The Influence of the Culture and Ideas of the Iroquois Confederacy on European Economic Thought
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Abstract

David Landes (2006) compares technological adoption in Europe and China after the medieval period in Europe.[1] He examines the rise of technological dominance of Europe versus China. He acknowledges that China had made numerous technological discoveries and advances, and were more technologically advanced than Europe in the tenth century, but queries why they never proceeded to an industrial revolution. Lander stresses the role of the market, in allowing the individual freedom and profit from innovation, in the technological advances that led to the Industrial Revolution. Lander looks East in his analysis, toward China and the Portuguese exploration around the tip of Africa into the Indian Ocean which opened this part of the world to Europe.

Heilbroner (1972) also asks why Europe? He examines how European societies based on a command economy and tradition metamorphosed into a market economy, "in which society assured its own continuance by allowing each individual to do exactly as he saw fit"[2]Heilbroner focuses on the growth of the "idea of gain" and profit motive in Europe. He does mention the effects of the "flood of treasure" from the national adventures of Spain and England, but his focus is on the change of Europe from economies based on command and tradition to market economies and the creation of the idea of factors of production.

Weatherford (1988) examines the interaction between Europe and the Americas "Once the two great civilizations of the Old World and the Americas collided, technological progress exploded making a true revolution in the mode of production" [3]

This paper also looks west, toward the Americas. This paper will examine how Native American ideas and economic organization based on liberty influenced the economic thought that became the basis of capitalism. Contact with the Americas changed Europe in numerous ways,[4] including the way it viewed the concepts of individual freedoms and individual rights. In 1776 two documents were published, the Declaration of Independence and the Wealth of Nations, by Adam Smith. Benjamin Franklin, who had close relationships with the Iroquois Confederacy, influenced both these documents[5] There have been numerous studies which link the U.S. Constitution and system of government to the Iroquois Confederacy.[6] The aim of this paper is to examine how the ideas, which were the basis of Iroquois culture, affected the economic thought and ideas which became the theory of capitalism described by Adam Smith in the Wealth of Nations.

Technological innovation and the spread and adoption of new technologies are essential to the growth and development of economies.[7]The entrepreneur has been identified as the key agent in creating change in the economy which leads to greater prosperity and development.

It can be argued that the basic nature of humans is to be an entrepreneur.[8] Recent scientific research tells us that all humans can trace their ancestry back to a single male that lived around 60,000 years ago in Africa.[9] The technological changes which occurred at that time[10] represented "a radical departure from the way life had gone before" (Wells 2002, pg. 85)[11] Schumpeter (1951) would identify such a radical shift from the circular flow of the economy as development and the individuals who adopted the new technologies as entrepreneurs. For the next 50,000 years this family of humans expanded throughout the globe, developing and adopting new technologies which allowed them to adapt and survive in whatever climate they found, from the severe cold of Siberia, during the depths of the last ice age, to the expanding deserts of the world. The basic means of production was hunting and gathering.

The second "great leap" occurred around 10,000 years ago when agriculture appeared simultaneously in several independent locations around the world. There was a sudden transition from hunting and gathering to settled life. (Wells, 2000 pg. 149) Changing climatic conditions at the end of the last ice age created fields of grain in the Middle East. First, these were gathered and stored, the population settled and grew. When climatic conditions worsened around 9,000 years ago, these Neolithic populations adapted and planted grain seeds. From this base in the Middle East, agriculture spread throughout the Mediterranean and then throughout the rest of Europe[12] In Asia, rice became the staple crop which traveled throughout Asia. (Wells, 2000) In the Americas, with their unique ecology, a separate and independent Neolithic revolution occurred in Mesoamerica around the same time. (Mann 2005, Weatherford 1988)

Agriculture was the first major technological development of the last 10,000 years and "set in motion a massive acceleration of human social evolution." (Wells, 2002 p. 151). Around eleven thousand years ago civilizations grew and a period of technological progress ensued. Sumeria invented, in the next few millennia, farming, the wheel, metal tools, writing, and "the first great civilization" (Mann 2006, p. 19). The human population expanded.[13]

In Eurasia, one result of the adoption of agriculture, was the evolution of a social organization based upon a model of command economies and Empire. For most of the last five thousand years the structure of the political economy was a pyramid of power, where land was the most important factor of production and labor was owned. The top echelons of the economy owned and controlled land, economic power and wealth. Kings, emperors, Pharaohs or a small oligarchy of aristocrats owned the land and controlled the vast majority of the wealth and economic production relied on forced labor, slavery or serfdom. Allen (2008) says that "evidence now indicates that the standard of living fell" when agriculture was adopted throughout Eurasia and there was a "reduction of health status and well-being" due to "increased psychological stress and a decline in nutrition" (p. 952).

Even in the ostensibly "democratic" Greek and Roman societies, the democracy only expanded the ruling class from a single head to a class of aristocracy who ruled. "The end of Roman slavery was the beginning of serfdom-not freedom" (Allen, 2008 page 956). The Magna Carta did the same, only expanding rule from the King to the aristocracy, a single monarch to an oligarchic aristocratic class, but it did not create, by any means, a participatory democracy. Slavery or serfdom was the prevailing means of production in these political/economic systems.

