime the cause of dispute—as the owner of the downstream dam, by raising his dam, would lower the fall of the upstream dam.

Where geography and climate was favorable, tidal mills and wind mills were also developed. Tidal mills were unknown in classical times—an example of the medieval urge to discover new sources of energy.

Mining

Mining was an important aspect of the medieval economy. The most important subset was stone quarrying, which the author suggests was more important possibly than all other forms of mining combined.

There was significant mining for building stone in France:

...during her age of expansion from the eleventh to the thirteenth centuries more stone was quarried in France than had been mined throughout the whole history of ancient Egypt...

Initially this struck me as a tremendous claim—given the stone in pyramids of Egypt. However, when considering the significant building of cathedrals throughout Europe in this time, the statement certainly seems reasonable. Additionally, France exported significant amounts of stone. William the Conqueror imported stone from France when building the Battle Abbey.

Mining was also important to the development and use of iron. The use of iron was increased greatly during the medieval period, replacing bronze which was more heavily used during Roman times. Every medieval village had its iron smith—it was common practice for every horse and plough animal to be shod.

The adaption of water power contributed to the high standard of metallurgy in this time:

...the most significant hydraulic invention was waterpowered bellows, which could produce a draft powerful enough to raise the temperature of the furnaces to some 1500 degrees C, hot enough to liquefy iron ore...

Finally, the mining of silver contributed to the progress of mining techniques. Certainly silver, and also gold, played a driving force in the development of mining, however there was interest in other minerals as well—lead, copper, tin, and zinc. German miners played a leading role in the expansion of these techniques throughout Europe.

In the German movement into eastern and southeastern Europe, miners emigrated with other emigrants into regions held by the Slavs and the Magyars. Colonizing and mining went hand in hand.... They moved into Iglau and then into the Hungarian mines of Zips, Schemnitz, and Kremnitz.... German miners in the twelfth century were called in by the rulers of Transylvania, and in the thirteenth century by the rulers of Serbia.

In this lies, perhaps, one source of the German minority communities of central and eastern Europe—communities that continued to thrive for centuries until their final forced relocation and decimation by the victors after the Second World War.

The Pre-Renaissance Renaissance Man

One of the more highly valued professions in the thirteenth and fourteenth centuries was that of the architect-engineers, so-called, as there was no real distinction at the time between what are today multiple professions.

An individual in this field would have the skills of the architect, structural engineer, various specialties of mechanical engineering, and the general contractor. He was considered the master of all phases of the construction project.

Gimpel offers brief glimpses into several examples of this and other types of highly skilled individuals. Most notable of these examples is Roger Bacon. Among many other accomplishments, Bacon wrote of great ships and flying machines—not unlike the letter from Leonardo to the Duke of Milan. Bacon is referred to specifically in one of Leonardo's notebooks.

Gimpel spends a considerable amount of time regarding the work of Villard de Honnecourt. He is relatively well known because a sketch book of his has survived through the centuries—a sketchbook composed of thirty-three parchment leaves.

Villard sketched buildings, for example modernizing the appearance of a window at Reims and the Tower of Laon. He had drawings of a perpetual motion machine—of course, not possible; however, it is remarkable that men of the time explored the possibilities for further energy development.

His design for this machine involved a wheel with seven evenly-spaced mallets or bags around the circumference—attached to swing freely as the wheel turned. In this way, he anticipated that there would always be four on the downward side of the turning wheel.

The idea, like many in medieval Europe, had previously been explored in India and the Arab world. However, it is one example to demonstrate that the medieval world was not in the dark during this time.

On one parchment, he demonstrated five mechanisms, four of which have technological interest. In one corner he drew a water-powered saw. Beneath this is what is thought to be the earliest representation of clockwork, used to “make an angel” placed on a church roof “keep pointing his finger toward the sun.” In a third corner is an eagle stuffed with ropes and pulleys—and a caption: “How to make the eagle face the Deacon while the Gospel is read.”

The eagle was a gadget—Villard appeared fond of gadgets; for example, on another parchment he sketched a hand warmer: a ball with various pivots inside, designed to keep the lump of warm coal from falling out. This system was later adapted to keep mariners' compasses level and barometers vertical.

He also sketched a military catapult, with detailed instructions; a complex mechanism for sawing timber under water—useful for cutting “off the tops of piles under water so as to set a pier on them”; various hoisting machines and water driven apparatus.

Further, he was an observer of nature and animals. In his sketchbook were drawings of various insects, a snail, birds, different wild animals, and domestic animals. He wrote of various medicinal techniques—including a treatment for wounds that included hempseed.

There are sketches of geometrical shapes superimposed on drawings of men and animals. He wrote of geometry, explaining various calculations: how to measure the diameter of a column, only part of which was visible; how to find the center-point of a drawn circle; how to measure the width of a distant window; and many others.

All of this was 250 years before Leonardo's famous notebooks. And Villard was not unique; the author suggests more than 150 manuscripts of this type were produced before the sixteenth century—men like Konrad Kyeser, Roberto Valturio, and Francesco di Giorgio.

Time Waits for the Medieval Man

The medieval mind was inventive and mechanically minded, as has been demonstrated by various examples throughout this book. Gimpel attributes this to the medieval belief in progress, “a concept unknown to the classical world.” He quotes Bernard of Chartres:

“We are as dwarfs mounted on the shoulders of giants, so that although we perceive many more things than they, it is not because our vision is more piercing or our stature higher, but because we are carried and elevated higher thanks to their gigantic size...”

Such attitudes led men to accept inventions as normal, and to assume that new inventions would continue to come forth. Priests would sing the praises of inventions in church.

One invention stands out above the rest, that of the mechanical clock. The Near East and Far East previously knew of sun dials and water-driven clocks. While it is often considered a fool's errand to identify in history the first inventor of something, there is much that points to the (non-water-driven) mechanical clock having been invented in the monasteries of the Middle Ages.

Gimpel cites Lewis Mumford, who sees in the mechanical clock the key invention of the entire industrial revolution:

“The clock, not the steam engine, is the key machine of the modern industrial age.... In its relationship to determinable quantities of energy, to standardization, to automatic action, and finally to its own special product, the clock has been the foremost machine in modern technics....”

The astronomical water-driven clock built by Su Sung in China (an even earlier renaissance man) in the eleventh century (and based on a mechanism invented by a Buddhist Monk more than 300 years before this) was considered, in its time and for centuries to come, the most advanced machine known. The same can be said of Giovanni di Dondi's mechanical clock, built in Italy in the fourteenth century. These machines were so complex that later generations found them difficult to keep in repair.

As an example of the complexity, Dondi's clock was able to maintain the calendar of the moving feasts. Such a feat was not again duplicated until the nineteenth century (although the change in the interim from the Julian calendar to the Gregorian calendar made this more complicated). Dondi's drawings were so detailed and precise that an exact duplicate of his clock was manufactured six hundred years later by Alan Lloyd.

Whereas in China, the art of the clock was kept as an imperial secret with only a handful of scientists and engineers privy to the details, in Europe the technology spread relatively quickly—as one might expect without the state intervening in the enforcement of intellectual property.

