

# Innovative Entrepreneurs as Agents of Civilization: A Historical Perspective\*

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*"Past economic growth is crucial to the material aspects of our existence: the best predictor of the living standard that a newborn baby can expect to enjoy is the accident of where he or she is born."*<sup>1</sup>

## Abstract

**This paper argues that in their search for profit entrepreneurs unwittingly promote the progress of society in areas that are not only economic. After analyzing the function of entrepreneurs in the market process, two historical cases are provided as examples: merchants in the Middle Ages and U.S. entrepreneurs from the mid 18th century until the late 19th century. The conclusion drawn is that those societies that have welcomed entrepreneurs have also achieved greater personal freedom and respect for private property.**

## Introduction

**T**hroughout history, societies have progressed thanks to innovative entrepreneurs. Such people have produced advances in all areas of human activity, benefiting their communities to a greater or lesser degree. While they have most often been motivated by personal ambition, profit and curiosity, it is also true that the results of their endeavors have brought improvements to all.

It is surprising, then, that innovative entrepreneurs are generally ignored in studies of progress in Western civilization. Moreover, the few writers that

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\* I give special thanks for the comments and suggestions I received from professors Pablo Guido and Sebastián Landoni in the writing of this article. I place on record, however, that any mistakes and omissions are the author's sole responsibility.

<sup>1</sup> Joel Mokyr, *The Lever of Riches: Technological Creativity and Economic Progress* (New York: Oxford University Press, 1990), p.3.

have analyzed their achievements have mostly portrayed them in a negative light as people who have become wealthy at the expense of their fellow citizens. From this standpoint, entrepreneurs, past and present, are seen as seeking to benefit only themselves or their families at any price, as if their success were the direct result of the damage caused to the rest of society.

In recent years, there has been much criticism of the impact of global capitalism on the world in which we live. Entrepreneurs have flourished largely due to capitalist societies and their institutions. However, for many critics of capitalism and globalization, entrepreneurs and multinational corporations are responsible for the misfortunes of the poorest countries. Critics argue that the only way to stop this evil is through greater controls on national and international economies. In their view, legal obstacles should be created to limit the negative consequences of capitalism and the activities of its “disseminating agents”: entrepreneurs. “Wild capitalism,” as its detractors like to call it, is the cause of all the ills and deprivations suffered by more than 80% of the world’s population.

It comes as no surprise then to see Bill Gates have a pie smashed into his face when these globaphobes have the chance to get close to one of the most successful innovative entrepreneurs in history.

This reaction against entrepreneurs and businessmen is nothing new and has been present throughout history. Without going too far back in time, in the 13th and 14th centuries medieval merchants were condemned by the nobility and the Church. Their business was tolerated as a necessary evil. The merchant who bought and sold products made by other people had no reason to become richer than the people who had produced the merchandise. The lender who gave money in advance to the producer had no reason to collect interest, as he had made no effort in the transaction. The same rejection was suffered by men who, during the 16th and 17th centuries, dared to experiment and delve into the field of science to achieve improvements in machinery and productive processes. Many even claimed that by discovering new, more efficient and economical production methods, entrepreneurs were harming craftsmen, whose livelihood was threatened, and peasants, who had to migrate to the cities because new farm machinery reduced the need for their labor. More recently, the great entrepreneurs of the second half of the 19th century were branded outright as “robber barons.” For more than six centuries, those who dared to challenge authority and tradition were rejected by the ruling classes and the intellectual elites of their time (this kind of rejection of successful

businessmen still exists today). Their ideas and often unexpected wealth were condemned, as if the changes they had managed to introduce after a difficult process of *trial and error* had led to nothing more than their own enrichment and the misfortune of others.

The few history books that mention names of successful entrepreneurs, merchants or bankers do so almost with contempt. They do, however, describe the achievements and heroic deeds of artists, generals, kings, politicians, philosophers and “social reformers” in great detail, as if they were the driving force behind history and progress. These people are portrayed as supermen who shaped the course of their societies, the success or failure of which rested on their fortune and astuteness. They might belong to the ruling class or to the “revolutionary elite” whose role was to establish a new social order, most times with the supposedly “noble” purpose of achieving a “more egalitarian society” and a “fairer distribution of wealth.”

The purpose of this article is to highlight the importance of businessmen (merchants, bankers, entrepreneurs) as *agents of civilization*. By civilization I mean a society that has attained an advanced state of intellectual, cultural and material development, marked by progress in the arts and sciences, the extensive use of reading, writing and technology, and the appearance of sophisticated political, social and economic institutions. Civilization does not exist in nature. It is the result of a *spontaneous process of creation*, of which Man alone is capable. Thus, throughout history, different peoples have achieved varying degrees and kinds of civilization, while other societies have never become civilized.

In this article, I will attempt to show that societies that allowed innovative entrepreneurs more freedom of action also created better conditions for the advancement of the population as a whole. That is to say, entrepreneurs were successful because they were free to experiment, bearing all the costs and reaping all the benefits of their actions. As a result, society as a whole was more productive thanks to better tools and, consequently, enjoyed greater prosperity and continued to do so through successive generations. Conversely, in countries where such entrepreneurs do not exist (or have never existed) we find the worst living conditions. In short, it is the absence rather than the presence of capitalist entrepreneurs that has resulted in less wealth and very poor living conditions for more than 80% of the world’s population.

For example, a simple improvement in the transport system may give freedom to more people, bring distant markets together, improve diets, make better medicine available or bring a circus to town for all to enjoy. If we focus only on the personal fortunes amassed by innovative entrepreneurs, we miss the whole wealth creation process and the benefits their economic success brings to the rest of society. We forget that we, consumers, are the ones who make them successful because we “choose” them.

In the pages that follow I will make reference to some of the entrepreneurs who have influenced the course of history. I will analyze the context in which they lived and how they contributed to the progress of civilization. For reasons of space I will discuss just a few select cases from the period spanning the 14th and 19th centuries. The first section discusses the role of entrepreneurs in society from a theoretical point of view; the second looks at medieval merchants; and the third deals with the characteristics of U.S. businessmen from the Declaration of Independence to the end of the 19th century.

### **Section One: *The Entrepreneur and the Market Process*<sup>2</sup>**

As Peter Klein<sup>3</sup> states,

Entrepreneurship, in the Misesian sense, is the act of bearing uncertainty. In an ever-changing world, decisions must be made based on the expectations of future events. Because production takes time, resources must be invested before the returns on those investments are realized. If the forecast of future returns is inaccurate, the expected profits will turn out to be losses. This is, of course, true not only of financial investors, but of all human actors. Thus, all purposeful human action carries some risk that the means chosen will not bring about the desired end. In this sense, all human actors are entrepreneurs.

Thus, societies that develop clear and stable rules that allow them to reduce risk and uncertainty will have more successful entrepreneurs (as defined below) than societies with no such institutions.

Institutional stability means a set of lasting rules that allow us to predict the consequences of our actions with some degree of certainty. Although we cannot be certain of how the market will react, we can be certain of the regulatory framework that governs the behavior of its participants. Within

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2 The unpublished research of professor Sebastián Landoni has been most useful in writing this section.

3 Peter G. Klein, “Función empresarial y control de la dirección de la empresa,” *Libertas*, no. 31 (October 1999): p. 12.

the context of a free society, this institutional stability is based on the following principles: individual freedom (freedom to enter and exit the market and factor mobility), clearly established property rights, the honoring of agreements and the rule of law.

A stable institutional framework does not mean, however, that entrepreneurs will have perfect knowledge of or even access to all the information required. Entrepreneurs assume risks even in societies with the highest respect for property rights. Clear and stable rules are a necessary condition for them to be willing to risk their capital in exchange for an expected benefit, but risk will not disappear completely even when such rules are present.

So far I have considered entrepreneurs largely as “uncertainty-bearers” although arguably their defining characteristic is that they seek underdeveloped markets for their ideas. In this view, entrepreneurs are “seekers” of new business opportunities, “alert” to unsatisfied market needs. Those that see entrepreneurs as seekers of opportunities rather than “uncertainty bearers” point out that the capital investment required to embark on an enterprise and entrepreneurship do not always go hand in hand.<sup>4</sup> Therefore, depending on which approach we take, entrepreneurs are either people who assume the risk of a new business venture or those who “discover” the business but need a capitalist partner to put it into practice.

With this caveat concerning the different interpretations of the term “entrepreneur”—depending on the characteristics that different authors choose to emphasize—this paper will mainly provide examples of *uncertainty-bearing entrepreneurs*, that is, those who contribute their knowledge and risk their capital to put a business into practice. Since the end of the Middle Ages we have seen examples of business ventures where the activities of the entrepreneur and the capitalist remain separate. However, such cases are uncommon.