In Europe, in the medieval period, trade and the transfers of technologies between Asia, Europe and Africa occurred, but for the most part, there existed for a "millennia great technological stability". From 700 BC to 1700 AD the basic subsistence pattern of agriculture was unchanged. The same grain crops were cultivated using the same methods of broadcasting the grain, the tools for growing and processing were essentially unchanged, the same animals were used, modes of transportation and the structure of the houses were basically unaltered.[14] (Weatherford, 1988) In Europe, during the 14th century there were repeated famines, due to bad weather there were universal crop failures which caused millions to die. The increase in human population as a result of agriculture and the adoption of animal husbandry also increased pathogens and zoologic diseases (Wells 2002) and a series of plagues and wars further decreased the population.[15] The Black Death of 1348-49 resulted in labor shortages and draconian legislature prevented wages from rising and labor mobility for a generation, but in 1358 in France and 1381 in England there were peasant uprisings. Allen (2008) indicates that in England, after the revolt, the labor shortage resulted in the end of wage suppression and limits on mobility. Serfs were allowed to run away and become free people on different estates, resulting in the "end of serfdom". He also states that "Population turnover, however, was not the same a renegotiation of social institutions." (Allen, 2009 page 956)

In the 15th century Europe was the backwater of the world. Its agricultural technology had not changed for millennium. Clothes were made mainly from wool and some leather, with only the very wealthy owning

some silk or linen. Land available for sheep grazing was the main constraint on clothing production, not labor to manufacture it into clothing. The trees and forests had been clear cut to allow for grazing and fuel, creating environmental degradation.[16] The economic system was based on feudalism. There were large disparities between the income and material well being of the Serfs or peasants and the nobles.[17] For most of the medieval period, in most of Europe, serfs were tied to the land and had limited choice, they were heavily taxed, had no legal rights "against violence by their lords" (Allen, 2008 page 957). The system was also a patriarchal one where women were subjugated to both their husbands and their lords and had even fewer rights than their male counterparts.

China, in the mid fifteenth century became a huge trading nation which expanded navigational technology and astronomical science. Zhu Di, became the Ming Emperor in 1402. The Eurasian cultures and civilizations had developed through the constant interaction with each other over the centuries along the Silk Road. When the Ming Empire, in China, deposed the Mongolian Empire, which had ruled from China to Turkey since the thirteenth century, the trade through the Silk Road was no longer possible. Zhu Di created trade partnerships through a fleet of treasure ships. He made advances in navigational technologies and set up astrological sites throughout Asia. He sent envoys throughout Asia and sent "fleets of leviathan ships" through the Indian Ocean to establish trading and astrological sites with kingdoms throughout Asia, India and Africa. He brought "rulers and their envoys" to China "to pay tribute to the emperor and bear witness to" his "inauguration" in 1421. (Menzies, 2002). Menzies (2002) claims that these ships circumnavigated the world and created the maps which later were transferred to Europe, along with the astronomical tools, through the Arabs, who had traded from the Atlantic to the Pacific for centuries (Menzies, 2002 pg. 389). This expansion of trade and technology stopped abruptly when the lightning struck and burned down the Forbidden City in 1421, three months after Zhu Di's inauguration. This was seen as an omen from God and the Mandarins used this as a rationale to stop the trade networks, infrastructure expansion and rule of Zhu Di. (Menzies, 2002, and Landes, 2006). Even during this period of relatively peaceful and internationally cooperative expansion of trade, the power pyramid based on a command economy, remained the basic economic/ political structure, with forced labor required to build the Emperors projects. Women were on the very bottom of the domestic and national social structure, having fewer rights than their male counterparts.

During the 14th to 15th centuries most technological advancements were not native to Europe. New technology was obtained through trade networks from the Chinese and Arab civilizations. The adoption of the compass, astrolabe and sextant and the availability of maps from the explorations of Zheng He's armada, "as well as advances in shipbuilding" allowed for travel across the Oceans. [18]

Landes (2006) notes that "almost every element usually regarded by historians as a major contributory cause to the Industrial Revolution in north-western Europe was also present in China." He postulates that because the Chinese lived under a totalitarian system their "absence of freedom" prevented "private initiative".[19] He contrasts this with Europe, where he attributes the "seventeenth century European mania for tinkering" as crucial to the technological advances that occurred. He identifies several reasons for the European "cultivation of invention" offered by historians, including the "Judaeo-Christian respect for manual labor" "subordination of nature to man" and a linear sense of time.[20] He aims to dispel the "new would-be (politically correct) orthodoxy" that other societies would have us believe that a sequence of contingent events (gains by Portugal and then others in the Indian Ocean, followed by conquests by Spain and then others in the New World) gave Europe what began as a small edge and was then worked up into centuries of dominion and exploitation." He aims to dispel the "myth" that Europe's technological dominance was a historical accident, comparing Europe's progress to China. Lander stresses the role of the market, in allowing the individual freedom and profit from innovation, in the technological advances that led to the Industrial Revolution.

Heilbroner (1972) describes Europe as a command economy, based on tradition. The Kings owned the land and warfare was a constant historical feature to dominate and acquire more land. Labor was owned and changes in technology, the way goods were produced was regulated by the King and entrenched guilds who resisted change.

