

**DEMOCRATIC AND POPULAR REPUBLIC OF ALGERIA
MINISTRY OF HIGHER EDUCATION AND SCIENTIFIC RESEARCH**

UNIVERSITY OF ABDELHAMID IBN BADIS – MOSTAGANEM-

FACULTY OF FOREIGN LANGUAGES

ENGLISH DEPARTMENT



MASTER DEGREE IN

« British Civilization »

Impacts of the Industrial Revolution in Great Britain from the Eighteenth Century to the Nineteenth Century

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Academic Year: 2016/2017

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General Introduction

General Introduction

Great Britain is the largest empire in history, it is considered as the world's greatest compromise; colonialism was one of its basis. It was a global power; and took its extreme power from the Industrial Revolution which was a turning point in its history. The concept of Industrial Revolution was the main reason which motivated Great Britain in other to make a general change in its economic system which was based on agriculture and manual work to be substituted into a mechanical one.

Great Britain was the first country in the world that witnessed the Industrial Revolution which led to the appearance of dramatical changes that had an impact on British people's life in different levels economic, social conditions, and political growth.

Some scholars believed that the Industrial Revolution was the arm that made Great Britain a super power, so that it could not be destroyed easily. So, what about the secret that made the Industrial Revolution reach a success in this empire? And to what extent had the Industrial Revolution helped into shaping the policy of Great Britain in different domains?

To answer these questions, we relied on the following hypotheses:

- The use of the right strategies in controlling the British economy.
- Relying on the colonized countries by getting raw materials and use them as market in other to sell their productions.
- New political system was brought in Great Britain.
- British people had the chance to get a better life.

As the matter of fact, this work is aimed to study or to discuss the effect of the Industrial Revolution on Great Britain.

In this research, we are going to deal with three chapters, each chapter has a title.

The first chapter deals with the main reasons that led to the appearance of the Industrial Revolution in the British empire which resulted in the technological advances, the agriculture revolution, and population growth.

The second chapter will be devoted to discover how did the Industrial Revolution affected the British economy, industry, society and made of Britain a great empire and, a global power.

General Introduction

The third and the last chapter will focus on the principle results of the Industrial Revolution, and through it many transformations had been made in several domains for instance, the income of wealth, means of transportation. All these changes that were a huge motivation behind the appearance of the new British Empire.

1.1. Introduction

The Industrial Revolution succeeded to improve the British industry, economy, and the living conditions of people. First, it began in Britain, then it spread in all over the world. Many changes were brought with it such as new factories, the replacement of hand tools with power -driven machine, the improvement of the system of transportation, and new living conditions. This chapter will be dealing with different definitions of The Industrial Revolution, then we move to the main causes and factors that led to its appearance in Great Britain and made it an industrial country based on a strong economic system.

1.2. Different Definitions of the Industrial Revolutions

The term Industrial Revolution refers to the process of rapid change in industry that has deeply modified agriculture, economy, and social conditions. This appeared in England in the eighteenth century, and then moved or spread in the nineteenth century in the European continent, even in the united states. The appearance of this revolution was due to many factors when new sources of energy, such as coal and steam, were used to power new machines designed to reduce human labor and increase production. The move to a more industrial society would forever change the face of labor.

The Industrial Revolution began in England from 18th to 19th in the late of 1700s. New methods of smelting iron by using a Coke or Courke were introduced, since the coke could heat iron more quickly than charcoal, production rates increased. This iron was instrumental in creating industrial machinery and railroad lines. Improvement of the system of transportation; for instance, improved British entrepreneurs who sought an efficient system of transportation. Recognizing the need to move goods and resources, new networks of canals and roads were built beginning from the mid eighteenth. Other changes appeared such as communication, banking, advance in agriculture industry and shipping. The Industrial Revolution was a result of many reasons. Several changes were brought in all sectors: living conditions, economy, and politics as a result, industry replaced agriculture and all this led to the emergence of large factories, rural exodus, as well as the appearance of proletariat and a non-landed bourgeoisie.

1.3. Enclosure in Countryside

At the end of the eighteenth-century, Britain was facing so many problems, and obstacles, and economy was one of its main concerns. The chief clan decided to search for a solution,

and to find a way in order to get money. The only solution was to take advantage of sheep, which provided wool. This wool would be woven into thread and finally would give us clothes. It means: by selling clothes one could reach wealth and incomes. The sheep meat was also considered as a good source.

When the clan chief realized the importance of sheep, they wanted to take possession of the clan land. They started to force people to leave their clan land with several ways by substituting them with sheep, this procedure is called clearance. As a result, the clan chief took the land by force, after that they became legally their properties. The same thing happened to the common land and it was enclosed in England and took profit of those lands between 1790, and 1850. (Sudha Shenoy, 1993, P.581)

However, numerous highlander men, and women even children were not left only without their clan lands, but also without their old way of life. They became very poor, some of them lived in the street of Glasgow, others went to live in Canada, and Australia. In the eighteenth-century, changes started to begin. Most of the lands were enclosed in order to be used for animal foods and cereal farms. These clan chiefs reached wealth and authority. The land owners were influenced, and persuaded their members of parliament to proceed by law which would give them the responsibility, and control of the land and enclose it.