In general, in this wealth creation process, there are more entrepreneurs who fail than those who succeed. Indeed, for every successful initiative there are hundreds of failures that pass almost unnoticed. This point is worth emphasizing because it is the entrepreneur who risks his capital in a world characterized by uncertainty and lack of information. As Mises points out in *Planning for Freedom*, “There is a simple rule of thumb to

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<sup>4</sup> The Austrian school of economics does not have a uniform criterion about who risks capital. For example, authors like Kirzner claim that entrepreneurs do not need to have their own capital, while Rothbard, among others, claims that they do.

tell entrepreneurs from non-entrepreneurs. The entrepreneurs are those on whom the incidence of losses on the capital employed falls.”<sup>5</sup>

Throughout the centuries, uncertainty-bearing entrepreneurs have organized themselves in different ways: from sole proprietorships, to small family companies (extended to limited responsibility companies), to the creation of large modern corporations. It took centuries of slow development to reach the current modern business organization, often criticized as one of the main causes of the unequal distribution of wealth throughout the world.

In fact, the differences between rich and poor countries emerge because the essential nature of companies (within the legal framework we have been discussing) is to create wealth, not to plunder the possessions of poor societies to give to the rich. Moreover, the market system rewards society as a whole in two ways: first by punishing companies that do not create wealth so that, by disappearing, they stop wasting precious resources; and second, by making companies successful when they do things well, so that they continue to benefit consumers and create prosperity.

Consequently, as mentioned above, nations with stable institutions encourage the development of uncertainty-bearing innovative entrepreneurs who generate greater wealth. As Micklethwait and Wooldrige point out: “The most important organization is the company: the basis of prosperity of the West and the best hope for the future of the rest of the world.”<sup>6</sup> These writers claim that the modern companies of the capitalist world have created the difference between rich and poor countries. The number of private companies established in any particular country can be shown to correlate with its economic potential and the quality of life of its inhabitants. An obvious example of this can be found in the two extremes: the United States, with 5.5 million corporations in 2001 and North Korea, with none (as far as we can tell).<sup>7</sup>

In the sections that follow we will see that most of these companies produce technological innovations that improve the production of goods and services, which become accessible to a greater number of people at a lower cost, resulting in a better quality of life. Paradoxically, the same critics of

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5 Quoted by Peter G. Klein, “Función empresarial y control de la dirección de la empresa”, *Libertas*, no. 31 (October 1999): p. 14.

6 John Micklethwait and Adrian Wooldrige, *The Company: A Short History of a Revolutionary Idea* (New York: A Modern Library Chronicles Book, 2003), p. xv.

7 *Ibid.*, p. xx.

globalization and the spread of capitalism are also quick to criticize the “progress of technology over the human being,” as if technology were the enemy of Man; as if having more goods available makes Man less human; as if technological development were inversely proportional to the development of Man as a social being.

In fact, cities with the greatest technological development offer Man the greatest opportunities for self-realization. Our quality of life increases, not only because we live longer, but also because our living conditions are better. Technology increases productivity. The same man produces more and this allows him to satisfy more of his needs. One of the first writers to draw attention to this was Jean-Baptiste Say<sup>8</sup> (1767–1832), in his *Treatise on Political Economy*, published in 1803.

Within the preceding hundred years, scientific advances and technological progress have greatly increased productivity, that is, have caused the same input to yield a larger output or made it possible to produce the same output with a smaller input.<sup>9</sup>

The greater the output, the more demanding we can be.<sup>10</sup> If we can demand more, we can satisfy more of our needs.

Moreover, when I refer to satisfying more needs I do not mean material needs alone. In fact, only people who have satisfied all their basic needs can *afford* to think about other, non-material needs. New and more productive technology saves time and resources—previously used for procuring food, housing and clothing—for other types of work.

What are the conditions required for this growth to take place in a particular place and at a particular time? The answer to this question lies in two interrelated factors: the first is the appearance of the entrepreneur and his company, and the second is his creative and visionary spirit; that is, his ability to create and develop new technology and improve that which already exists. Just as a society needs a group of entrepreneurs willing to bear uncertainty, it also needs creative spirits capable of molding into new technology their own ideas, and visionaries to anticipate new ways of satisfying people’s needs. As often as not, both factors are found in the same person. This was especially true up to the mid 19th century (partly as a

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<sup>8</sup> Author of *Say’s Law* or market law: “Supply will create its own demand for products.”

<sup>9</sup> Henry W. Spiegel, *El desarrollo del pensamiento económico: Historia del pensamiento económico desde los tiempos bíblicos hasta nuestros días* (Barcelona: Ediciones Omega, 1984), p. 310.

<sup>10</sup> Say was to develop this reasoning in *Say’s Law*, which bears his name. For further details about this, see Henry W. Spiegel, *ibid.*, pp. 312-317.

result of the lack of available capital and the precariousness of what today we would call “financial engineering”).<sup>11</sup> However, the complex and sophisticated scientific advances made in recent years have driven an increasing number of entrepreneurs and innovators to join forces with capitalist partners and develop their capabilities within the framework of a company.

To see how and why technological creativity occurs, we thus must distinguish two basic components in the invention-innovation sequence. The first component is that technical problems involve a struggle between mind and matter; that is, they involve control of the physical environment . . . The other component is social. For a new technique to be implemented, the innovator has to interact with the human environment comprised of competitors, customers, suppliers, the authorities, neighbors, possibly the priest. For a society to be technologically creative, three conditions have to be satisfied. First, there has to be a cadre of ingenious and resourceful innovators who are both willing and able to challenge their physical environment for their own improvement. Innovation of any kind is unlikely in a society that is malnourished, superstitious, or extremely traditional. Second, economic and social institutions have to encourage potential innovators by presenting them with the right incentive structure . . . Third, innovation requires diversity and tolerance . . .<sup>12</sup>

The history of economic and technological progress is the history of innovative entrepreneurs who challenge the traditional order of things and “established truths.” It is the history of those who bear uncertainties in their search for new frontiers of knowledge, and who reap economic benefits only if they succeed. It is the history of those who are alert to the market’s unsatisfied needs.<sup>13</sup> In a free society—namely a society without privileges, subsidies and artificial monopolies—economic rewards are a direct result of the contribution made by entrepreneurs to satisfy the needs of the population. Success or failure is determined by consumers’ daily choices. The sections that follow will discuss two stages in the progress of these innovative entrepreneurs, from the Middle Ages until the end of the 19th century. Why did they appear? What did they contribute to the societies of their time and those that followed? What circumstances favoured their appearance? How did their activities affect the development of society?

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11 An analysis on how this aspect evolved can be found in: Jonathan Barron Baskin and Paul Miranti, Jr., *A History of Corporate Finance* (Cambridge: Cambridge University Press, 1999).

12 Joel Mokyr, *The Lever of Riches: Technological Creativity and Economic Progress* (New York: Oxford University Press, 1990), pp. 11-12.

13 Kirzner, in fact, gives more importance to “alertness” than to the act of bearing uncertainty as the defining property of entrepreneurs. Israel M. Kirzner, *Competencia y función empresarial* (Madrid: Unión Editorial, 1975).

## Section Two: *Entrepreneurs in the Middle Ages*

In the late 20th century, a large number of economic historians<sup>14</sup> traced the first signs of capitalism (others would say pre-capitalism) back to the **Low Middle Ages**. Most agree that by the late 11th and early 12th centuries, a series of changes had begun to take place in Europe that was to lead to what José Luis Romero has called the “mercantile revolution.”<sup>15</sup> The traditional medieval economy revolving around the “manor” and based on barter was slowly giving way to an economy increasingly based on trade, in which businessmen were to play a fundamental role.

The changes that made for a more open economy were:

1. The end of invasions and civil war in Europe.
2. Population growth; as fewer people died in peacetime, more labor became available to produce food.
3. An increase in trade, as peace brought safer transport and growth in demand.
4. Finally, and as a consequence of all of the above, the growth of cities.

A new social class, formed by merchants and burgesses, made all these changes possible. These men, moved by their enterprising spirit and their eagerness for profit, developed a new economy of trade that led to economic prosperity in Europe after almost 600 years of stagnation.