Europe did not offer state protection for intellectual property until much later in its development. Such flourishing of technologies, as demonstrated in this book, occurred without patent or copyright laws. Patent law gained its first significant foothold in Europe in the Republic of Venice in 1474, with some evidence for the issuance of patents in England during the fourteenth century. (There are also instances in ancient Greece, 2000 years prior.) Copyright law has an even later start, in 1710 with the British Statute of Anne.

By the fourteenth century, the weight-driven mechanical clock was quite common in Europe—the technology spread fairly rapidly. There is evidence to suggest that the mechanical clock was invented in the late thirteenth century—Robert the Englishman's text of 1271 shows clockmakers at that time making great efforts to solve the various mechanical problems involved.

Of course, along with the blessings of the clock came some curses—as all technological leaps tend to offer. Life became more regimented; every hour the bells would ring. Time did not follow cycles of sunrise and sunset, but of hours and minutes.

There were further developments, in magnets and compasses for example—in some cases, developments not surpassed for centuries. Gimpel credits the perfection of the compass for Europe's conquest of the seas. While Gimpel does not mention this, there was, of course, the development of movable type by Johannes Gutenberg in around 1439.

The “Dark” in the Dark Ages

There is a stereotype of the Middle Ages, encompassed in the term “Dark Ages.” While the term has fallen out of favor with scholars, “Dark Ages” still paints a picture within the mainstream community: war, famine, plague, and religious intolerance including witch hunts.

This stereotype finds its roots in the fourteenth century—toward the end of the period of the Middle Ages. Gimpel describes the Condemnation of 1277 as the beginning of the end for technological advancement and intellectual questioning that marked the Middle Ages. Bishop Tempier condemned “219 execrable errors which certain students of the Faculty of the Arts have the temerity to study and discuss in the schools...”

In so doing he slowed the progress of science and reason in Paris—the Athens of the thirteenth century...

With the condemnation, Gimpel describes the beginning of witch hunts and burnings—something unknown to Europe for much of the preceding centuries. Obviously, the exploration of new ideas would be relatively subdued in such an environment.

Additional major shocks occurred: a devastating famine in 1315—1317; the Hundred Years' War began in 1337 (a war between the by now centralized kingdoms of England and France—and not involving the still relatively decentralized central and eastern European lands); and the Black Death, from 1347—1350.

Most interesting is Gimpel's description of currency devaluation by Philip the Fair of France, beginning in 1294. Philip was instrumental in turning France from a feudal society to a centralized state (apparently he felt that William's descendants needed a proper enemy).

After first devaluing in 1294-95, Philip announced a thirty-nine percent devaluation in 1306. This did not go over well with the people, first going after Etienne Barbette, thought to be the instigator of the devaluation. The demonstrators then went after the king, who—ultimately successful in putting down the protest—beheaded one leading representative from each of 28 trades!

Devaluations continued, and more blood was spilled. Pop culture was on the side of the people, with a song written after the devaluation of 1313:

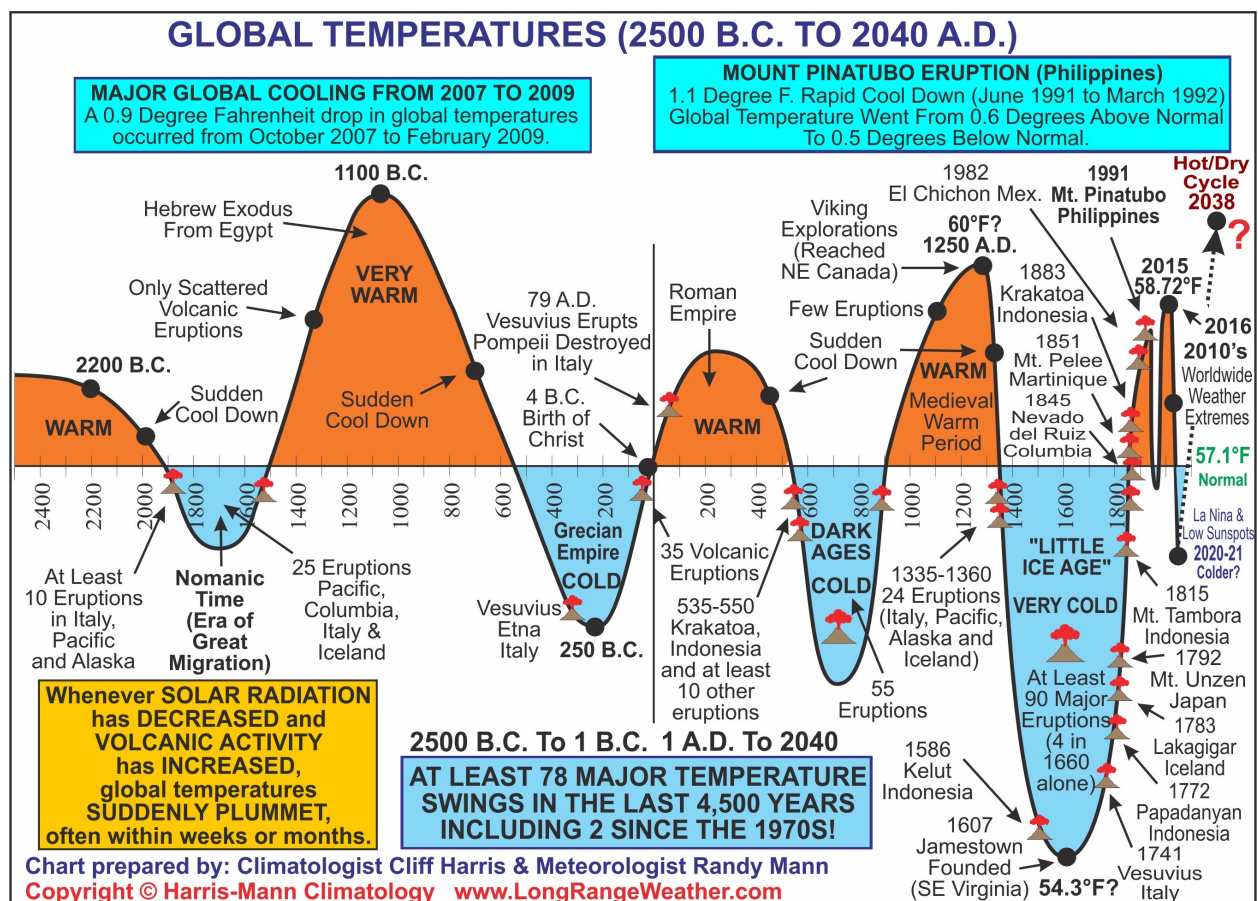
*It seems the king enchants us,
For at first sixty made twenty for us
Then twenty made four and thirty made ten*

*Gold and silver all is lost
None of it ever to be returned...*

Conclusion

Gimpel offers a wide-spanning view of technological development during the Middle Ages. As opposed to commonly-held fallacies, it was a time of significant industrialization and scientific development. Advancements in energy, mechanization, mining, and development of precision instruments all were evident during this period.