Since the Neolithic revolution, Eurasia shared technologies, plagues, wars and immunities and a political economic structure based on command economies and forced labor. There was a class system which concentrated wealth and power in the hands of a few. Much of the literature, which attempts to answer the question of what caused the industrial revolution, focuses on Europe and Asia. Allen (2008) says there is "a well established consensus that the roots of the British Industrial Revolution run back to 1500" (page 965). Allen (2008) examines a number of possible reasons for why the industrial revolution occurred where it did and when it did, focusing mainly on Europe or Asia, the influence of the Americas are not explicitly considered.[21]

Weatherford (1988) examines the role and the significance of the "discovery" of the Americas on the evolutionary process which created the industrial revolution.

New research in archeology and anthropology describe cultures in the Americas that were arguably the most advanced in the world in 1491. About the same time as the Neolithic agricultural revolutions were taking place in the Middle East a separate independent agricultural revolution was occurring in the Americas. In Eurasia, "the ancestors of wheat, rice, millet, and barley look like their domesticated descendants,…both are edible and highly productive" (Mann, 2006 page 20).

In the Americas, the ancestors of the main staples, maize and the potato, did not look anything like the domesticated maize and potatoes that became the staples of Native American diets in different parts of the Americas. "Modern maize was the bold act of conscious biological manipulation- "arguably man's first, and perhaps his greatest, feat of genetic engineering"" (Mann 2006 page 218). Genetic engineering was also obvious in other native agriculture products, including the potato. The farming technology in the Americas had resulted in horticultural advancements which modern scientists still cannot replicate[22] Maize, unlike the Eurasian grains, also needed careful planting, it could not be broadcast, but needed to be removed from its husk and planted, adding perhaps to the process of thoughtful selection of the seed which was to be planted.

The civilizations of the Americas "invented a dozen different systems of writing, established widespread trade networks[23], tracked the orbits of the planets, created a 365 day calendar (more accurate than its contemporaries in Europe) and recorded their histories in accordion-folded "books" of a fig tree bark paper," and discovered and used the number zero in mathematical calculations. (Mann page 19) Before European contact "tens of millions of people" populated the Americas. (Stannard, 1992 page x). The civilizations of the Americas were as old as Sumatra and as advanced and sophisticated as any that had existed elsewhere in the world. When Cortes and his army visited Tenochititlan, it was the largest city in the world at that time, with a population of about 25,000,000. It was built on the Lake of the Moon, with extensive causeways connecting it to the mainland and outlying communities in present day central Mexico. The Spanish marveled at the cleanliness of the people and the streets[24] and the extensive markets for goods of all kinds. (Stannard, 1992 page 3).

In the Northeastern North America, the Native Americans lived in a landscape which they had sculpted and formed through constant care and a unique form of husbandry. Villages were surrounded by six square miles of corn,[25] beans and squash gardens. Orchards of mast (nuts) and fruit trees and berries surrounded the cultivated land. Forests lay beyond the orchards and the forest floors were kept clear of undergrowth by controlled fires. Game, buffalo, deer, turkeys and other game and birds lived in the forests and were killed by the Natives. This unique form of husbandry avoided the contact with the zoological diseases

which had plagued Eurasia. Rather than a wilderness, the American landscape represented a managed ecological system which was sculpted and managed by the native populations.[26] (Mann, 2006)

Northeast America was thickly populated. [27] The natives were taller than the Europeans, healthier, and wealthier in terms of goods and services available to them, the average diet was "about 2,500 calories a day, better than those usual in famine racked Europe" (Mann 2006 page 45). Income distribution was notably equitable. They were cleaner and had a nutritionally balanced diet. Upon meeting the natives of North Carolina White's chronicler thought the natives longevity was due to the use of tobacco and began the importation of tobacco to England. (Unfortunately he died of lung cancer but the spread of the use of tobacco had significant consequences for the development of world trade). "Time and time again Europeans described the People of the First Light as strikingly healthy specimens. Eating an incredibly nutritious diet, working hard but not broken by toil, the people of New England were taller and more robust than those who wanted to move in" "Because famine and epidemic disease had been rare … its inhabitants had not of the pox scars or rickety limbs common on the other side of the Atlantic." (Mann pg. 48) The Native Americans viewed the Europeans with disdain, as "physically weak, sexually untrustworthy, atrociously ugly and just plain smelly" (Mann pg 50).

For the centuries before and after Columbus' arrival the largest Native American political economic unit in Northeastern America was the Haudenosaunee or Iroquois confederacy, controlling an area from New England to the Mississippi River (Weatherford, 1988 page 137). Around 1000 AD corn, beans and squash appeared in the Northeastern America and the people of the region formed into five groups. Farms lined the hills and the population rose. As a result of increasing population, warfare also increased and a spiral of violence existed. According to Haudenosaunee oral history, Deganawidah, who was not a member of the five nations, came with a message of peace. He, along with Ayenwatha persuaded the Seneca, Cayuga, Oneida, Mohawk and Oneondaga to ally in peace, rather than constantly fighting. The Haudenosaunee constitution or Great Law of Peace laid out the alliance's rules. (Mann 371). The Haudenosaunee confederacy was created between 1090 and 1150 AD[28], and is the "second oldest[29] continuously existing representative parliament on earth" (Mann 2006 page 373). The Great Law of Peace's 117 codicils were concerned with setting limits on the council's power, as well as establishing the structure of the relations among nations. According to Mann (2006) the "Haudenosaunee was a libertarian" and "a feminist dream" (page 372). "The league was predicated, …on the consent of the governed". The jurisdiction of the Great Law was limited to relations among nations and outside groups, internal affairs were governed by the individual nations. Universal agreement was required before any action was taken and when the council of sachems decided upon "an especially important matter or a great emergency," the sachems would submit the matter for a referendum by their people. (Mann 2006, page 372)