The Middle Ages cover a vast period of history from the 5th to the 15th centuries. Throughout these thousand years of history, the political, economic and social organization of Europe underwent many changes, which vary according to the region and the period analyzed. The last eight hundred years are usually divided into two periods: High Middle Ages (from the 7th to the 11th century) and the Low Middle Ages (from the 11th to the 15th century). In the rest of this section, I will give a brief description of the most outstanding differences (from an economic standpoint) between these two periods, showing how changes introduced in the Low Middle Ages gave rise to institutions that encouraged the appearance of

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14 Douglass C. North and Robert Paul Thomas, *The Rise of the Western World: A New Economic History* (Cambridge: Cambridge University Press, 1973); Carlo M. Cipolla, *Before the Industrial Revolution: European Society and Economy 1000–1700* (New York: W.W. Norton & Company, 1994); Rondo Cameron, *A Concise Economic History of the World: From Paleolithic Times to the Present* (New York: Oxford University Press, 1997); Robert S. Lopez, *The Commercial Revolution of the Middle Ages, 950–1350* (Cambridge: Cambridge University Press, 1976).

15 José Luis Romero, *La revolución burguesa en el mundo feudal*, vol. 1 (México: Siglo XXI Editores, 1979).

innovative entrepreneurs, and highlighting the consequent improvements in the lives of ordinary people.

The High Middle Ages were characterized by an almost exclusively rural society, whose political and economic institutions were run by the same person: the “feudal lord.” The lord and his peasants lived on the manor, which functioned as a social, political and economic center. All transactions were based on custom and tradition and were carried out mainly through barter. The prevailing economic ideas were those of “a fair price” and “fair income.” Concepts such as “supply” and “demand” were unknown. Political and productive units were isolated from the outside world. Money had disappeared almost completely. A manor was self-sufficient and only 10% of the economy operated outside its boundaries. Based on custom, self-sufficient economic units and scant social mobility, the feudal system did not bring technological innovations or the search for improved production, because anything that meant change was considered wrong and rejected. Moreover, there were no incentives for the creation of wealth. Any “surplus” production was “punished” through tax increases or confiscated by the feudal lord, as it was not permitted to trade with other peoples or store this surplus.

This closed form of organization resulted from the “barbarian” invasions that swept Europe after the fall of the Western Roman Empire, and from the absence of effective central government. It slowly started to disappear in the early 11th century as it fell victim to the four changes mentioned at the beginning of this section. Within two centuries, it had been replaced by a new political, social and economic structure. However, it is worth emphasizing that change was not uniform. The north of Italy, central France, the Netherlands and some cities on the Baltic coast evolved more quickly than the rest of continental Europe because of their geographic position and access to the sea. Running from north to south, the trade route between the Baltic and the Mediterranean (with its ports of entry for merchandise from the Far East) passed through the central area of France, which became a significant trading region. The rise of towns and trade fairs gave greater power to the merchant class.

As Luis Romero points out, moving from the High Middle Ages to the Low Middle Ages implied a transition from a *natural* economy to an economy of *trade*. Order was reestablished in Europe in the mid 11th century: the same routes that were previously used by invaders and their armies started to be used by merchants and a growing and increasingly mobile

population, thus encouraging trade and the growth of towns. In short, the Low Middle Ages were characterized by greater social, geographic and economic mobility. Peace brought a fall in the mortality rate and an increase in population. This new population demanded more food, which could be supplied as a result of two main changes: first, new land became available, as regions that used to be insecure became safe; second, a greater number of peasants and new cropping techniques, such as triennial crop rotation, led to higher yields and the appearance of new farming tools. Compared to previous centuries, the 11th and 12th centuries saw greater mobility and this brought with it new forms of work and new economic relations, as well as new forms of communication, larger towns and more trade.

The growth of towns and trade was a simultaneous and mutually beneficial process. Towns, or “boroughs” as they were also known, developed as a result of the increase in trade and the establishment of medieval trade fairs within their walls. As merchants settled in towns instead of being constantly on the move, a burghess and merchant class emerged, which in turn speeded up these incipient social transformations. It was the stability and security afforded by the boroughs that prompted such notable growth in these merchants’ activities. However, it is not a simple matter to determine which of all the above-mentioned factors first triggered this series of changes. In general, social analysis shows that we cannot single out any *one* factor as decisive in a process of this kind.

According to Henri Pirenne,<sup>16</sup> a core feature of this new social class was that it no longer depended on the feudal lord for its prosperity. Trade and industry, which until then had been sporadic and fortuitous activities, became stable and independent as a result of the growth of towns. The process of peace that took place after the 11th century gave a growing number of peasants the opportunity to seek their fortune elsewhere, generally close to commercial ports (in the north of Italy, the Netherlands or in the cities on the Baltic Sea). Some continued farming, but on new land; others traded in the cities. We must bear in mind that the desire for freedom from feudal “service” was a key factor that drove people to search for new opportunities. The “city” played a fundamental role in this process, providing security for peasants who managed to escape from the feudal manor.

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16 Henri Pirenne, *Economic and Social History of Medieval Europe* (New York: Harvest Book, 1937).

As the population became independent from the feudal lord, settling in the cities or on newly available land, a concept hitherto unknown in medieval society appeared: “profit.” During all of the High and part of the Low Middle Ages, local economies were self-sufficient. Profit was not only considered to be wrong, but was also legally and morally punishable (the Church’s teaching played a decisive role here). According to Pirenne, this new search for profit not only resulted from the changed relationship between the peasant and the feudal lord, but also from the growth of towns and their demand for agricultural produce, essential to their survival. The free peasants, living on the outskirts of the towns, fed the new urban population.

Currency reappeared as a result of the growth of trade. Although it had never completely disappeared, it was used in a very restricted way until the 11th century (mostly by members of the nobility to acquire luxury goods). But the increase in trade made the barter system difficult to maintain; therefore, the demand for money increased significantly after the 12th century, which resulted in price increases that benefited producers and encouraged the entry of new market competitors. (Something similar was to happen when gold and silver from America caused the “price revolution” of the 16th century.)

Currency gave rise to a kind of craftsman that could be described as the direct predecessor of the “banker.” As greater commercial activity increased the number of currencies used for trading, it became practically impossible for merchants to know the value and the equivalence between the hundreds of currencies of different origin that were being used at that time. To overcome this difficulty, specialists appeared whose job was to determine the origin, composition, weight and quotation of the different currencies. According to Jack Weatherford,<sup>17</sup> the modern word “bank” comes from the way in which these early money merchants did business; it is derived from a word meaning “table” or “bench,” the prop that literally formed the base of their operations at the fairs. From Italian, the word *bank*, *banco*, and *banque* soon spread into other European languages and eventually throughout the world.

The first deposit banks of any importance were set up by the *Knights Templar*, a religious order that became the main financial brokers during the Crusades. They were not “bankers” in the modern sense of the word,

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17 Jack Weatherford, *La historia del dinero: De la piedra arenisca al ciberespacio* (Barcelona: Editorial Andrés Bello, 1998).

as the business they carried out was subject to numerous *religious* restrictions. But thanks to their reputation as brave warriors, their honesty and the number of castles they owned from England to Jerusalem, they became the safest and most practical way to save money.

It was the families of Northern Italy who gave us our modern concept of banking. These clans from the city-states of Pisa, Florence, Venice, Verona and Genoa started out by offering banking services independently from the Church and the State. This independence gave them much more freedom to do business with the rest of the world, even with “infidels” (as Muslim merchants were known). The boost that these financial brokers gave to the economy slowly brought an end to the Christian prohibition of usury.

Impotent in practice, the Church came to be very tolerant, gradually allowing exemptions and justifying increasingly greater and more important exceptions . . . [this] is particularly interesting because it shows how the Church made people accept ideologically the position conquered by Medieval merchants in the economic and political spheres.<sup>18</sup>

Thus, it was not long before bankers became experts in a much more profitable activity: “credit.”

Although loans had always existed, bankers made a significant contribution to the economic development of their time because they made credit available to a greater number of people. The document used for loans was the “bill of exchange.” “The Italians did not invent the bill of exchange, but they put it to a new and more profitable use.”<sup>19</sup> When a merchant needed money, he went to the banker.

[The banker] gave him the necessary money in cash, in the florins of Florence or the ducats of Venice, and they both signed the bill of exchange whereby the merchant agreed to pay a slightly higher amount of money in another currency at the next fair in Lyon or Champagne, France. The merchant did not go to the fair personally to pay the bill. Both parties knew that if the merchant failed to show up at the fair, the office in Florence would collect the money owed it.<sup>20</sup>

The bill of exchange also brought another important benefit for trade: it eliminated the need to transport large quantities of coins and the difficulty

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18 Jacques Le Goff, *Mercaderes y banqueros en la Edad Media* (Buenos Aires: EUDEBA, 1975), p. 97. Translator's version.