Consistent with my previous work regarding this era, I continue to be fascinated by the light afforded to us by those who lived during the Dark Ages. ^{*3}



We should remember, that the Earth's coldest periods have usually followed excessive warmth. Such was the case when our planet moved from the Medieval Warm Period between 900 and 1300 A.D. to the sudden "Little Ice Age," which peaked in the 17th Century. [See above chart] ^{*4}

The Sin at the End of History

“Capitalism is state sponsored usury” —Heinrich Pesch

Heinrich Pesch's association of capitalism with usury will be familiar to anyone who has read much of E. Michael Jones' work on the history of capitalism. For most others the statement is meaningless since usury is an obscure and irrelevant concept in the world of the free market. Most people believe that usury has ceased to be a practical issue, even within the Catholic Church. In this view, likening capitalism to usury is hardly a criticism.

Michael Hoffman was of the opinion that the Church leaders caved into usury as the first intrusion of modernism. John Noonan argued instead that the Church actually changed its mind on usury. Michael Novak in his first life as a progressive Catholic used Noonan's belief to argue that if the Church could change its moral law regarding usury, then it could do the same for contraception. Later, as a neo-conservative he simplified his position to the conclusion that the Church was out of its depth in several areas of the moral law and the popes could not be trusted on questions of economics.

In the three decades following the Second Vatican Council it appeared to many in the Church that sins of the flesh were no longer sins at all. The popular Catholic embrace of contraception, then abortion and homosexuality has produced an abundance of evidence that the Catholic community is now no different to the rest of society regarding the sexual revolution. In defense of their position a close inspection of the New Testament reveals relatively little attention to sins of the flesh. The best known cases in the Gospels both involved women persecuted by inflexible men and forgiven by the Redeemer Himself. The older law of stoning for adultery was replaced by forgiveness and the 'come as you are' theology that flourished in rebellion to *Humanae Vitae*.

References to avarice are not so rare in the New Testament. From St. John the Baptist excoriating exploitation in business dealings (Luke 3), to the merchants weeping over the fall of Babylon in the Revelation of St. John the Evangelist (Rev 18), the Christian Scripture is bursting with concern for economic abuse. The love of God is challenged by the love of money, and the primary question for man is where to store up treasure: on earth, or in heaven. A survey of the Gospels alone will turn up over 30 independent instances relating to the use and abuse of property rights and economic relations. And they represent only four of the twenty seven books of the New Testament.

Like sins of the flesh toward the end of the 20th century, the sins of the marketplace are no longer relevant according to the most vocal exponents of 21st century popular Catholic thought. Like Pope Paul VI preaching an old-fashioned sexual morality to a rebellious world, the pronouncements of popes on things economic are considered equally old-fashioned now and beyond their competence. The bulk of Catholic ink devoted to the morality of the market proclaims the market to be a more reliable guide than the teachings and traditions of the Church itself.

If the market is good thing, and usury is a non-existent thing, then the march of the market and finance to dominance of our world should have been marked by a history of improvement in the human condition under their rising hegemony. It is this history that Jones has attempted to explore in *Barren Metal*. Jones is not an economist, so mainstream economists may stop reading at this point. The facts of history are facts of history, however. If economics is as positive a "science" as it likes to claim then it should have no difficulty with history regardless with who writes it.

Jones writes history as human history. This does present a slight problem to the economist. For the economist, economics is about the doings of rational self-interested individual economic actors, i.e. *homo economicus*.

Humans rarely fit this definition. Moreover, humans bleed, and starve and have families. They die. Jones' history of economics looks at how economic conditions have arbitrarily caused human happiness and suffering. He also examines how non-economic factors, such as religion, alchemy, and political action have impacted on the direction of economic behaviour over the last 800 years or so. For most people, perhaps apart from economists, this makes his work extremely interesting reading...

Usury is the central theme and is portrayed as pitted against labour as the central dynamic of capitalism. Behind usury lies the question of money. The book's title, *Barren Metal*, is a reference to Aristotle's argument against usury, based on the fact money is naturally sterile. While Aristotle used the sterility argument, it must be noted that St. Thomas Aquinas did not. Jones wisely does not immerse himself in arguments over usury, he merely acts the scribe to show that what could be usury in his stories from history just happens to result in misery for workers in those same stories.

The moment that someone, especially a non-economist and perhaps even more damningly, a non-neo-conservative, mentions the misery of workers, red lights start to flash in various quarters: the man must be a socialist. He must be at least a closet Marxist. Jones makes it worse for himself by beginning the book with a chapter on a fourteenth century worker rebellion. Before we get to the socialism of the first chapter it is important to clarify a few points regarding Jones and socialism.

Marx defended usury. *Das Kapital* contains a nice little argument defending the charge of pure interest on money loans. Marx's argument does not hold metaphysical water, but he draws a strong conclusion from it. For Marx, and all the Marxists I have asked about this point, banks and interest are fine and good. It is the ownership of productive capital that is the evil. Jones fails as a Marxist on this point. By contrast, Michael Novak might be a Marxist, at least as far as his usury theory goes.

The Church has always defended the poor, especially where there is injustice involved, but it has always opposed socialism in the strongest terms. Jones is following the Church's approach.

Unlike Marx and Novak, Jones believes usury does exist, moreover that it is the refinement of the capitalist urge. For those with a bend for theory and old fashioned moral thought you could read questions 66, 77, and 78 in the second part of the second part of St. Thomas Aquinas' *Summa Theologica*. They relate to the moral principles underlying private property, justice in prices and usury, all of which are ignored by capitalist economic thought. A little reflection on these can lead to the simple insights that excessive land rents, prices distorted by power imbalances in the marketplace, and the pure riskless component of interest on money loans are all places where people obtain a return from something that they do not own. They are all species of theft. Jones does not dwell on these arguments, but he does tend to adopt their conclusions. At the very least he presents example after example of where they hold good and in doing so reveals himself to be in conformity with the longer tradition of the Church's understanding of things economic.

Jones condemns abuse of private land property explicitly in his treatment of the Irish potato famines in Chapter 72. Amartya Sen won a Nobel Prize in economics for demonstrating that all the famines which have occurred over the last century and a half were like the Irish famine. They all happened in areas that never stopped exporting food, even though huge numbers of the locals were starving to death. The Irish case was sufficient for Jones and it certainly followed Sen's pattern.

Jones digs a little deeper into the harshness of the Irish landlords and finds that debt was really the master spring that turned an agricultural calamity into a human disaster. Some of the cogs in that machinery included the popularity of Smith's *Wealth of Nations* and the ideology of the newly minted classical economics of the British Enlightenment. Sen focused on train loads of relief food that were turned back from starving regions of Bengal in the vain hope that "the market would fix it." Jones recounts how British troops were brought to protect the loading of ships with grain to be exported away from crowds of starving Irishmen on the basis of protecting private property rights.

The Church has always believed property should be privately owned and commonly used. The English landlords ignored the second part, just as neoconservatives tend to do at the present time. The Church's position is not socialism, which ignores the first part, and only believes in common use. Communism, which is really just capitalism, but with the state as the only property owner, uses most of the same techniques as its supposed opposite. The bad communists used propaganda to trick the community into accepting low wages while overcharging their customers. Capitalist corporations use marketing, but the essential method is the same. Communism is less efficient than capitalism, but the party still live more like capitalist power brokers than their comrades. Bad communists have worthless money, while good capitalists merely have inflation. Bad communists used to be distinguished by making women work in factories and everyone work long hours for a feeble standard of living. Good capitalists have achieved the same thing using the market.