The five nations were governed internally by female clan heads, who chose the sachems who held office, set the agenda of the League and had the power to impeach the representatives and to declare war. Women also owned property and when a man married he joined the woman's household.[30]

The Great Law of Peace formally represented checks on authority, the requirement for consensus, the equal status of women, the requirement for consent of the governed and the impeachable power of the sachems which were representative of a region-wide traditions of independence and individual rights. There was no class system, labor was masterless, although divided into male and female jobs, was engaged in with consent, the Iroquois were ruled by a council, and throughout North America "any person called the "head" of a tribe…occupied a largely honorary position of respect rather than power" . Sachems and Chiefs played ceremonial and religious roles rather than having political or economic power. (Weatherford, 1988 pg 143) Authority rested in a group and group agreement was necessary and found through the use of a caucus.[31]The political economic system represented a participatory democracy and economy, based on free will, equity and independence from government rule. The economic paradigm could be represented by a circle of cooperation and labor was, arguably the most important factor of production was labor.[32]

Contrast this to the political economic systems that prevailed in Europe and Asia, where command economies were the basis of a social and economic pyramid which concentrated wealth and power in the hands of a small percentage of the population, creating a highly inequitable distribution of labor, income and wealth. Serf labor or forced labor was the basic means of production, with wealth flowing to the small percentage of land owners at the top. Class systems established and enforced the inequitable distribution of wealth and labor, a belief existed that God had ordained different classes and wealth and power passed on through hereditary with the supreme authority resting in an individual King or Emperor or a class of aristocracy.[33] Where the vast majority of Eurasian population lived in poverty, the North American Native population lived in equitably distributed wealth, where the Eurasian system was based on tyranny and slavery, the Native American system was based on equality, free choice and masterlessnes. [34] Personal freedom was the basis of the operation of Native American economies in North America, forced labor was the basis of the Old World's command economies.

The Native Americans had an "antiauthoritarian attitude", they insisted on personal liberty and social equality. "Indians were appalled by the European propensity to divide themselves into social classes, with those on the lower rungs of the hierarchy compelled to defer to those on the upper." (Mann 2006 page 375). Government was by consensus, authority rested in group agreement. The result, was arguably the healthiest, wealthiest (measured in terms of goods and services and calorie consumption), most equitable societies on earth at that time.

Wells (2002) attributes the third leap forward as the transportation revolution. The meeting of the European and Western Hemisphere was the third great leap forward. After 1492, the agricultural technologies and the mineral wealth of the Americas allowed for the transition of the European countries and the rest of the world into the modern market economies and political democracies which support them. "Once the two great civilizations of the Old World and the Americas collided, technological progress exploded making a true revolution in the mode of production" (Weatherford,1988, p57)

The massive transfer of wealth from the Americas, were fundamental to changes that disrupted the traditional command economies of Europe, beginning the Renaissance. (Brandon 1986 p. 5). The ideas that flowed into Europe, starting with the first journals of Christopher Columbus and America Vespucci, began a debate about the basic valuation and ownership of labor which was the basis of the Enlightenment. (Weatheford, 1988) Adam Smith, in the Wealth of Nations, incorporated the idea of personal freedom, liberty and masterlessness into his theory. Smith identified labor as the most important factor of production, replacing land and formalizing an economic system based on the Native American concept and economic organization based on free will and the paradigm of the circular flow, versus the traditional command economy paradigm based on the pyramid of power which was the predominant form of economic organization in Smith's time. "Labor alone, never varying in its own value, is alone the ultimate and real standard by which the value of all commodities can at all times and places be estimated and compared. It is their real price; money is their nominal price only." (Smith p. 36)

According to Weatherford (1988) there were several phases of technological and wealth transfer from the Americas.[35] First, the gold and silver taken from the Americas allowed the development of a financial sector in continental Europe, second the adoption of the agricultural bounty of the Americas, caused changes in the fundamental way peasants led their lives and caused labor shortages and shifts in the use of the existing technologies which resulted in the industrial revolution. Third, were the rise of corporations and trading companies and the subsequent rise in slavery in the Americas. Fourth, was the influence of the Native American ideas on European and American thought. Participatory democracy is one key idea which is identified as coming from European American contact with the Native Americans. (Weatherford 1988, Mann 2006, Brandon 1986)