19 Jack Weatherford, *The History of Money* (New York: Three Rivers Press, 1997), p. 111.

20 Ibid.

of operating with them when large amounts were involved. This made trade much less risky and more agile. Weatherford points out:

The new Italian bank money boosted commerce by making it transpire much faster. In 1338 a shipment of coins required three weeks to wend its way from Rouen in the north of France to Avignon in the south, a distance of just over four hundred miles, and the shipment faced the hazard of being lost, stolen by robbers, or pilfered by the very people hired to transport it. By contrast, a bill of exchange could be sent in a mere eight days, and if it was stolen, the thief could not redeem it. Bills of exchange, in other words, moved faster and protected everyone involved in the transaction. Despite the extra cost of eight percent to twelve percent, a bill still proved cheaper than the cost of hiring an armed escort for a shipment of gold and silver coins or bullion. Bills of exchange helped to free money from its spatial limitations.<sup>21</sup>

As time went by, these bills evolved into what today we call “paper currency.”

Under the new system, a bag of a hundred florins that might once have sat idle for years in a noble’s strongbox could now be deposited for safekeeping in an Italian bank that had access to branches across the continent. The bank then lent the money and circulated the bill of exchange as money.<sup>22</sup>

Thus, the economy became more active. This new *credit money* allowed many craftsmen and bankers who did not have enough savings to start larger, more profitable businesses.

Among the best known Italian bankers were the Peruzzi, Bardi and Acciaiuoli families from Florence, whose relatives operated from Cyprus to England. However, the most outstanding of all was the Medici family, originally headed by Giovanni (1360–1429), who was succeeded by his two sons, known as Cosimo the Elder and Lorenzo the Elder. During this period the Medici became the most powerful family in Florence and one of the most influential in Europe, because it was they who financed the rising European monarchies. Their sons became cardinals and popes, and their daughters married nobles, and became queens and mothers of kings. Under Cosimo’s leadership, the Medici became the most important private company of their day. Apart from their head office in Florence, they had branches in Ancona, Antwerp, Avignon, Basel, Bologna, Bruges, Geneva, London, Lübeck, Lyon, Milan, Naples, Pisa, Rome and Venice. Indeed, perhaps a major difference between this family of merchants and bankers and other families is that they used their wealth to gain power through political alliances and noble titles. Consequently, as they consolidated political

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<sup>21</sup> Ibid., p. 112.

<sup>22</sup> Ibid., p. 113.

alliances, they gradually lost the characteristics of a company competing in an open market leaving the system and its associated principles behind.

These economic changes not only benefited merchants, bankers and producers, but also the development of society as a whole. Some of the advances that provided widespread benefits: contracts and trading companies, insurance, the double entry system, the development of information systems, the adoption of arabic numerals, the dissemination of education, public clocks, bills of exchange and credit. The adoption of these aids to commerce significantly changed the way individuals related to one another. These changes, in one form or another, still affect our lives today.

For example, the appearance of new trading companies was widely encouraged by the use of trading company agreements,<sup>23</sup> which allowed strangers to join capital without risking all their fortune, and encouraged those already in business to continue investing in new projects and initiatives. Before this legal instrument came into existence, only family groups or people who knew each other very well did business together and formed companies. Trading company agreements broadened the possibilities of creating new companies with smaller capital contributions (it was no longer necessary to be wealthy to start a business). These agreements also made it possible to separate personal (or family) capital from business capital. Previously, when a person went bankrupt, he had to respond with all his personal fortune, which meant that many risky business ventures were rejected.

To reduce risk further, insurance companies also developed during this time, specializing at first in the transport of merchandise. This contributed significantly to the growth in trade mentioned earlier.<sup>24</sup> Insurance companies were a fundamental stimulus for trade.

Another sector that evolved simultaneously was accounting which, with the adoption of arabic numerals and the double entry system, not only accompanied but also fostered the growth of trade. Indeed, the development of new information and registration systems was essential for “modern merchants.” The new needs of international trade demanded an

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23 Robert Lopez develops this in: *The Commercial Revolution of the Middle Ages, 950–1350* (Cambridge: Cambridge University Press, 1976), pp. 73–79.

24 For this item, I recommend reading: Peter L. Bernstein, *Against the Gods: The Remarkable Story of Risk* (New York: John Wiley & Sons, Inc. 1998), especially chapter 5.

unprecedented mercantile education. Therefore, it was the merchants themselves who fostered education centers which specialized in their own needs. According to Pirenne,

The development of credit documents assumes merchants knew how to read and write. Trade was no doubt the reason for the foundation of the first schools for the children of the bourgeoisie . . . , from the second half of the 12th century the towns began to open little schools, which may be considered as the starting-point of lay education in the Middle Ages.<sup>25</sup>

Most merchants who engaged in some type of international trade (which at that time meant trade among communities that were little more than one hundred miles apart) needed a reasonably advanced level of education. This is seen, for example, in the need to master different languages.

As Pirenne points out, there seems to be a close relationship between the rise of education and the expansion of credit. The new trade documents required much more advanced reading and writing skills than previously, and credit operations required the development of another fundamental element: “mathematical calculations.” For Jack Weatherford, “The Renaissance began not as movement in arts and letters but as a practical, mathematical revival to help bankers and merchants perform the increasingly difficult tasks of converting money, calculating interests, and determining profit and loss.”<sup>26</sup>

Two men were to make a lasting contribution to this area of knowledge: Leonardo Fibonacci and Luca Pacioli. The first, better known as Leonardo Pisano—as a tribute to Pisa, his city of birth—published his *Liber Abaci* in 1202. His text introduced into Europe what today we call arabic numerals, even though the Arabs themselves had taken them from India. This simplified system was a great improvement on complex roman numerals which were difficult to add and subtract, and which, in practice, were incompatible with multiplication and division. This novelty “eliminated the need for an abacus, since merchants could calculate the new numbers more easily in their heads or on a slip of paper.”<sup>27</sup>

The second man, Luca Pacioli, published in 1487 *Summa de arithmetica geometria proportioni et proportionalità*, which explained the mathemati-

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25 Henri Pirenne, *Economic and Social History of Medieval Europe* (New York: Harvest Book, 1937), p. 122. Translator’s version.

26 Jack Weatherford, *The History of Money* (New York: Three Rivers Press, 1997), p.125.

27 Ibid., p. 125.

cal operations and the double entry system widely used at that time. “With a book such as this, a shopkeeper required no university training to maintain an efficient and profitable business,” Weatherford states.

It is fair to say, then, that these merchants were the “entrepreneurs” of the Middle Ages, and dared to challenge the inertia of the medieval world view. The concept of the rule of “custom” was increasingly questioned as a result of their activities. The changes and advances introduced by these *bourgeois*, as they were later called, awakened the curiosity of a society that had remained static for centuries. The changes promoted by these entrepreneurs not only swelled their coffers but also caused Western Europe to emerge from its defensive position after eight centuries of stagnation. The merchants’ restless spirit forced society to take a new look at many ideas and theories that had gone unquestioned until then. As an involuntary consequence of their actions, the population as a whole enjoyed better opportunities for progress. Contact with faraway markets, thanks to flourishing international trade, allowed for labor specialization and increased productivity. Much of what is now Western culture was adopted and adapted by merchants from other cultures. Contact with other civilizations brought outstanding benefits for the whole of society. This was evidenced, for example, by new habits in eating and dress, as well as new techniques of production, trading and transport. As a result, Man was slowly freed from the bonds of ignorance and nature itself.

It is important to remember, however, that these changes happened very slowly and it should not be assumed that persons in the 15th and 16th centuries were completely free in the modern sense of the term. The rise of trade and the appearance of certain “modern” elements, such as those mentioned above, played a fundamental role in the progress of society as a whole during this period. Merchants, bankers and burgesses led these changes. These businessmen, who competed with one another for their own private benefit, set the scene for new ideas and new technologies.

Paradoxically, a shopkeeper or a merchant would not have acquired his knowledge at a university, as universities at that time, together with government and the Church, rejected many of these changes which threatened their political, economic and spiritual power over society. It was the early “merchant schools,” with their secular approach to education, that later became the basis for scientific knowledge in the 17th and 18th centuries. Within this context, the Arabs were one of the peoples that contributed most to Western culture, although for many years they were dismissed as

“infidels.” It was not until the end of the 16th century that the academic/university environment started to pay attention to these advances.

In sum, there is little doubt that it was the *civilizing influence of trade* that lay at the heart of all subsequent changes. Trade increased in times of peace and cooperation, promoted closer contact among peoples, and encouraged education, making communication more efficient and productive. The profit motive, which had become widely accepted by the end of the Middle Ages, was to become one of the merchants’ most important incentives, if not the principal one.