Land makes several appearances through the ninety nine chapters and is lurking in the background in many others. The experience of the Scottish highlanders is largely about land. The older Catholic order, where landed lairds saw their property wealth in terms of stewardship and social responsibility, was pitted against the new Capitalist order, where the lowlanders favored the Protestant ethic of economic individualism. The Protestants had the might of the English government on their side, which at that time was controlled by the Whigs. The libertarian abhorrence for government conveniently ignores the fact that capitalism needs a supportive legislative regime. That is, it needs strong government. The paradox of strong government implementing *laissez-faire* principles dominated the English political scene over most of capitalism's history. In the USA it is easy to forget that in England "liberal" means conservative.

Somehow liberals of both stripes need strong government to ensure that they are able to enjoy their favored sort of liberty. The left-winger needs a strong government to feed them, while the right winger needs a strong government to enable them to feed off the less fortunate, which is the story of the Irish potato famine.

The economic dimension of the French Revolution was also largely about land. The older feudal political structure used land as the implicit structure for both political power and economic organisation. Bringing down the government also meant stealing the feudal land. Chapter 49 relates this to the emerging bourgeois, organised under freemasonry and active in the capitalist destruction of the previous order.

There is little point in trying to pinpoint where just price appears in this volume since it is the dynamic in almost every chapter. Capitalism is the systematic avoidance of the just price. Pope Leo XIII tended to focus on just wages, which is one aspect of the just price principle. Since laborers also tend to be consumers, high prices for products is ultimately equivalent to low wages as well. Jones begins his tour through economic history with exactly this violation as the fuel behind the Ciompi rebellion of 1378. For the defenders of the free market, this book shows that the more capitalism has favored usury over the just wage, the further prices have strayed from the optimum.

Samuelson was once clear in pointing out that the price that resulted from the perfect market was equal to the normal cost of supply. Wilhelm von Kettler not only agreed, but noted that this was also the just price. Does this make St. Thomas Aquinas a supporter of the free market? Not quite. The free market is not the perfect market. Obtaining perfect market prices does not require a perfect market—it only requires the moral will not to overcharge. This is what capitalism shrinks from and this is why low wages and high prices are the common lot of the common person through the age of capitalism and the pages of *Barren Metal*.

This simple moral fact is apparent almost everyone, but economists have been trained to reject it and pretend that this “science” of human action in the market place is more like physics or chemistry than an explication of moral principles. Its violation is almost too common through the 99 chapters of this book to make a fuss about. Squeezing the common man is something that is invisible to economic theory because *homo economicus* is not hurt when it is squeezed, only real people are. Classical economics is premised on the belief that labor does not mind having its price cut and the inconvenience of labourers starving to death is merely an economic correction. Malthus preached as much, and he had no shortage of followers. Today there are no shortage of Catholics who would side with Malthus rather than the popes.

Jones focuses on real people. This is perhaps the most endearing aspect of the book. We are introduced into the worlds of real historical people. The winners, whether they are Fuggers or Churchills, are shown with all their personal foibles and frailties. The thinkers, such as Newton, John Law, or Adam Smith are shown in their contexts. They are typically hungry with a hunger for something other than money, but try to sate it with gold.

Adam Smith is portrayed as fatherless, circulating in a fatherless crowd. Somehow the fatherless streak has been important in the development of economic thought. It is really at core the seed of rebelliousness. Jones’ character studies are delicious and relevant. To learn the psychology of a man goes a long way to understanding why he thinks the way he does, especially when he rejects the obvious. This is the hallmark of good literature, to plumb the depths of the human condition and explore its manifestations in action, especially social action. *Barren Metal* is delightful literature.

The ninety nine chapters read like just as many novelettes, but non-fiction. Humans work in a moral environment, shaped by religious beliefs, complicated by concupiscence and the effects of original sin. Aristotle noted that money was the only thing a man desires without limit because it satisfies no natural desire. For some it makes hungry where most it satisfies. It becomes the *summum bonum*, the greatest good towards which all other action is ordered. The only other thing that man desires without limit is God, not because God makes man hungry, but because God delights our highest faculties and the potential for divine delight is unbounded. God completes the man through grace and man responds by desiring to conform himself more to God. By contrast, wealth appears as man’s tool, but easily becomes his master. It gives him power over others, to effectively enslave them. God is all powerful, but His power is usually expressed in freedom and making free. In these, and other respects, wealth is the earthly match to God in the eyes of man, hence the preponderance of admonitions against avarice in Holy Scripture.

This theological perspective is not developed by Jones, but rather sits implicitly. Most of his character portraits illustrate man’s thirst for God in the negative. They show the corruption that flows from a Godless life. Isaac Newton was an alchemist, he dabbled in turning base metal into gold as a metaphor for turning man into a god. Jones strays into the curious story of the way Newton’s physics could only be accepted by his peers because they also were secretly alchemists, whereas the common Protestant would reject them because they looked too Catholic. Robert Hugh Benson foresaw that in the end times the West would polarize into Catholics and freemasons and this polarization is somehow evident in the men who made up the history of economics.

The sociologist Tönnies divided human societies into *Gesellschaft* associations of individuals and *Gemeinschaft* communities of genuinely social persons. Economics is about individuals and self-interest, like the lodge. The Catholic Church is about communities of persons related through the logic of love and ultimately modelled on the example of the Most Holy Trinity. There can be a *Gemeinschaft* economics, and it is found in the home, but it needs the will to choose the good of the other in the marketplace when exported to society as a whole. *Gesellschaft* economics is the economics of the fatherless individuals like Isaac Newton, Adam Smith, and David Hume. It is what is taught as economics both on the Right and Left. If the *Gemeinschaft* religion is Catholicism, then the *Gesellschaft* religion must be Freemasonry.

Chapter forty nine describes “The Creation of the Grand Lodge.” Many join the Lodge to help their business prospects, but Jones looks the larger scale relationships between the lodge and economics, especially in his chapter on the Masonic suppression of the Jesuit Reductions in Paraguay. Since the death of Pope Pius XII the Church has been rather quiet regarding Freemasonry, but prior to that there was a constant stream of the strongest condemnations against what it meant to Christians and society. Outside of this chapter the significance of the lodge can also be found behind many of the prominent characters Jones examines. The interested reader might like to examine the freemasonic connections of many of the others that Jones presents merely for their economic exploits, especially those from Britain and the US.

While it would be rash to link capitalism with freemasonry, the individualism in both gives them considerable common ground. Edward Cahill believed Freemasonry was closely linked to communism, which many would consider sufficient evident to break any link with capitalism. On the other hand Chesterton considered both socialism and capitalism to be co-conspirators against the common man, so perhaps the tension is only apparent. Robert Hugh Benson may have been right after all. Jones does not indulge speculations regarding the machinations of freemasonry, but merely presents some of the better documented facts.