After 1492, the first export from the America's was gold and silver. The Spanish imposed a system of forced labor on the Native Americans in South America to mine silver and gold. Silver from the Potsoi mine in Peru increased the money supply in Europe and allowed vast wealth to be accumulated by the aristocracy and spread through the economy of Europe, as Spain expanded its naval fleet and built an Empire. In continental Europe modern credit instruments and markets for them developed and interest rates "dropped from 20 to 6 percent in continental monarchies in the fifteenth and sixteenth centuries." (Allen, 2008 page 958-959). The flow of silver and gold from the Americas allowed an expansion of military power first by Spain and then by England,[36] who regularly pirated the Spanish ships. The accrual of these metals from the Americas disrupted the trade patterns with Africa, who had previously had almost monopolistic control of the gold trade to Spain and Europe. The impact of the inflow of silver was more extensive than gold. Potosi a colonial mine founded in 1545 "produced silver for the treasuries of Europe at a rate and volume unprecedented in human history" (Weatherford, 1988, p 5). Wealth had only been in the hands of Kings and the aristocracy, with the discovery of Americas, "for the first time people had massive amounts of silver and gold" (Weatherford, 1988, p 13). Whole new merchant and capitalist classes arose. "Precious metals from America superseded land as the basis for wealth, power and prestige" and allowed the creation of a monetary system. (Weatherford, 1988, p 15)

Second, the technological transfer of horticultural products and their adoption by European and African farmers allowed for a transition in agriculture and the subsequent industrial revolution which followed by providing the raw materials for the textile revolution. The introduction of the potato helped stop the cycles of famine, which farmers had experienced with wheat production and the population grew.[37] By the end of the sixteenth century, corn allowed a growth of population in Africa as well as Europe, which contributed to the slave trade.[38] At the same time the Native American populations were being decimated by diseases introduced from Europe, the African population was expanding due to the introduction of corn and other Native American agricultural products (including peanuts and manioc, which are both African staples now). Facing a labor shortage in the America's Europeans turned to Africa and the slave trade. (Mann, 2006 page 224).

Europe had previously relied upon sheep and some leather for clothing. The production bottleneck was the amount of wool and the land available to produce it. There was excess labor, given the amount of wool produced for the production of clothes. Weaving and spinning were done by peasants in home based cottage industries. Water wheels were a technology used to grind wheat and grains into flour. These technologies had been unchanged for thousands of years. The introduction of potatoes, corn and numerous other agricultural products from the Americas reduced the use of the mills. The introduction of long grain cotton created in the America's resulted in a shortage of labor, "suddenly, the peasants and the weavers had more fiber than they could weave". "Europe needed more energy than it had in human and animal power, and the most readily available source…" was "the waterwheels already in place throughout the continent" The first textile factories were born. (Weatherford 1988, page 43).

Third, recent archeological and anthropological evidence shows that the Native Americans had extensively formed their landscape to suit their needs. Road, paths and trails created trading routes. Before European contact "tens of millions of people" populated the Americas. (Stannard, 1992 page x). After 1492, the pathogens from Europe raced through the Americas and massive deaths followed, disrupting political and economic systems throughout the Americas. Sometimes the diseases preceded the arrival of the Europeans through the extensive trading networks that existed (Mann 2006). Some estimates put the death toll as high as 95%. (Mann (2006), Stannard (1992) and Weatherford (1998)). The land the Europeans came to was largely emptied of its population before they arrived. The carefully managed ecosystem was falling into disarray. Since Columbus found America, trade ships had plied the coast of Northeastern America, but the Native Americans did not allow settlement by Europeans. In 1616, European contact spread an epidemic of what was probably viral hepatitis to people from present day Maine to Narragansett Bay in Massachusetts. "The coast was empty" Thomas Dermer, noted in 1619.[39] Villages were empty, fields

overgrown and untended and skeletons lay unburied, bleached by the sun. The merchant Thomas Morton recorded that the Native Americans "died in heapes as they lay in their houses" (Mann 2006 page 58 and 60). Before the sickness, Massasoit had been the sachem of a confederation of as many as twenty thousand people, with several thousand in his own community. After the epidemic, in which it was estimated 90% of the people in coastal New England had died, his community was reduced to sixty people and the confederation to fewer than a thousand. (Mann, 2006 page 61). The massive death created political and spiritual crisis. Massasoit, decided to allow the Pilgrims to settle on an abandoned Native village site and to ally with them against his neighboring confederacies. This allowed and opened settlement of North America to the Europeans. By the 1700's North America was a multiracial society, with surviving Native populations living as neighbors with European populations.

Fourth, the social and political structures of the Iroquois Confederacy (the Haudenosaunee) affected the fundamental thinking which fueled the Enlightenment and the subsequent economic and political revolutions which followed. The conflict between tyranny (command economies) and liberty worldwide should be attributed to the Haudenosaunee and the New World attitudes toward personal liberty. "So accepted now around the world is the ideas of the implicit equality and liberty of all people that it is hard to grasp what a profound change in human society it represented" (Mann 2006, page 378) The Native society offered competition to the paradigm on which European society was based, in Jamestown, for example, scores of English escaped to Native populations, despite the threat of dire punishment. (Mann 2006 page 377).

The results of the European's Age of Enlightenment, in which the twin ideas of Capitalism[40] and Democracy were formed, can be attributed to the contact with the Haudenosaunee and the Northeastern Native populations but also to the flow of ideas which had entered Europe in the journals of the explorers, priests and colonists since first contact in 1492. The concepts of free choice, and government ruled by the populace through participatory democracy, were foreign ideas to European social, political and economic systems. They were the basis of the Haudenosaunee federation and fundamental ideas of the economic and political structures throughout the American continents.