Although these changes took place all over Western Europe, the concentration of entrepreneurs-innovators operating within each region varied over time. There is not enough room in this short article to analyze the history of each region in detail. Instead, I shall simply trace the general course of what can be called the “long journey towards wealth and innovation.” That is to say, how the center of trade and technology slowly shifted between the 14th and the 19th centuries, moving first from the north of Italy to the Baltic coast and the Netherlands, then to England with her industrial revolution in the 18th century and, finally, to the United States in the 19th century.

Why did the importance of each of these places wax and wane at certain periods throughout the centuries? Their changing fortunes can be explained in terms of geographic, political, religious, and economic factors, among others. However, some circumstances are common to all the cases mentioned in this article (and to other societies with entrepreneurs that promote social and economic progress) and these are directly linked to the central idea of this article.

Innovating-entrepreneurs actively promote the social and economic progress of the societies in which they operate. They run risks and invest their skill, time and capital in search of future profits, which they expect to receive in reward for the risks they take. These entrepreneurs appear in societies where economic and political freedom prevails, societies that offer a stable <sup>28</sup> institutional framework where their initiatives have more possibilities of bearing fruit. In other words, societies with clear rules of play produce entrepreneurs willing to run more and greater risks.

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<sup>28</sup> As described in the first section of this work.

In the case of the medieval merchants and bankers, these conditions were definitely met. In the city-states of Northern Italy they existed more than in the rest of Europe and the known world.<sup>29</sup> Consequently, this region became not only the trading center of its time, but also shone in the world of knowledge and art, which is why it is considered the “cradle” of the Renaissance. The north of Italy was synonymous with intellectual, artistic, educational and political refinement. As happens today, the most refined cities or countries in every sense are also those where entrepreneurs have attained economic success. The countries with the greatest number of successful companies (successful in a competitive, privilege-free market) are those whose citizens enjoy the highest quality of life (better health care, education, food, recreation, housing services, etc.).

This being so, why did these economic centers move from one region to another? Quite simply because, when a certain degree of freedom is lost in one place, entrepreneurs will start seeking it elsewhere. This happens, for example, when the incumbent government tries to take away part of the wealth of successful entrepreneurs through taxes. It happened when certain entrepreneurs and innovators in the north of Italy found that their experiments and discoveries were being hindered because their ideas ran counter to Church doctrine. For this reason, many of them migrated to other regions that offered more freedom. In general, countries that restrict freedom and violate property rights see the quality of life of their population worsen, while those that offer more guarantees are benefited by the inflow of capital and entrepreneurs from other regions. This is what a study of the “long journey towards wealth and innovation”<sup>30</sup> teaches us.

### **Section Three: The Entrepreneurial Spirit in America. From the American Revolution to the Captains of Industry**

In this section, we will jump forward in time and space to make a general analysis of the role of entrepreneurs during the first hundred years of United States history. There is a wide gap between medieval innovative entrepreneurs and the American *captains of industry* of the late 19th century. More than 500 years of political, social, economic and technological developments separate the small republics and city-states of Northern

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29 Timur Kuran, “The Islamic Commercial Crisis: Institutional Roots of Economic Underdevelopment in the Middle East,” *The Journal of Economic History* 63, no.2 (June 2003), explains some of the reasons why European merchants caught up with and then overtook Arab merchants.

30 An analysis of this subject can be found in: Douglass C. North and Robert Paul Thomas, *The Rise of the Western World: A New Economic History* (Cambridge: Cambridge University Press, 1973).

Italy and the booming republic of North America in the late 19th century. When medieval merchants started experimenting with their technological and institutional innovations, the American continent was still unknown to Europeans. In fact, it was the impulse these entrepreneurs gave to navigation techniques and the exploration of new trading routes that brought about the discovery of America.

The economic and technological development of the United States is very revealing, and shows clearly the important role played by businessmen in the process that led the thirteen British colonies to become the world's leading power in just a century and a half. In this section I will analyze the driving force behind this growth and how it was achieved.

It is important to bear in mind that despite the civilizing role of entrepreneurs mentioned earlier, entrepreneurs and businessmen have been widely questioned and criticized, even in the United States, especially by intellectuals.

A series of economic depressions, beginning in the mid-1870's and continuing until the late 1890's brought sporadic financial and emotional misery to millions of workers, despite the fact that national economic output nearly quadrupled and output per capita nearly doubled, raising the standard of living of most Americans. The disorienting shocks of temporary unemployment and the threat of bankruptcy were what people worried about, deflecting their attention from the steady increase of national and personal wealth for three decades, 1867–1897.<sup>31</sup>

Situations like these, together with the exploitation of women and children during the industrial revolution in Europe, were frequently decried throughout the 19th and 20th centuries, and turned the “capitalist bourgeois” into one of the most despised figures in society. However, intellectuals disregard the fact that it was precisely these entrepreneurs that made possible the great economic growth of the most powerful nation on earth. Gary North himself points out that these critics and the public in general do not understand that

the American economic system has pitted entrepreneur against entrepreneur, each in quest of fame and fortune (or at least fortune); but all of them have been continually pressured by the threat of competition to meet the demands of consumers, except in those cases when a few of them could get a majority of voters to create legal barriers to entry, thereby granting producers a monopoly. The genius of free market competition is a simple

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31 Gary North in the book by John Chamberlain, *The Enterprising Americans: A Business History of the United States* (Tyler, TX: Institute for Christian Economics, 1991), p. xiii.

one: **producers compete against producers; and consumers compete against consumers.** When men are all allowed by civil government to compete openly, without threats of physical retaliation from their competitors or threats of violence from the civil government, most businessmen lose, and most consumers win. Most “grand new ideas” are flops, but those that survive by attracting capital and buyers change history.<sup>32</sup>

The history of businessmen is both the history of men who have succeeded and of men who have failed, because the failure of the latter is the key to the success of the former. If a system does not allow for failure or punishes it too harshly, it does not encourage entrepreneurs who are willing to take risks and try new things. Blaine McCormick, in his work *Ben Franklin's 12 Rules of Management*, highlights that “successful failures” are one of the outstanding characteristics of 19th century American businessmen, who learned to optimize their businesses from their mistakes.<sup>33</sup>

Following this train of reasoning, the successful businessman we refer to will always be most likely to appear within a framework of freedom that respects property rights,<sup>34</sup> because

if we receive the complete benefit of our produce and if we trade it, we will be more willing to invest in that business; however, if we feel diminished, because part of our profit (externality) goes to others, we will feel less encouraged to invest. When all benefits are obtained, investment will increase and, consequently, the product and the economy will grow.<sup>35</sup>

We are not saying that businessmen will tirelessly seek the common good, or sacrifice their lives and effort for the sake of humanity. On the contrary, they will try to take advantage of every chance they have to avoid competition and to gain some kind of captive market to maximize their profits. **Therefore, in order to prevent this type of behavior, a free market is necessary, with low entry and exit costs.**

The contrast between a rent-seeking society and a market [profit-seeking] society is sharp. In a market society, profits are earned by businesses competing to serve consumers. The entire society benefits as the needs of consumers are served. The rent-seeking society, on the other hand, works well only for the powerful with government connections. The entire society is the loser as elites sew up existing

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32 Ibid., pp. xiv-xv.

33 Blaine McCormick, *Ben Franklin's 12 Rules of Management: The Founding Father of American Business Solves Your Toughest Problems* (Irvine, CA: Entrepreneur Press, 2000), p. 74.

34 To read about the significance of property rights in this sense, see: Harold Demsetz, “Hacia una teoría de los derechos de propiedad,” *Libertas*, no. 6 (May 1987).

35 Roberto Cortés Conde, *Historia económica mundial. Desde el Medioevo hasta los tiempos contemporáneos* (Buenos Aires: Grupo Editorial Planeta, 2003), p. 14. Translator's version.

opportunities for themselves, thereby blocking others from competing, and resources are drained in unproductive activities to influence the government.<sup>36</sup>

“Rent-seeking” has predominated throughout time in most countries that have not achieved economic development. Economies have always been regulated and intervened, but whenever regulation and intervention were minimized, businessmen had the chance to generate more wealth. It is the need to compete for consumers that allows for the appearance of the kind of entrepreneur described in this article. Adam Smith draws our attention to this point:

The interest of the dealers, however, in any particular branch of trade or manufacture, is always in some respects different from, and even opposite to, that of the public. To widen the market and to narrow the competition, is always the interest of the dealers. To widen the market may frequently be agreeable enough to the interest of the public; but to narrow the competition must always be against it, and can serve only to enable the dealers, by raising their profits above what they naturally would be, to levy, for their own benefit, an absurd tax upon the rest of their fellow-citizens. The proposal of any new law or regulation of commerce which comes from this order, ought always to be listened to with great precaution, and ought never to be adopted till after having been long and carefully examined, not only with the most scrupulous, but with the most suspicious attention. It comes from an order of men, whose interest is never exactly the same with that of the public, who have generally an interest to deceive and even to oppress the public, and who accordingly have, upon many occasions, both deceived and oppressed.<sup>37</sup>

Adam Smith’s classic work was a response to an economic system that prevailed since the early 17th century: “mercantilism.” The mercantilist doctrine held the belief that national wealth was based on the accumulation of precious metals; therefore, overseas colonies were to be established, a merchant navy built, and mining and industry promoted. At the same time, it restricted foreign trade using import duties and export subsidies, thus guaranteeing a favorable balance of trade, which in the end led to national wealth.