Regardless of their associations with secret societies, the moral framework of Jones’ protagonists have considerable similarities. The notion of solidarity is noticeably absent. Also absent is any appreciation of the long term. Lord Keynes was not alone when he remarked that “in the long term, we are all dead.” It is almost a hallmark of capitalist thinking to exploit the present and store up calamities into the future. It is impossible to point to the best instance of this in *Barren Metal* because almost every event chronicled has this feature.

The speculative bubbles are examples of the short term profit taking at the expense of necessary future calamity. Jones deals with the Mississippi Bubble in Chapter 46, and is rather explicit in claiming that the inflationary schemes which create speculative bubbles all share this same feature. All are predicated on short term profit at the expense of future calamity. The mechanics of the business cycle also relies on short term greed ignoring longer term realities. Many readers will recall the belief of a dozen years ago that the good times would never end and everyone could be rich by borrowing and speculating. That story received widespread currency a year or two before the financial collapse of 2008.

Nowhere is this more evident than in the matter of currency debasement. In the old days of precious metal money that meant debasement by alloying coins with junk metals instead of gold or silver. The age of capitalism can hardly be blamed for inventing debasement of money. The Romans suffered under debasement of their coins and it was a cause of Diocletian’s abdication. The problem of money has been present since ancient times, but today it is a puzzle that remains unsolved.

In this age of global financial uncertainty there is a strong movement back to gold as “real” money. The economists of the so-called Austrian School tend to favour gold. It has a certain philosophical strength in that it can be shown that exchange is closely linked to the value of labor, so a substance that represents labour is “naturally valuable.” The question of how far one can take the “labor theory of value” is examined in *Barren Metal*, both through various case studies and a discussion of its development as theory. The labor theory was almost universally accepted until the 19th century, after which it fell out of favor, largely because it failed to justify land rent, pure entrepreneurial profit and usury. That is, it does not sit well in an economic world that ignores the moral directions found in Questions 66, 77 and 78 of the second part of the second part of St. Thomas Aquinas’ *Summa Theologica*.

In earlier times the systematic rejection of these moral limits to profits in the marketplace was not as developed, and it was relatively easy for people to see these connections. Today we are immersed in a different economic approach, one that Scott Meikle claims has lost the ability to communicate with the likes of Aristotle. That should not be a surprise, since Aristotle was comfortable with common sense metaphysics, but the Enlightenment has based its thought explicitly on a rejection of metaphysics. Jones takes a middle approach. He recognises more value in the labor theory than most people today, but eventually rejects it, at least in its Marxian formulation, because it cannot arrive at a price based on the amount of labor in a product. Marx failed to understand labor because he failed to see the role which God’s labor plays in creation or nature. A man could invest enormous amounts of labor to produce wine in Iceland, but his wine would not come close in value to wine produced in Portugal, with only a fraction of the effort. Readers may draw their own conclusions. Either way, the matter is not as cut and dried as mainstream economics would have its students believe, and *Barren Metal* goes a good distance toward reviving interest in this forgotten question.

The Austrian school fondness for gold is partly based on their attempt to reintroduce some metaphysics into economic thought. Like other aspect of their attempt it is only partial, but it is sufficient to make a strong case for metalism. Regardless of the metaphysics of labour theory of value and natural money, the evidence shows it to be a fickle choice for a medium of exchange. *Barren Metal* contains a good set of case studies for Austrian gold bugs. The problem with gold money is that once it gets the State’s stamp of approval on it the average person loses interest in whether it is really gold. Isaac Newton the alchemist was selected to be the master of the mint, which makes for an extremely interesting story. Jones makes a story of it and includes interesting explorations into the linkages with physics. There are other cases as well, all ending with debasement, and the kind of results that have turned too many to socialism.

As well as debasement of metal coins, there is also the far easier debasement of paper money based on precious metal. Notionally paper money came into existence as a paper receipt for a quantity of gold being held either by some organisation capable of holding it securely (a goldsmith, a bank or the government). Issuing more ‘receipts’ via loans than represented the actual value being held is an old trick and an easy form of debasement. So easy, in fact that *Barren Metal* contains several historical examples. In addition, Jones notes that the supply of gold does not necessarily meet a community’s need for currency, a problem he investigated in Scotland in particular. Others have noted a variety of historical mismatches between demand for currency and supply in gold money economies, but the point is clear.

The choices for money are usually limited to three possibilities, metal-backed, debt-backed and fiat. Metal backed money is very clearly ruled out in *Barren Metal* and the evidence and logic is hard to argue. Fiat currency is simply money printed into existence, usually by the government, and meaningful merely by its acceptance by the community. Lincoln printed fiat money known as Greenbacks to help finance his war. It worked well because his government had the self-restraint to print only a prudent amount, proportioned to the size of the economy and

capacity of the government. Getting the dose right is the key. Generally, most students of economics today are fiercely dismissive of fiat money, largely because governments usually fall prey to a strain of public avarice and overprint. The result is essentially debasement.

Debt based money has come to dominate western economies. Its critics see it as fiat money only more costly. Governments can borrow as much as they want which means the volume of money does not necessarily match the need for money in the economy. Every dollar borrowed into existence is a dollar on which interest must be paid, which is the sinister side of debt-based money because that interest looks very much like usury at a national level. Left unregulated, debt based money tends to grow, causing inflation, which is merely debasement by another name, and greater national debt—hardly sensible, but now the dominant form of money. With debt-based money (and the usury that goes with it) as the norm, it is easy to understand the gold bugs' enthusiasm for something more solid, but throughout history, and especially in the United States after the Civil War, the medicine of "sound money" has proven more harmful than the disease of inflation.

Jones considers other forms of money as well, including my favorite, the French assignat, which is a currency based on land value owned by the government which came into being during the French Revolution. If gold money is embodied labour and naturally money, then land is also naturally money because in one form or another almost everything of value in the economy is the result of complex combinations of labour on the raw materials of the earth and the use of land-based space. The value of products is therefore a mixture of the value of labour and the value of land/space resources that have contributed to its delivery to its end consumer. Land is static in a physical sense, but land values rise in proportion to the economic activity that is carried on in their vicinity. If the government owns tracts of land and rents them to private individuals and businesses it has no involvement in those businesses but it does have the right to charge them rent. This makes land naturally valuable. If the government issues money based on the value of its land assets that money is backed by a physical bounded asset that has natural value every bit as valid as labour value. As the economy grows, land values grow, hence the volume of money grows, which naturally matches the needs for currency. To top it off, unlike debt money that costs the community in interest each year, land backed money earns rent from its tenants, so it lowers taxes without getting its nose into the business of its tenants.

Somehow the French worked this out and during their revolution they stole land and issued money against it as assignats. Despite all the nice theoretical reasons above the assignat was a failure. Was it because land based money is flawed? No. It was merely because the revolutionaries did not have the self-restraint to limit their printing of assignats to the value of the land. It became debased by run-away inflation.