In 1776 two influential documents, the Declaration of Independence and the Wealth of Nations were published. Both promoted the concept of participatory democracy and participatory economy, known as Capitalism. Both were influenced by the then radical ideas of personal choice and independence. Both were influenced by Enlightenment thinker Benjamin Franklin, who assisted Adam Smith in his research (Cannan 1994 page vii and Ross, 1995 p 255). These radical ideas of freedom and personal choice were based on the influence of the Native American people whom Europeans had been in contact with since 1492 and lived next to since the early 1600's, when North America began to be settled by Europeans. Benjamin Franklin had close contact with his Native American neighbors, acting as an ambassador to the Haudenosaunee confederacy and printer of treaties.

In eighteenth century Europe the political and economic systems did not differ much from those found in the medieval period. Economic changes had begun due to contact with the Americas, the pyramid of power had expanded due to the inflow of silver, but was unchanged, Kings and Emperors ruled by divine right. The monarchy of England granted trading licenses to particular corporations,[41] wealth was measured by the amount of gold and silver in a countries treasury, in Britain suffrage was granted on the basis of land ownership and limited the British electorate to one-fifth of the population. There was a growing class of mechanics and merchants, who often ended up in debtors prisons if their aristocratic customers did not pay their debts, the common person had few legal rights. (Nelson, 2006 page 58). There was massive migration to London, despite the lethal conditions of city life, migration from the countryside kept the population of cities in England growing. (Allen 2008) The British government's trade or mercantile laws governed what could be produced in America and required that all goods go through British ports.

Capitalism, as first presented by Adam Smith in the Wealth of Nations (1776) was a treatise against the conglomeration of trade power and the influence by government on the production and trade processes of the economy. At that time trade routes and areas were mandated by the government creating monopoly power for a group of companies known as the Mercantilists. The economic structure of the Native American economies in the North East by contrast were libertarian and based on personal freedom. There was separation of government and individual choice in economic production. (Mann 2005)

Throughout the Wealth of Nations there is evidence of the influence of Enlightenment thinking and the Native American political and economic culture that fostered it. Smith presents the idea that labor is the basis of real value, independent choice based on self-interest is the motivation for work and exchange and division of labor. He makes arguments against the inherited superiority of class, arguments for the use of markets rather than government to determine what is produced, how and for whom, and even the importance of value of the ownership of capital (goods) versus land ownership, which all suffrage and political power were predicated on at the time of Smith's writing. These ideas demonstrate a radical departure from the political and economic system which had existed for the thousands of years before in Europe and still existed in eighteenth century England.[42]

Smith reorders the valuation of the factors of production from that which had existed in Europe since the Neolithic revolution, where land was the most valued factor of production, labor was owned and capital was also the property of the few wealthy landholders, who ruled the economy. In contrast, in the indigenous American economies labor was the most valued factors of production, and labor owned itself, was "masterless". Land was communally shared, although there were tribal boarders. In the Wealth of Nations, Smith adopts this valuation of the factors of production, "Labour…is the only universal, as well as the only accurate measure of value"[43]

Smith also challenged the way a Nations economic success was measured from accumulation of gold and silver in a government's treasury to the production of goods by "productive labor". This was a radical departure from the valuation of wealth which existed in Europe at that time and the influence of the materially wealthy Native American societies can be seen here as well.

One of the Enlightenment ideas was an increasing intolerance of class distinctions and the divine right of kings and an increasing belief in meritocracy versus aristocracy. (Nelson, 2006 page 70). This can also be seen in statements by Smith, he writes "The difference between the most dissimilar characters, between a philosopher and common street porter, for example, seems to arise not so much from nature, as from habit, custom and education." "When they came into the world, and for the first six or seven years of existence, they were… very much alike" (Smith edited by Cannan, page 17) Smith attributes the division of labor as the basis for the diversification of talents and specialization of occupations through education rather than an innate or divine mandate based on the existing class system. This radical departure from previous European thought was a core belief of the Enlightenment thinkers.[44]

He also advocated the idea of competition as the best economic structure, and defined perfect competition as a market which allowed free entry and exit from industries. This structure allows for the composition and decomposition of firms and industries in the economy in order to allow the adoption of new technology and the most efficient methods and assumes economic freedom exists.

Adam Smith writes that the division of labor is the basis of prosperity. Labor, is the basis of the value of all goods and services. Smith identified money, as the means of exchange and valued in commodity metals of silver and gold, but he makes it clear that silver and gold are commodities which value the worth of the products produced by labor. Productive labor is the key valuation to worth of goods. This was a novel idea in Europe when he proposed it, influenced by Enlightenment thinkers such as Benjamin Franklin, Hume, Rousseau, and Thomas Paine.

Smith also addresses the concept of technological innovation and the value of human capital, he writes, " A great part of the machines made use of in those manufactures in which labor is subdivided, were originally the inventions of common workmen" who found more productive processes to manufacture the goods they were employed to make. (Smith page 10) Here he indicates that the common workman is the source of innovation, due to specialization and the expertise acquired through specialization.

In the statement that "Labour, therefore is the real measure of the exchangeable value of all commodities." (Smith page 33) Smith is again making an argument for the value of individuals.

Smith (1776) discusses the importance of the market and trade or barter in meeting the wants of individuals. "In civilized society he stand at all time in need of the co-operation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons." "man has almost constant occasion for the help of his brethern" "not from their "benevolence" "but from regard to their own interest" "not to their humanity but to their self-love…their advantages" do they trade. (Page 15) These statements all presuppose the freedom of individuals in the market place to make choices, to exercise their free will, ideas which are common today but were radical thoughts in the 1700's based on Native American realities.