It was against this very system that the thirteen American colonies rebelled in the second half of the 18th century, even though it was a system implemented by Britain in all its overseas colonies. In the American territories, colonists managed to evade mercantile controls, partly through

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36 Paul Craig Roberts and Karen LaFollette Araujo, *The Capitalist Revolution in Latin America* (New York: Oxford University Press, 1997), p. 64.

37 Adam Smith, *Investigación sobre la naturaleza y causas de la riqueza de las naciones* (México: Fondo de Cultura Económica, 1987), p. 241.

their own ingenuity, and partly because of the Crown's lack of political will to implement such controls. For one reason or another, the colonial society—made up as it was of different social classes with diverse interests (interests which were often conflicting due to differences in wealth and political influence)—had one thing in common upon which all could agree:

They alone were responsible for the generation of wealth. Government has almost nothing to do with creating wealth, and little more to do with distributing it . . . Government did play a substantial role in the colonial economy of America, but the few edicts coming from London had little effect on average American enterprises.<sup>38</sup>

Unlike colonists in other regions, English settlers in America knew that they had to earn their own living. In fact, many of the colonizing initiatives were organized as joint-stock companies. In John Steele Gordon's opinion, this was one of the key factors for the future development of the United States.

The joint-stock company is the direct ancestor of the modern corporation and thus, together with the nation-state itself, the most important organizational invention of the Renaissance. Without it, the modern world simply could not have come into being. And without the joint-stock company, the history of the United States would have taken a very different turn indeed.<sup>39</sup>

Joint-stock companies, then, played a fundamental role in the colonies' economic development. Because these companies limited the stockholder's responsibility to the invested capital, they attracted many more investors who were willing to risk part of their capital instead of investing it in other initiatives that would have required them to risk all their equity (as had happened in the Low Middle Ages). This, plus a general willingness to run risks and experiment, paved the way for new opportunities.<sup>40</sup> Thus, the thousands of settlers who arrived in North America from the 17th century onwards found a society that encouraged entrepreneurs of all sizes: small, medium and large. Their success or failure was tied to their work ethic, which did not mean working hard just for the sake of it, but rather working for the benefit of others.

Indeed, unwanted labor is useless in one economic sense, in that it allows a person to consume scarce resources without returning anything to society.

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38 Larry Schweikart, *The Entrepreneurial Adventure: A History of Business in the United States* (Orlando, FL: Harcourt Brace & Company, 2000), pp. 43-44.

39 John Steele Gordon, *The Business of America: Tales from the Marketplace—American Enterprise from the Settling of New England to the Breakup of AT&T* (New York: Walker & Company, 2002), p. 4.

40 For an analysis of this subject, see: Larry Schweikart, op. cit., p. 30.

Rather, labor that does not serve others (in a market sense) is actually consumption, not production.<sup>41</sup>

The American colonies were largely autonomous for the first 150 years of their existence. However, when the Seven Years' War (1756–1763) was over, Great Britain, strengthened by victory against France, tried to impose stricter controls on her property in the New World. She was starting to consolidate her overseas economic empire and the North American colonies were expected to play a prominent role in this new political and economic arena.

Colonists, however, felt these new measures went against their rights and, after just over ten years of dispute with the Crown, they were to declare their independence in 1776. The founders of Virginia needed new land, as their old land had been exhausted by the type of crop cultivated (mainly tobacco). As a result, they started to expand westward, but the Royal Decree of 1763 put a stop to this. This measure, on top of the new taxes imposed by the British parliament on the colonies, put colonists on a war footing.<sup>42</sup>

The purpose of their fight was to maintain their freedom, their right to life and their property; that is to say, principles inherent to the *Magna Carta* of 1215 and the Glorious Revolution of 1688. The moment this freedom was threatened, they did not hesitate to defend it. The British Crown's attempt to apply the mercantile system endangered colonial autonomy and led to the break with Great Britain.

This is perhaps one of the principal differences between the United States and the rest of the countries in the American continent that waged wars of independence. While other colonies decided to go to war to obtain a freedom they did not have, North Americans waged a war to defend a freedom they already enjoyed in practice. (This is also what makes the American Revolution different from the French Revolution.)<sup>43</sup> The issues mentioned above are an example of some of the ideas that were upheld by the representatives of colonial assemblies in the pro-independence movement and which figure in the institutional structure of the new republic. These men were well aware of what the institutional requirements for the new government were.

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41 Larry Schweikart, *The Entrepreneurial Adventure: A History of Business in the United States* (Orlando, FL: Harcourt Brace & Company, 2000), p. 11.

42 To expand on the subject of taxes and the independence of the United States: Charles Adams, *Those Dirty Rotten Taxes: The Tax Revolts that Built America* (New York: Touchstone Books, 1999), and *For Good and Evil: The Impact of Taxes on the Course of Civilization* (Lanham, MD: Madison Books, 1993), chapters 27 and 28.

43 Robert Peterson, "A Tale of Two Revolutions" in Burton W. Folsom, Jr., *The Spirit of Freedom: Essays in American History* (New York: Foundation for Economic Education, 1994).

One of the best examples of an innovating entrepreneur is Benjamin Franklin,<sup>44</sup> although he is usually better known for his involvement in the American fight for independence, and for his skills as a scientific inventor, rather than for his spectacular entrepreneurial career. In fact, McCormick says: “. . . Franklin became a scientist and a patriot because his success as a business manager allowed him to retire at age 42 and pursue other interests.”<sup>45</sup> Franklin represents the *pure entrepreneurial spirit*. A man who started from scratch, with no fortune or formal education apart from reading and writing, but with a strong will to make progress and experience new things, in an environment that rewarded the *uncertainty-bearing innovating entrepreneur*.

Born in Boston in 1706, the youngest son of a soap and candle manufacturer, Franklin showed his fondness for books from an early age, which led him to work at his brother's printing shop at the age of twelve. As he disliked working for his brother, after a few years he left for Philadelphia to work for another printer. His initial success allowed him to set up his own business, which was highly profitable thanks to agreements reached with book editors. His restless personality and his constant search for new opportunities also drove him to get involved in the ink and paper market, thus becoming the supplier of some of his competitors. When he retired from business in 1748, Franklin was considered the main player in the printing industry throughout the North American colonies.

He devoted the rest of his life (he died in 1790) to public service and scientific work. Trained in the world of business he poured his talent and skills into public projects: he founded the first library in Philadelphia, the fire department, hospitals, local militias and the University of Pennsylvania, among other initiatives. “His life of public service and the subsequent popularity of his autobiography have left a unique and indelible stamp on the business activity of the following 200 years in America.”<sup>46</sup> He also played an outstanding role in the fields of science and politics. Especially famous as a revolutionary leader, he was a diplomatic representative first of the colonies and later of the independent nation, and the only representative to sign both the Declaration of Independence and the Constitution of the United States.

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44 For an introduction to the public debates of the pre-revolutionary period and for Franklin's ideas: Edmund S. Morgan, *Benjamin Franklin* (New Haven: Yale University Press, 2002).

45 Blaine McCormick, *Ben Franklin's 12 Rules of Management: The Founding Father of American Business Solves Your Toughest Problems* (Irvine, CA: Entrepreneur Press, 2000), p. xv.

46 *Ibid.*, pp. xvii–xviii.