The members of parliament agreed with them, because the landowners, and clan chiefs were strong, and would help them in the elections. The enclosure led to the emergence of land lords and aristocrats. They gained a lot of money which they invested thanks to the increased trade with India, and west Indies. This investment brought them money, this was due to the co-mines, and iron works that had eventually raised the economy.

Nearly, all these landlords and aristocrats preferred to invest their money in the lands. some of them bought sites on the edge of London, and other built nice country houses, and looked around the to discover other richnesses. So, they became interested with lands and new farming methods.

Britain, and Holland were the two countries that applied the best farming methods. It was due to the cool climate of their country, and the clever inventors that helped a lot in the development of the country during the Industrial Revolution.

At the beginning of the eighteenth century, “the great inventor Jethro Tull created the seed drill machine.” (Gibson, 2010, P.38). It was used for planting corn seeds in straight lines and

at fixed intervals. Another advantage for this machine consisted in cleaning the land from weeds and make it easier to grow crop. The seed drill helped, and improved the farmers in their work. At the same time the roots were introduced in both Britain and Holland.

1.4. Agricultural Revolution and Population Growth

The parish village ordered and organized all the farm lands but, no farmer could buy the necessary materials, there were only cheap machines used for land in three different areas around the village. The rich farmers wanted to add the system of land holding which brought new methods, and machinery in one area in each farm. The farmers had enough money, and a strong persuasive reason to make a change in the system of farming, because they knew that the system of land holding would produce more quantities of food than the traditional one.

On the other side, people didn't realize that population was growing faster; thanks to good food productions, enclosures, and the farming methods. It had been reported that Smithfield was the British largest meat market, and the farmers which accomplished a remarkable advance in animals farming. For instance, "in 1710, the average weight of an ox was 168 kilos, and by 1795, was 364 kilos, during the same period the average weight of sheep in Smithfield rose from 17KG TO 36 kg". (Hobsbawm, 1968, P.97)

Moreover, the British lands were fertile, and they improved in the right way. So, wheat of bread was growing almost everywhere as a result, poor people wanted to consume the same white bread which the rich people did.

Unfortunately, the enclosures were getting damaged, there were few large fields before, but now lots of smaller ones and each field surrounded with so many small trees were growing around them like populations. In the second half of the century, there was a problem of growing landless classes which became worse by the rapid growth the population. Some of them could not find work, many of them had to rely on the help of the poor laws up by the queen Elizabeth.

Then another problem occurred, there were several years of harvest; however, the price of the wheat raised in a remarkable way so, the local magistrates fixed particular wages that allowed the poor to eat, and buy without losing lots of money. They preferred to help those whose wages were low out of the local rate. The most famous example was in a village called Speenhamland. The Speenhamland Act was applied in many parts of the country. This

system was a destructive one, because the employers were able to engage people cheaply. (Gibson, 2010, P.217).

It has been informed that after the parish had to add the law ways they paid, some employers even reduced their wages, after the proclamation of the Speenhamland Act it was usual, the national cost of helping the poor rose from 2 million in 1790 to 4 million in 1800. (David Byrne, 2011, P.22).

Another result of the Speenhamland Act: was the growth of populations. Families were helped basing on the family members. There used to be a big difference before the enclosure, the farmer limited the number of his family, because he would divide the land among his children, so as that they could be able to marry, but the Speenhamland Act refused this idea, and they encouraged them to have larger families. with this way, it would help them to have an increase in finance. (J.D. Chamber and G.E. Mingay, 1968, PP.144-5)

The neighboring parish decided, and agreed together to build a parish work house where the poor people could find food, and shelter. Some parishes hired the work house, and its residents to a local businessman who looked for cheap workers, and in exchange of their work they were offered food. This system was better than slavery of children, and adults working for long hours. As a consequence, the old law collapsed, and. People left their villages, and moved to towns in order to get a job it was such an energy that would make the greatest revolution possible to change the British panorama.

However, there was an obvious change in the population growth. “In 1760, the total number of population was 6,7 million, and in 1801 rose to 8,8 million”. (Landers John, 1993, P.37). This growth was a result of the advance in medical knowledge, public health, and improved diet. After the Industrial Revolution, a new agriculture technology was introduced. There was also a link between the construction of roads and canals, this allowed them to be transported and displaced around country in a short time. In addition to that, new forms of the Industrial Revolution came to appearance, there was an advance in the quality of clothes, hygiene, and, earlier marriage which in return led to the raise in the birth rate. This latter continued to rise and as result, the standard of living has also changed. For instance, the average age of marriage had fallen from 30 to 23 years old. (Ibid). Those factors which caused an increase of population with force, and health was one of the most demographic millennium movement.