Increasing the money supply is not totally a bad thing. In the short term it brings prosperity and political optimism. It makes fortunes. Unfortunately when it is out of step with the physical economy, the scale of the actual capacity of the community to produce useful and needed products, its long-term effect is disaster. As the disaster approaches it can be delayed by more of the inflationary poison, but that only intensifies the eventual collapse. Jones provides many case studies of this process in a variety of different packages, but the ultimate pattern is similar.

Behind all of them are various mechanisms of usury, appearing to get something for nothing. That is either theft or illusion. Most of the illusions are really thefts from the future and the victims are more often those that cannot afford the folly. This is the essential logic of capitalism. It is state sponsored usury. The state over the last century has been vigorously abetted by an educational system that has permitted a system of thought to develop that purports to explain the mechanics of the economy but is only a clever illusion to hide the moral dimensions of its essential flaws. Jones examines Keynes, and a selection of recent theories and cases. Keynes understood the shortcomings of the gold standard and accurately predicted its demise. He knew that an economy needed to be managed, but as a self-

proclaimed “immoralist,” he denied economics its necessary foundation in the moral law. The resulting collapse of Keynesianism in the 1970s allowed the economic dog to return to the vomit of laissez-faire capitalism under the leadership of Milton Friedman, Paul Volcker, Margaret Thatcher, and Ronald Reagan. Keynes, the man, lived his quip “in the long run we are all dead” and did not care to plumb the long-term consequences of what appeared to work so well in the short term. Keynes’s dictum could be not only his own epitaph, but the epitaph for capitalism as well.

The men behind capitalism may have been powerful, and usually rich, for at least a time, but they are not the type of person you would want your daughter to marry. By and large, they are all bad men. The most effective have been the bankers and, with the magic of usury, the bankers have been creeping forward as a class, always a little wealthier than before, sometimes slowly, sometimes violently. Usury creeps. If one small class of humanity has constantly crept larger and larger on the sin of usury, it can only lead to one conclusion. Jones does not go there, he is too much of an optimist. If you want to examine that possibility you would do well to read a book published in 1947 by the sociologist Karl Zimmerman. It is not about economics, it is about Family and Civilization and is still in print. While Jones has shown in *Barren Metal* that usury is the dynamic of capitalism, Zimmerman can be used to conclude that it is likely to be the sin at the end of history, or at least the end of the history of the West. *5



ABOVE: POLITICAL CARTOON BY GLENN MCCOY — ‘REFERS TO PLANNED PARENTHOOD PROFITING FROM DEATHS OF INNOCENT LIVES’ *6

[Planned Parenthood Founder, Margaret] Sanger called for “a simple, cheap, safe contraceptive to be used in poverty stricken slums, jungles, and among the most ignorant people.” But, Sanger added, “Even this will not be sufficient...” *7

All the World's Suffering is Designed on this Business Model

[Dutch Banker turned whistleblower, Ronald] Bernard revealed the utterly depraved and wicked practices of the elite which included child sacrifice, rape and more.

He also went on to say that human beings on this planet can be traced back to a predatory state or elite entity which is immune from the rule of law via privilege given to them through the state.

“All misery on earth is a business model.”

“Syria is a business model,” Bernard says. “It is about resources and some other interests.”

... While his interview De Vrije Media in April touched on the utterly murderous and insane practices of the elite, a new interview released this month goes much deeper. In the second interview, Bernard explains how and why the ruling class are able to maintain this control while committing horrid crimes, and while extracting wealth from the citizens through unscrupulous and illegal means, all the while maintaining immunity from the law.

They’re “like a bunch of vampires, that is what it is. In 20 years they already stole 100% of the real value. This is what caused the national debts to increase, you will see everywhere, with individuals, that those debts keep growing,” Bernard explains as he details our current situation.

“Then reports start showing up, like Oxfam Novib after a global research did show that 8 people own as much as half the people in the world. How is this possible?” he asks. “It’s not just speculation, it’s the interest rate that takes the real actual value and adds it to the capital at the top.”

He is correct, 8 people own more wealth than half the world and it is because the system they built is set up to funnel wealth upwards. These people robbing the masses with impunity is entirely possible, as Bernard explains, because they operate outside of normal laws.

What Bernard is referring to in the quote above is illustrated on nearly a daily basis. We see bankers across the planet get exposed for funding terrorism, human trafficking, money laundering for drug cartels, and employing a scheme of wholesale robbery against the commoner. When these criminals are caught—and even admit to their crimes—they are let off with no accountability.

Bernard then goes on to make a powerful yet ominous statement.

“All misery on earth is a business model.”

When we look at the suffering of other human beings across the planet, we can link this back to a predatory state or elite entity immune from the rule of law through special privilege obtained through the state....

While Bernard goes on to note that there is a single organization at the top running things, we feel that it is a little more complex. There are certainly power players who influence global policy, but there are constant rifts within these elite groups separated by different nationalities and cultures. However, that doesn’t change the nature of the effect—debt and suffering.

This top-down model, as Bernard points out in the latter part of the interview, is “the ideal situation for psychopaths” because they get to prey on the masses using the power of the state.

“As long as people don’t realize how it works: How they’re deceived... How their being robbed... How the value, their value, is taken away from them to enrich the rich even further... as long as the people don’t see this, as long as they are not aware, nothing will change.”

Even when people do become aware of the banking elite and their ability to rule from outside the law, they believe they can change it by acting within that system. This deception is maintained by instilling the illusion of democracy.

This control is maintained, even over society’s most brilliant minds, because people have been told their entire lives about the “illusion that we live in a democracy.” They buy into it because it makes “one feel like they have contributed to the democracy, and real change is about to happen.”

But, like Bernard notes, that change never comes because the people who enter the system, even if they are originally genuine at heart, become puppets for the status quo.

What Bernard is talking about is not some conspiracy theory. It is very real. As the Free Thought Project reported this week, in an interview with French publication Le Figaro, Russian President Vladimir Putin, noted this exact same thing when he said U.S. presidents serve as little more than puppets for the ruling oligarchy.

“A certain person may be elected by the public on the basis of his merit and ideals—but rarely is this person able to formulate policy,” Putin said.

The good news is that there is a solution to this madness and it is in the palm of your hand right now, or on the screen in front of you. Humanity has the ability to communicate with one another across the world—instantly.

It is up to us how we choose to use this ability. Will we spend it staring at videos of kittens 24/7, or break away for a few moments to take in and disseminate information that will help to free our fellow human.

Information and knowledge will free us from those who wish to keep us oppressed but only when we want to be free. This all starts with you. *8



ABOVE: GARFIELD COMIC — ‘MEDITATION ALLOWS ONE TO OBSERVE THEIR THOUGHTS AND DISCOVER THEIR SOURCE OF FEAR IN EVIL’ *9

“The hardest thing is watching good people be destroyed because they are good people.” — *W. McElroy’s husband*

Millennials and the Decline of Political Thought

We accused Justice Antonin Scalia of being a homophobe after his dissent in *Obergefell vs. Hodges* without even taking the time to understand his decision. We responded to Republicans' wariness of accepting Syrian immigrants by condemning their alleged racism without understanding how the Obama administration's failures contributed to such an exodus in the first place. We pledged support for the Black Lives Matter movement online while often refusing to involve ourselves in the protests happening in our communities.