This type of leader shaped the new nation (Franklin was perhaps the most famous, but certainly not the only, founding father interested in the development of science and technology).<sup>47</sup> This is another outstanding difference between North America and other colonies that gained independence in the same period, as most of these were ruled by soldiers and lawyers.<sup>48</sup> The attitude of a businessman holding a public position in the United States is clearly different from the bureaucratic formalism of the man of arms and law in Latin American countries.<sup>49</sup>

The cost of the war and the loss of trade ties with Britain after independence brought economic difficulties to the colonies, but

when the last necessary ratifying vote on the Constitution came through in 1788, merchants and businessmen from Kennebec to the Savannah River could look forward to moving out into a world of internal free trade that was to become the greatest “common market” in history . . . The great business boon of the Constitution was that it created a legal instrument that permitted individual forward planning without fear of *ex post facto* interruptions by government or undue molestation from mercantilists of any sort, whether homegrown or foreign.<sup>50</sup>

The new republic needed capital more than ever to fuel its economic rise. This continued to be one of the fundamental requirements for growth even well into the 19th century. Without doubt, trade was the main driver of economic growth, and the first great American entrepreneurs devoted themselves to this business. Trade with other nations allowed the government to accumulate gold and silver and to use these metals to pay off the obligations assumed during the War of Independence. This is of utmost importance, as it shaped what we call the *ethics of capitalism*; that is to say, the honoring of one’s commitments.

The first significant “business trip” was made in 1784 when the *Empress of China* set sail from the New York bay for Macao and Canton. During these early years, men such as Robert Morris, William Duer, Daniel Parker, Samuel Shaw and Donald McKay stand out. We note the case of Elias Hasket Derby, who was aware of the importance of fast transport

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47 For this subject: I. Bernard Cohen, *Science and the Founding Fathers* (New York: W.W. Norton & Company, 1997).

48 This specific case from the history of the United States does not mean that businessmen *must* have a political role in society. However, facing the British government’s advance on colonists, they responded in defense of their natural rights, led very often by businessmen.

49 For an interesting analysis on this subject, see José Ignacio García Hamilton, *El autoritarismo hispanoamericano y la improductividad* (Buenos Aires: Editorial Sudamericana, 1998).

50 Gary North in the book by John Chamberlain, *The Enterprising Americans: A Business History of the United States* (Tyler, TX: Institute for Christian Economics, 1991), p. 37.

and broke many of the navigation conventions of his day. He focused on ship building and promoted new designs, and not only stood out in this area of technological innovation but also for his concern to increase the well-being of his employees, which is why, for instance, he refused to load slaves on the coasts of Africa. His crew was paid more than workers in other companies, and officers were allowed to trade for their own benefit at foreign ports, as long as their shipments did not interfere with the company's. As a result, many employees used their bunks to carry merchandise. When Elias Hasket Derby died in 1799, at the age of 60, he was a millionaire.

Slowly, capital became available in the United States and was invested in the country's first industrial projects, essentially related to shipbuilding and enhancing the production of exportable goods. In general, these entrepreneurs were interested in increasing the speed of the manufacturing process. We now know that progress is not linear and failure is much more frequent than success. When failure occurs, however, a change is brought about in the way things are produced, which in turn leverages other sectors of the economy. Very often, several people are working on the same project or invention at once, and usually one of them comes up with the innovation that is later adopted by everyone else. Although this person takes all the credit for the invention, behind the inventor are many others who never become famous, but who play a leading role in the whole process of wealth creation and technological innovation.

Samuel Slater and Eli Whitney were two successful businessmen in this first stage of industrialization. Born in England, Slater made his name in the textile industry. In his youth, he worked for almost six years as an apprentice under one of the partners of the famous inventor Richard Arkwright. During these years he "took mental pictures" (as copying plans was forbidden) of the machines he worked with and their dimensions. At the same time, he thought up changes that would make these instruments more reliable. When he arrived in New York (disguised as peasant because if he had been known to have been an industrial apprentice for so many years, he would not have been able to leave Great Britain), he contacted Moses Brown, a man in the textile industry, who was going through difficult times and needed new blood for his company. The beginning was not simple as Slater's proposals required Brown's employees to completely change their production procedures, plus they did not have the exact plans for the new machines. But, after a process of trial and error, the United States had its first cotton spinning machine.

Samuel Slater built his first factory in 1790 and for many years he was one of the main suppliers of the national textile industry.

The second of these two men, Eli Whitney, is considered by Chamberlain as Connecticut's leading inventor. Whitney explored different fields. He invented the cotton gin, which complemented Slater's invention. The cotton gin led to a "furious exploitation of cotton" in the Southern states (and probably saved the "peculiar institution of slavery from its natural death"). Whitney was also the first to build weapons with interchangeable parts, and in doing so he established the basis of the American mass production system.<sup>51</sup>

Whitney, who had been born on a farm, hated farm work because he found it too arduous. He went to work with his father in town as soon as he could. He studied hard, and later, after graduating from Yale, he headed south without a penny in his pocket. On the way, he stopped in Georgia, at the plantation of some old friends. There he met a fellow scholar from Yale, Phineas Miller, who would become a partner in one of his most important projects. Miller was the manager of a plantation and told Whitney about one of the problems they had with cotton fiber. It was a very difficult task to remove green seeds from the cotton fibers and took many additional hours of work (a slave could only clean half a kilo of cotton per day, which gives an idea of the cost of this operation). The tool Whitney invented pulled the cotton through small slotted openings so as to separate the seeds from the lint. With Miller as his partner, they produced and sold this new machine.

But Whitney was to be frustrated when he tried to collect the patent rights for his invention—his machine was being copied throughout the South and production of cotton rose from 2.5 million kilos to 35 million in only seven years. These were hard times for Eli Whitney, but, instead of giving up, he sought new ways to take advantage of his inventiveness and manual skills. After experimenting with new tools and machinery, he created a machine that produced identical parts that could then be turned into another machine. That is to say, he invented a machine for making machines. He applied his idea for the first time to the manufacture of weapons (muskets). In 1798 Whitney signed his first agreement with the Army and his business was very successful. In 1812, he signed a second agreement and people from all over the world came to Connecticut to visit

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<sup>51</sup> Ibid., pp. 59–62.

his plant—not only weapons manufacturers but also representatives of the textile industry. The seed of the mass production system had been planted in the United States.

The industrial revolution had not yet started in North America, but its presence could be sensed. “The task ahead for the next generation of businessmen was to expand to the West, join the nation by roads, channels and railway.”<sup>52</sup> The steam engine played a fundamental role in this new age. After some years, as the local market grew, the United States started to depend increasingly more on its domestic market to strengthen economic expansion. Towards the middle of the 19th century, with the discovery of gold in California, businessmen stopped looking to foreign shores and focused on their domestic market.

Four factors were behind the spectacular growth of the business world after the second half of the 19th century: faster transactions; the development of communications and transport; the size of companies (both in terms of the number of employees and the capital invested); and the geographic scope of businesses, which covered thousands of kilometers from the Atlantic to the Pacific. It became impossible for businessmen to run their companies on their own, as they had been doing until then.

The key to this great change was the spread of the railroad throughout the country. Very soon, railways began to replace waterways since they offered comparative advantages such as year round operation (unlike waterways, which were frozen in winter). The railway networks could also be built across areas that could not be covered by waterways because of the geographic features of the terrain. Another advantage was that trains could travel three or four times faster than steam ships. All this encouraged remarkable growth in markets and, consequently, more competition. The railway network grew from 19,000 miles in 1860, to 33,000 miles in 1870, and to 155,000 miles in 1913.<sup>53</sup>

This increase in the size of the domestic market changed the way companies were managed. The word “efficiency” was given a new meaning,

New forms of statistical and accounting information also augmented administrative capacities. Balance sheets and operating statements suc-

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52 John Chamberlain, *op. cit.*, p. 62.

53 For detailed statistics of the evolution of the world economy, I suggest: Angus Madisson, *La Economía Mundial, 1820–1992: Análisis y Estadísticas* (Paris: OECD, 1997).

cinctly highlighted for management the salient details of operating performance and financial condition.<sup>54</sup>

A detailed analysis of this may be found in Larry Schweikart, who says that business could not have been run in more than a dozen states, with thousands of employees, and an estimated capital of millions of dollars if changes had not been introduced.<sup>55</sup> Edgar Thomson and Daniel McCallum emerged as the innovators of the modern administrative system in the mid 19th century, together with Albert Fink, who introduced new accounting methods for expanding organizations.

In ten years, Thomson's railways expanded from 250 to 438 miles, with profits soaring from 2 million to 11 million dollars. Such growth would have been impossible if a hierarchical "management" system had not been developed, based on a pyramid structure where long-term decisions were made by the highest ranking executives (including operations and financial officers), while everyday decisions were taken by middle and low level "managers."