Contact with the Americas allowed changes which were fundamental for entrepreneurship to flourish and technological development and adoption to increase in Europe. A comparison of the political economic structures and thought in medieval Europe before contact with the Americas, and those that evolved in Europe and among European Americans after contact can be attributed to the beliefs of the Native Americans, and the spread of those ideas from the journal accounts of European explorers and colonists through Europe arriving as the printing presses were expanding, as well as the[45] transfer of agricultural technology and monetary wealth that Europeans received from their expansion into the Americas. The Native American libertarian beliefs affected the political structures and economic theory of how the world should work. It can be argued that the melding of the European and Native American beliefs resulted in the U.S. Constitution and the ideas of capitalism, which, over time has resulted in the collision of two conflicting paradigms of economic organization, command economics based on a pyramid of power and concentrated wealth versus an economy based on personal freedom and free choice. Adam Smith's work represents a reordering of the value of the factors of production, labor is identified as the most important factor, personal freedom and free choice are paramount throughout Adam Smith's writing for the creation and operation of a free market economy. This re-ordering and re-valuation of the factors of production laid the foundations for the industrial revolution to occur.

The conflict between the two paradigms still exists. Command economies and concentrated wealth are still the basis of many economies and a concern of many economists[46].

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[2] Heilbroner, Robert L.; The Worldly Philosophers, the lives, times and ideas of the great economic thinkers 4th edition, Simon and Schuster, NY, 1972 p 18

[3] Weatherford, Jack; Indian Givers, How the Indians of The Americas Transformed the World, 1988, p 57

[4] WeatherFord, Jack; Indian Givers, How the Indians of The Americas Transformed the World

[5] Cannan, Edwin in the introduction to Adam Smith's The Wealth of Nations

[6] Schaaf, Gregory; The U.S. Constitution and The Great Law of Peace,WeatherFord, Jack; Indian Givers, How the Indians of The Americas Transformed the World and Mann, Charles; 1491 to name a few.

[7] Schumpeter describes economic development as "the spontaneous and discontinuous change in the channels of the (circular) flow, disturbance of equilibrium, which for ever alters and displaces the equilibrium state previously existing" (Schumpeter, page 64).

[8] Schumpeter discusses the role of the entrepreneur in the process of development and identifies an entrepreneur as one who initiates new economic processes. According to Schumpeter, the entrepreneur does not need to invent these processes, they could be generally known but unused. The entrepreneur is the one who initiates the new processes which are outside the circular flow and which leads to greater prosperity.

[9] Wells, Spencer used DNA analysis to traced the history of humankind. Wells (2002) attributes the "great leap forward" which took place 60,000 years ago to a genetic shift, research of recent scholars trace all humans back to an African man 60,000 years ago and a single woman between 150,000 and 250,000 years ago. Due to severe climatic conditions around 60,000 years ago, during the last ice age, deserts expanded and the human race dwindled down to a bottle neck, in which one man can be identified as all of our grandfather, approximately 2000 generations ago.

[10] The Upper Paleolithic period between 50,000 and 70,000 years ago. (Wells, 2002 pg. 89)

[11] There is archeological evidence of three significant shifts in the way the Paleolithic economy operated. First, there is evidence of more diverse and efficient tools, better use of stones and other materials, second, art appeared, which represented a conceptual leap in thought and third, food sources were exploited in a more efficient manner. (Richard Klein, in Wells 2002)

[12] Wells correlated the transition of agriculture with the migration of women, but not men, into Northern Europe. He attributed this to partilineal marriage contracts where the woman travels to her husband's family. Over thousands of years, these marriage patterns created a Northward movement of

agricultural technologies and the transition of Europe from hunter gathers to and economy based on agricultural, not reaching the British Isles until 2,000 years ago. (Wells, 2002 and 2006)

[13] Palaedemographers who use archaeological and anthropological methods to estimated world population had grown from 10 million people at the time agriculture originated approximately 10 thousand years ago to 500 million by 1750, at the eve of the industrial revolution. "Paleolithic hunter gathers populations had taken over 50,000 years to increase from a few thousand individuals living in Sub-Saharan Africa to 10 million scattered around the globe." (Wells, 2002 pg. 151)

[14] Jack Weatherford 1988) examined the technological change in a German village of Kahl, he wrote "The Romans came and went and ownership of the village passed through a long succession of emperors, kings, counts, archbishops and princes" but the basic technology did not change. (page 41).

[15] In the middle of the sixth century the plague of Justinian reduced the population of Europe by fifty percent. It ended the Roman Empire, which had split, and which Emperor Justinian had been expanding from the eastern capital in Constantinople. The bubonic plague "caused one of the worst die-offs in human history" (p 74). Europe's cities became "scourged remnants" heaped with dead. "Europe's agriculture ebbed, and trade almost halted" (p 77). "When the first pandemic receded" Europe's population was cut in half, "city life virtually ended" and the Dark Ages had begun. It took centuries for Europe to recover. (Karlen, 1995)

[16] Weatherford, 1988

[17] See Allen, 2008 page 953 for data on 1688, a period which would have already begun to feel the effects of the "discovery" of the Americas. Zinn (2005) points out that in 1491, in recently unified Spain, the nobility, which were 2 percent of the population, owned 95% of the land, its population were mostly poor peasants that worked for the nobility. (p 2)

[18] See Menzies (2002) for a description of the growth of Chinese navigational technology.