The political involvement of our generation is becoming increasingly devoid of substance.

Gay rights, the Syrian refugee crisis, and race relations are undoubtedly important. In fact, they are crucial issues that our nation must address. Yet the disturbingly reductionist approach we take in responding to such problems reflects a troubling trend that is taking root amongst millennials: a tendency to morally simplify complex political issues. We "virtue signal," expressing viewpoints that are trending in our communities to fulfill our own narcissistic desires for acceptance.

Fueled by the rise of social media, engaging in the nuances of policy is sacrificed in the name of moral clarity as we jump to self-righteous conclusions to satisfy an online audience. Dialogue becomes obsolete, preventing us from appreciating the complexity of today's thorniest issues and from being able to generate solutions to society's most pressing problems.

The crises that are facing our nation are profound: health care costs are rising at unprecedented levels, educational performance for the poor and for people of color are spectacularly low, and the global security environment is at its most unstable since the end of the Cold War.

We tend not to focus on these topics, however. Despite being engulfed in one of the most contentious presidential elections in modern history, we do not even know the stances of our candidates on most of these subjects. Why? Because understanding them would require us to do more than watch a 30-second BuzzFeed video clip showcasing Trump's racist tirades towards illegal immigrants. They require us to invest time reading substantive articles, understanding complex concepts that can't be boiled down to an "ism" or "phobia." And, of course, because they don't make for good social media posts. A lengthy Facebook rant on the importance of investing in preventative medicine wouldn't get many likes, and it would be downright impossible to explain with Twitter's 140 character word limit.

Instead, we jump on every slip of the tongue produced by our candidates.

In an age defined by the rise of social justice warriors, calling out the racism and sexism of both Trump and Clinton is a convenient way to bandwagon onto the trending, progressive movements of our generation. Though it is undoubtedly important to hold our nominees accountable for their words, it seems that many engage in such moral condemnation solely for the purpose of advancing their personal reputation. Social justice warriors are the ultimate armchair activists, a far cry from the grassroots organizers and protesters that are at the forefront of advancing equality. Instead, they engage in the worst forms of political activism, where the standard for effecting change is lowered to brief affirmations of solidarity that usually don't amount to any tangible results.

Even worse, such moral righteousness prevents us from engaging deeply with the problems at hand, revealing a fundamental contradiction amongst those in our generation: though we claim to be moral relativists when

interpreting societies foreign to our own, we do not hesitate to shut down the dissenting opinions of those within our own communities.

Responses to 2016 presidential election also encapsulate this attitude perfectly. Fueled by the desire to “virtue signal” in our online communities, we immediately label all Trump supporters as bigots undeserving of our attention. In fact, I have seen many of my peers demand that all Trump supporters unfriend them immediately, refusing to see these individuals as anything more than racists and sexists. For some, of course, Trump’s bigotry may constitute a red line. Others, however, draw a red line with Clinton’s support of abortion, which they view as mass killing of fetuses. For such voters, though they may find Trump’s chauvinism to be abhorrent, the moral imperative of preserving life takes priority.

Even more importantly, support for a political candidate may not be the result of automatic “decision rules,” but rather of a multiplicity of factors. This explains why Trump is may be polling as high as 32% amongst Hispanics, as many Latinos are willing to tolerate Trump’s insensitivity in the hopes that his business expertise will improve economic conditions and that his harsh stance on illegal immigration will better help them get jobs and receive social services. But such nuance has no place in a culture dominated by social media, where the rush towards passionate extremes is what generates the greatest following. For many in our generation, Trump’s bigotry and Clinton’s progressive rhetoric are all that matter: it’s enough for a catchy Tweet after a debate and the approval of the overwhelmingly liberal community.

Virtue signaling is easy: it does not require us to be educated about policy, only that we distill complex moral and social problems into a memorable hashtag or Facebook post. We become accepted by our communities, receiving the external validation we so often seek on social media.

Nonetheless, it is our responsibility to deviate from such a culture and engage in the harder task of understanding the nuances and moral complexity of current issues. We must challenge ourselves to look past the headliners of our time and expand our capacity to comprehend the unfamiliar. Achieving such a mindset is crucial, as it is only then that we will achieve the true diversity on which Stanford prides itself, both in representation and in thought. ^{*10}

How Liars Create the ‘Illusion of Truth’

“Repeat a lie often enough and it becomes the truth”, is a law of propaganda often attributed to the Nazi Joseph Goebbels. Among psychologists something like this known as the “illusion of truth” effect. Here's how a typical experiment on the effect works: participants rate how true trivia items are, things like “A prune is a dried plum”. Sometimes these items are true (like that one), but sometimes participants see a parallel version which isn't true (something like “A date is a dried plum”).

After a break—of minutes or even weeks—the participants do the procedure again, but this time some of the items they rate are new, and some they saw before in the first phase. The key finding is that people tend to rate items they've seen before as more likely to be true, regardless of whether they are true or not, and seemingly for the sole reason that they are more familiar.

So, here, captured in the lab, seems to be the source for the saying that if you repeat a lie often enough it becomes the truth. And if you look around yourself, you may start to think that everyone from advertisers to politicians are taking advantage of this foible of human psychology.

But a reliable effect in the lab isn't necessarily an important effect on people's real-world beliefs. If you really could make a lie sound true by repetition, there'd be no need for all the other techniques of persuasion.

One obstacle is what you already know. Even if a lie sounds plausible, why would you set what you know aside just because you heard the lie repeatedly?

Recently, a team led by Lisa Fazio of Vanderbilt University set out to test how the illusion of truth effect interacts with our prior knowledge. Would it affect our existing knowledge? They used paired true and un-true statements, but also split their items according to how likely participants were to know the truth (so "The Pacific Ocean is the largest ocean on Earth" is an example of a "known" items, which also happens to be true, and "The Atlantic Ocean is the largest ocean on Earth" is an un-true item, for which people are likely to know the actual truth)...

To cover all bases, the researchers performed one study in which the participants were asked to rate how true each statement seemed on a six-point scale, and one where they just categorised each fact as "true" or "false". Repetition pushed the average item up the six-point scale, and increased the odds that a statement would be categorised as true. For statements that were actually fact or fiction, known or unknown, repetition made them all seem more believable.

At first this looks like bad news for human rationality, but—and I can't emphasise this strongly enough—when interpreting psychological science, you have to look at the actual numbers.

What Fazio and colleagues actually found, is that the biggest influence on whether a statement was judged to be true was... whether it actually was true. The repetition effect couldn't mask the truth. With or without repetition, people were still more likely to believe the actual facts as opposed to the lies.

This shows something fundamental about how we update our beliefs—repetition has a power to make things sound more true, even when we know differently, but it doesn't over-ride that knowledge...

If repetition was the only thing that influenced what we believed we'd be in trouble, but it isn't. We can all bring to bear more extensive powers of reasoning, but we need to recognise they are a limited resource. Our minds are prey to the illusion of truth effect because our instinct is to use short-cuts in judging how plausible something is. Often this works. Sometimes it is misleading.