Thomson was neither the first person to use this structure, nor the most famous. McCallum, whose career also began with the railways, is recognized as one of the first promoters of "hierarchical" management systems. His philosophy explains the advantages of this system, as well as the best way to understand and apply it. Some of the guiding principles were:

- division of responsibilities
- reliable reports on the performance of tasks
- timely submission of these reports
- confidential communication, to prevent management exposure and consequent loss of authority
- delegating authority to managers to allow them to carry out their duties properly.

To implement these changes, information needed to flow smoothly between the different company sectors. The new bureaucracies created such a demand for information that this led to a "revolution" in accounting. According to Alfred Chandler, accounting appeared for the first time as a "profession" when it replaced the traditional double entry book keeping system.<sup>56</sup> The new accounting practices could be classified in three categories: financial accounting, capital accounting and cost accounting.

54 Jonathan Barron Baskin and Paul Miranti, Jr., *A History of Corporate Finance* (Cambridge: Cambridge University Press, 1987), p. 138.

55 Larry Schweikart, *The Entrepreneurial Adventure: A History of Business in the United States* (Orlando, Florida: Harcourt Brace & Company, 2000).

56 This system had been introduced by medieval merchants, which gives us an idea of how long some changes in the accounting process can take.

Albert Fink, engineer in charge of the railway in Louisville and Nashville, was one of the first to implement these “new accounting” methods at work, mainly to make a comparative analysis of the operating costs of each branch line owned by the company he worked for as manager.

All of these changes were gradually applied to new large-scale projects after 1850. Most of the prominent figures in this period were innovating entrepreneurs who worked in the field of transport: Andrew Carnegie and the steel industry, Vanderbilt and steam tenders, James Hill and the railway, Rockefeller and oil, and Henry Ford and automobiles.

To conclude this section, I would like to examine in more detail the case of Andrew Carnegie, perhaps one of the most outstanding innovating entrepreneurs in the United States.<sup>57</sup> Carnegie came from Scotland to the United States in the mid 19th century at the age of thirteen. His family was extremely poor and he started work at a factory for \$1.20 a week (12 hours a day, 7 days a week). Shortly afterwards, he began working for a telegraph company, where he was soon noticed for his ability to learn messages by heart, without having to write them down. Thanks to this skill he was hired as the personal assistant to Thomas Scott, manager of one of the railway companies. Through his closeness to Scott, the young Carnegie quickly acquired experience in the two booming industries of that time: steel and railroads. Scott taught Carnegie about the business of buying and selling stock in the financial market. Very soon, he was earning considerable sums of money as a result of his business vision and became one of the stockholders of the Keystone Bridge Company. This was the beginning of his brilliant career in the steel industry. Steel bridge construction became one of the fastest growing activities as transport networks expanded and required great technological innovation.

It did not take long, however, for Carnegie, an innovating entrepreneur like few others, to go from bridge construction to steel manufacturing. In 1864, he set up the Cyclops Iron Co. His main concern was to control costs in his companies; his accounting systems recorded in detail the costs of each department. The other key aspect in the growth of his companies was his research and technology investment policy. He soon recognized that technology was the *wave of the future*. He knew the British were more advanced in this area of the industry and did not hesitate to bring

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57 Larry Schweikart, *The Entrepreneurial Adventure: A History of Business in the United States* (Orlando, FL: Harcourt Brace & Company, 2000), pp. 202–213.

equipment from Europe. (He was the first to introduce the system designed by Henry Bessemer in America.) Always alert to the contributions talented and innovating employees could make to his industries, he never hesitated to hire the most experienced staff possible.

In characteristic style, he attracted “senior managers” by offering them company stock. At a time when company “ownership” and “management” were separate functions, Carnegie joined them together in an unprecedented way. When he gave stock to his managers, productivity increased remarkably. He also obtained a comparative advantage over other companies, because this policy allowed for internal funding, and generated a constant return on the company’s profits which could be reinvested. This practice did not encourage some stockholders because Carnegie hardly paid any dividends (his partners received very little money apart from their salaries). However, internal funding gave Carnegie the advantage of obtaining money when most of his competitors could not, and at zero cost. His main goal was to reduce costs to reinvest and grow. That was his *philosophy*.

When he acquired the Homestead Steel Works, he offered its owners money or the equivalent amount in stock in his own company. All of them, except one, preferred the cash. The only one who decided to take the stock witnessed how, in fifteen years, its value went from \$50,000 to \$8 million. The key to Carnegie’s success was acting when his competitors did not want to or could not act; i.e., during times of recession or crisis.<sup>58</sup>

The only exception to his constant quest to reduce costs was salaries. He thought that the most valuable jobs in a free market should be the best paid because this guaranteed productivity. He did not mind paying higher salaries as long as they were negotiated individually. This led to several clashes with union leaders, and sometimes to violent strikes where people died.

His companies continued growing during the 1880s and 1890s. It would be naive to think that this great businessman did not have serious opponents and critics in his day. (In this he was like Rockefeller who was his contemporary and with whom he had to deal at a certain point). But criticism did not deter him from pursuing another of his goals: donating \$300 million to charity. In 1904, when his charity efforts were just starting, he had already donated \$180 million.

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<sup>58</sup> Except in the case of the crisis that took place in the 1870s, his company was never supported by the government.

Most of the money came from the sale of Carnegie Steel to J.P. Morgan in 1900. The agreement was reached on a cruise ship owned by Morgan, who offered \$480 million for the company. When the deal was closed, Morgan told Carnegie: “Congratulations, you have become the richest man in the world.”

### Final Remarks

In this article, I have highlighted some of the main characteristics of entrepreneurs and described two different historical periods in which they played a leading role. Over the last seven centuries, Western civilization has progressed slowly but steadily. Each of the factors forming part of what we describe here as “civilization” has advanced notably in the West. However, it is not easy to find studies that directly relate *innovating entrepreneurs* to this *spontaneous process of building civilization*. In fact, businessmen have generally been ignored in the literature covering the evolution of Western civilization over the last few centuries, and most writings that do mention them, paint them as a class of men that are only concerned about increasing their fortune without caring about their community.

In fact, the cases analyzed in this paper show that innovating entrepreneurs are among the most important *agents of civilization* because, as a direct or indirect consequence of their activities, all manner of advances and innovations are introduced to society that benefit the population as a whole, both in the mid and long term. However, we should not overlook one important point: these entrepreneurs try to further their own interests and increase their own fortunes; but when these goals are pursued in a society that respects individual freedom and property rights, success is only achieved once consumers have been satisfied in the market.

It is with the goal of success in mind that the innovating entrepreneur bears uncertainty, hoping to do better business than his potential competitors. This uncertainty usually means he must risk his own capital or that of those funding his project, depending on whether we take entrepreneurs as uncertainty bearers or “new business developers” supported by third party capital (see Section One of this paper). Successful businessmen are rewarded with economic profit. This economic reward, in a market economy, reflects the magnitude of the services an individual or company has ren-

dered to the community. The greater the contribution, the greater the reward will be.

The innovating entrepreneurs I have mentioned were successful because they competed in the market and, therefore, were selected by consumers. Why do I say they are *agents of civilization*? Because their economic success is proof that their innovations and discoveries introduced some progress that benefited their communities. Very few entrepreneurs have a definitive impact on society, but together they contribute to progress. Both the successful and non-successful entrepreneur, who will never be famous, play a part in this *spontaneous creation* process. Every innovating entrepreneur who succeeds contributes to a continuing chain of improvements (difficult to quantify) that is greater in impact than any specific advance or invention on its own. Innovation implies a process that liberates resources that can be used and reallocated to other activities.

These entrepreneurs were the greatest creators of wealth that have ever existed, and their search for profit and their capacity to accumulate wealth resulted in new developments in all areas of human activity. For example, banking, which emerged to simplify the trade of medieval merchants, developed at the same time as credit. Credit, disseminated through the trading banks of the 19th century, allowed new innovators to run risks and embark on their own *creating adventures*. It allowed others to buy a house before saving all the money required to pay for it, and still others to exploit their intellectual potential because, thanks to a loan, they now had access to education. This chain of improvement is endless, precisely because the process is spontaneous. Nobody can command or control it.

To sum up, societies with more innovating entrepreneurs enjoy a better quality of life. But why do some societies have more innovating entrepreneurs than others? Another paper would be needed to answer this question but, following the line of thought developed so far, the short answer is that societies with clearly defined property rights and with more freedom to pursue the infinite number of opportunities that arise will also have more innovating entrepreneurs. This is only one aspect, however. These societies must also guarantee low costs to enter and exit the market. If these two conditions are met, circumstances will be ripe for the accumulation of wealth and for its constant reinvestment in all kinds of new initiatives. If creation is a *spontaneous* process, where the principles of liberty prevail, innovating entrepreneurs as *agents of civilization* will also prevail.

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