[19] Landes 2006 page 6.

[20] Landes also notes that Christian Church's "view of labor as penalty for original sin" (2006 page 9 and 10)

[21] Allen (2008) mentions growth of the world economy as one of the possible explanation for the Industrial Revolution.

[22] Both corn and potatoes were developed from native plants which have little resemblance to them. Many of the plants the Native Americans cultivated required selection of seeds for planting, which allowed the farmers to choose seeds from plants which had the characteristics they favored most (versus broadcasting of grains in Europe). Mann, 2006.

[23] The extensive the trading routes included thousands of miles of paved highways. (Weatherford, 1988)

[24] Allen (2008) indicates the cities of Europe between 1500 and 1800 were "death traps" which "maintained their populations through massive migrations." (Allen, 2008 page 961)

[25] This observation was made by a European traveler in 1669. Mann 2006 page 297.

[26] Brandon, William; New Worlds for Old reports the description of explorers, priests and colonists which constantly discussed these observed traits.

[27] An estimated 100,000 people lived along the coast of what would become New England in the sixteenth century Mann, page 46

[28] These dates were calculated using astronomical calculations and traditional lore. (Mann, 2006 page 373) See also Burns, 2004 page 5 and Weatherford (1998) page 135.

[29] "Iceland's Althing, founded in 930 A.S., is older" Mann, 2006 page 373

[30] There is scholarly work which indicates that female suffrage movement, which began in Sennaca, NY were influenced by the Mohawk women who lived in equality on the neighboring reservations. See The Sacred Hoop, Allen, 1986

[31] The word caucus comes from the Algonquin languages. A caucus allows informal discussion of an issue without the necessity of voting for or against any specific question. (Weatherford, 1988 page 145)

[32] Based on conversations with Joseph Bruchac, PhD director of Ndakinna Native American Education Center, Greenfield, NY See also See Brandon (1986)

[33] Heilbroner points out that the idea of factors of production did not exist as an abstract concept in these command and tradition based economies. Land could not be sold, only conquered and labor was "tied to the Lord's estate" and "rarely if ever paid for any of his services" (p26). No personal freedom existed.

[34] "The one greatest dividing difference" in the attitude of the Old World and New World was the "attitude toward property, the usual Old World tendencies can be summed up in the word dominium, the New World's communitas". The Old World was preoccupied by authoritarianism and "the ultimate act of dominium, total war". The New World was preoccupied with "group relations", lacked interest in "the acquisition of property" and frequently lacked a central authority. (Brandon, 1986 p ix) Personal freedom was fundamental to operation of many Native economies in the New World, forced labor was the basis of the Old World's command economies.

[35] Jack Weatherford, (1988) describes this transition in detail.

[36] Allen (2008) notes that because England was an island it did not need to fund the wars that continental powers did and this differing geopolitical situation delayed the development of a financial sector in England until 1689 when William and Mary were invited by Parliament to take the throne. "They

brought with them modern continental financial institutions as well as involvement in European wars." (page 959)

[37] The potato was introduced into Europe between 1530's and 1580

[38] Mann 2006

[39] Thomas Demer planned to start a colony in 1616 and return Tisquantum, who had been kidnapped five years before to his homeland. In reparation for Tisquantum and his fellow Native Americans capture Massasoit, who was sachem had captured some French men and an epidemic followed. When Tisquantum, which means rage (a name likely adopted later in life) returned to his homeland it was emptied. The Pilgrims set up their settlement on the remains of his village. (Mann 2006)

[40] Mann (2006) and Weatherford (1988) discuss the influence of Native American ideas on socialism and communism, but not capitalism. This paper's argument is that Adam Smith's ideas were greatly influenced through the link with Benjamin Franklin by the Native American beliefs in individual freedom and liberty. [41] The rise of corporations was a result of trade with the America's. See Weatherford, 1988.

[42] See Nelson (2006)

[43] Smith, Adam; Wealth of Nations, page 41

[44] Nelson (2006) argues that Thomas Paine's works, such as Common Sense, Rights of Man and the Age of Reason, represented "core treatises of the Enlightenment" shared by other Enlightenment thinkers, such as Adam Smith, "Franklin, Washington, Jefferson, Rousseau, Condorcet,… Price Priestley, Godwin and Wollstonecraft" (page 80 - 81). Thomas Paine and Benjamin Franklin were both knowledgeable of their Native American neighbor's beliefs and championed them in their works. Franklin attempted to have a government formed on the basis of the Haudenosaunee confederation and incorporated their ideas on liberty into the constitution. Paine proposed that suffrage should be widely allowed, although he only proposed it for men and not women as in the Native cultures. He also wrote against the growing practice of slavery, which he found abhorrent. See Nelson, 2006, Mann 2006 and Weatherford, 1988.

[46] Thomas Piketty, in Capital in the Twenty Fist Century, 2013 discusses the concentration of wealth. Robert Reich also discusses this topic. Saudi Arabia, Russia, China are command economies, to mention a few.