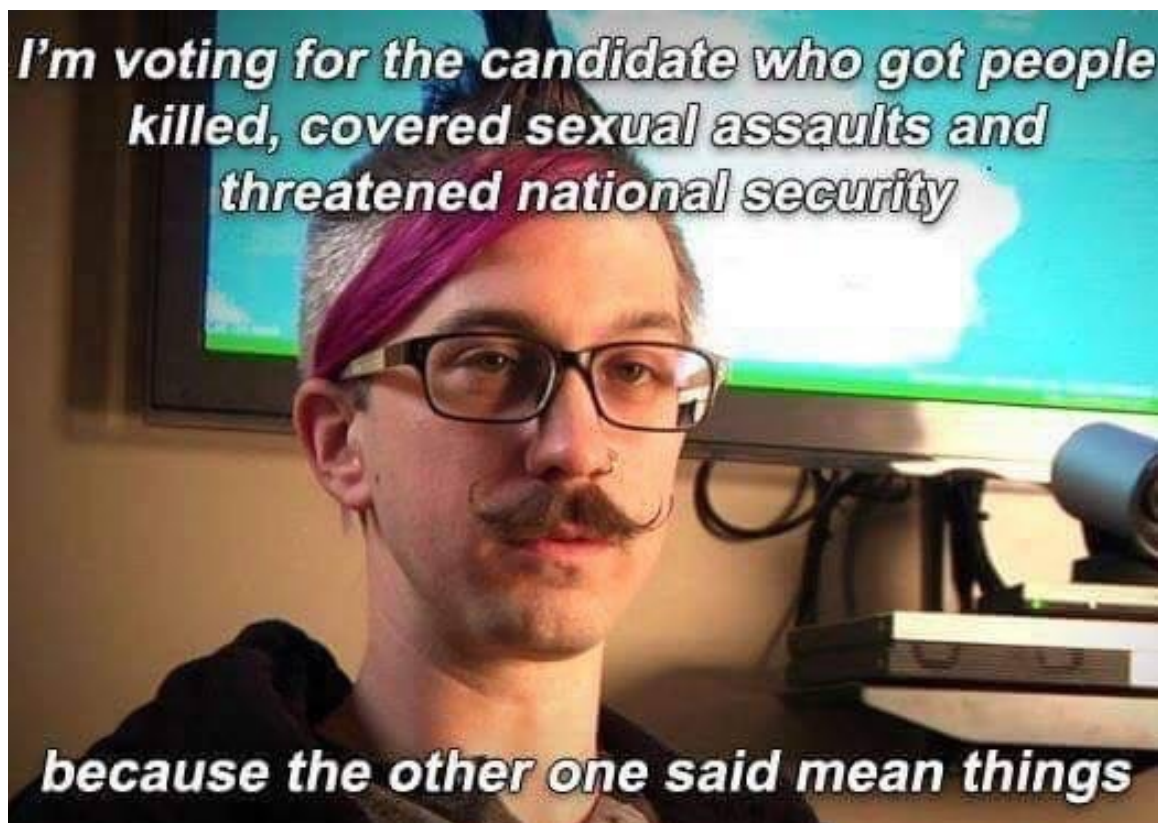
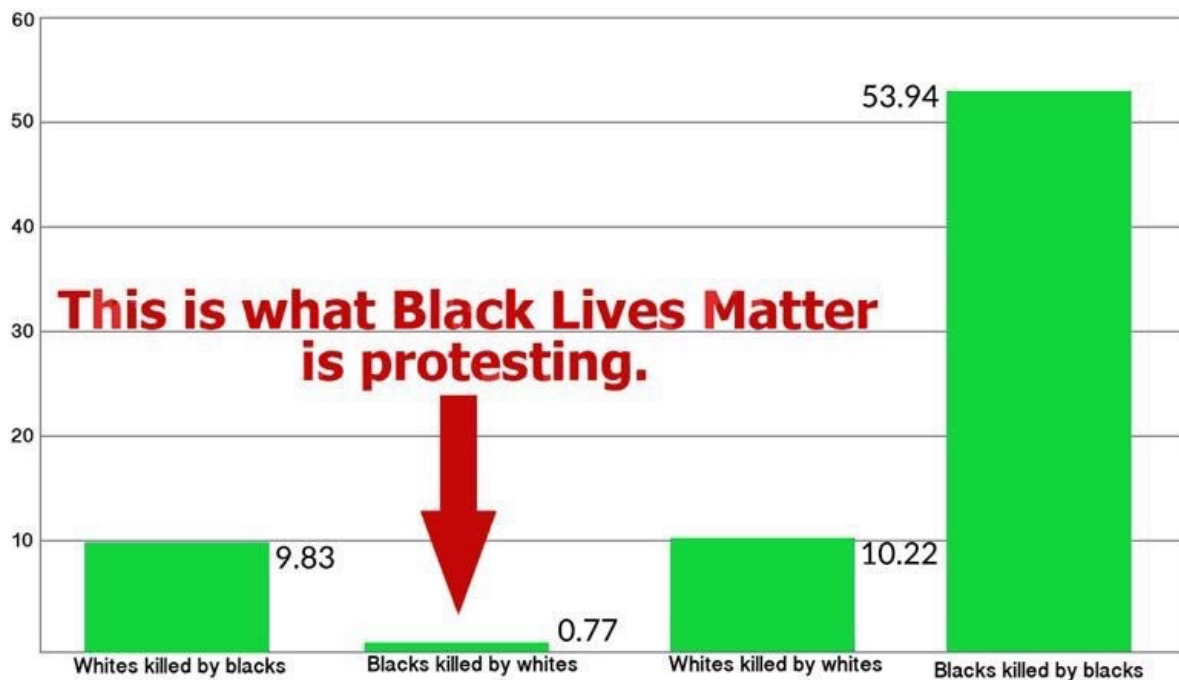
Once we know about the effect we can guard against it. Part of this is double-checking why we believe what we do—if something sounds plausible is it because it really is true, or have we just been told that repeatedly? This is why scholars are so mad about providing references—so we can track the origin on any claim, rather than having to take it on faith.

But part of guarding against the illusion is the obligation it puts on us to stop repeating falsehoods. We live in a world where the facts matter, and should matter. If you repeat things without bothering to check if they are true, you are helping to make a world where lies and truth are easier to confuse. So, please, think before you repeat. ^{*11}

"You are personally responsible for becoming more ethical than the society you grew up in." —*Eliezer Yudkowsky*

"As soon as you trust yourself, you will know how to live." —*Johann Wolfgang von Goethe*

Murder of blacks & whites in the US in 2013 (per 1,000,000 members of the murder's race)



COMPLAINS ABOUT WEALTH INEQUALITY



**HAS A NET WORTH OF \$20 MILLION
AND AN ANNUAL SALARY OF \$7 MILLION**



TOP: MEME TELLS 'MEDIA REALITY CONCEALS SPIRITUAL DISHONESTY' *14 / BOTTOM: SHOE COMIC'S 'SUBTLE TRUTH IN LANGUAGE' *15

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This research paper was created without commercial intent—all materials were discovered online.

Acknowledgments

To all uncredited authors (*Sources*), whose work was sampled for compilation into this document:

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God

The *All* that *IS*.

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