Population growth and economic expansion are interwoven. An increase of population expresses a social phenomenon referring to the rise of birth rate, a decrease of death rate, early marriage and in some cases illegitimacy. This social phenomenon required various needs such as the creation of new jobs as well as active production.

In broad terms, economic progress would be impossible when it was not accompanied by an equivalent increase in the population rate. Thereby, population growth called for a new structure which directed the development of the country or a move from a small unit towards a wide one. In this context, economic writers like 'Deane and Cole claimed: "It seems clear that the rise in the birth rate was closely connected with the process of industrialization, although it remains an open question whether this increase took place primarily as a result of earlier marriage, greater fertility, or even an increase in illegitimacy.'" (W.A. Cole, 1971, PP. 648-52).

1.5. Factors of Production

1.5.1. Cotton Industry

In the eighteenth century, in any house and even in the poor family you would certainly see a big loom taking a very large space in the house. When the men returned from the field to home, they sat down to work; there was a spinning wheel in which the wife put the wool around it to eventually transform it into thread.

This is called the cottage industry. It was very beneficial because it gave an additional income for the family, and since the English cloth was of good quality, however, this trade was so big and important, that it became a symbol of what made Britain a rich country.

In the eighteenth century, and exactly in 1768 Richard Arkwright invented the spinning frame that could produce multiple threads at once. It was first powered automatic, and then continuous textile machine also enabled people to move away from small home manufacturing towards factory production. (Chapman, S.D, 1972, P.122).

Arkwright found that in Cromford there were not enough local people to supply him with the workers. He needed building a large number of cottages close to the factory, so he imported workers from all over the Derbyshire. Women and children worked in his spinning-factory, and men worked at home turning the yarn into clothes. The mill at Cromford was recognized as an internationally important site of the Industrial Revolution.

Later on, historians named this period the Industrial Revolution. The first steam pump was designed by Cornishman it was called savery and this was in 1698 but unfortunately it was short of safety value. Another Cornishman called Thomas New Comen decided to improve this latter in 1763. (John Simkin,1997, P.65).

This idea came to his mind when he was at the university of Glasgow, when someone bought him a broken model of new comen's steam pump, and he asked him if he could fix it. James Watt believed that this thing needed a separate condenser which would allow the steam to go out of the lot cylinder to cool somewhere else. He succeeded to make an engine that contains several qualities such as: speed, more effective, more reliable, and finally increase the economic status. This steam engine created a demand for high quality of iron, and for coal, After, it became efficient enough to the use of powering vehicles so that they run on metal rails. The concept of industry did not focus only on grimy factories, and Smokey chimneys, it was also a period about craftsmanship and beauty.

However, one production led to an another one, and the factors of output which increased in one area led to the growth in others. Cotton and woolen clothes were considered as the basic materials of the Industrial Revolution, and they were very popular abroad. In the middle of the century, British uniforms equipment, and weapon were sold to many countries for their armies. In order to face this increased request. They found an advanced method of production so they invented new machinery in order to replace manpower, but, the spinning process has limited the production of cotton goods and could not provide enough cotton thread for the weaves. But, in 1766 a new machine was invented which could do the work of hand spinners in amount, and quality, the cotton clothes. (Lewis Hackett, 1992, P.15).

“In 1785, a clever inventor came up with new machine called the spinning jenny it aimed to produce a large number of clothes without spending a lot of time”. This instrument was the first power machine of weaving, it has made a radical change in the fabrication of cloth besides, it gave Britain the ability to produce cloth cheaper than elsewhere. As a result, the Lancashire cotton clothes were sold everywhere in Europe. (SD Chapman, 1990, P.55).

However, those machines raised a serious problem. They made many people jobless; moreover, the cottage industry was replaced by factories in which workers spent hours working under the leadership of factories.

In the midland, the factories started to develop in a remarkable way by producing good quality of plates, cup and other Chinese goods as soon as they took place of the old metal

plates, and drinking cups. Shortly a large quantity of Chinese goods was made and exported. The best mark was Josiah wood china which became admired and approved. (Young Jennie J, 2013, P.109)

The story of the beginning of the cotton industry is interesting. It is a clear example of the influence of commerce on industrial development. It was the result of the east Indian trade. Its creation corresponded to the import of foreign products. During the early period of the cotton industry in England, the quality was insignificant. Almost all the cotton stuffs-sold in London and in the chief towns came from India. Cotton spinners and weaving expanded in Great Britain in two distinct, narrowly concentrated rounds two centers. The first one was Manchester surrounded by growing towns all with the same functions and same needs and forming together one factory and market. The second was Glasgow which extended along the Clyde Valley from Lanark to Paisley and Greenock.

1.5.2. The Woolen Industry

In England, the woolen industry was the most characteristic and the most striking example of the early system of manufacturing, because of its intimate connection with agriculture. In Britain the wool industry, for many generation provided the material for the activity of cotton. Second, only agriculture supported the number of people it employed and the volume of trade they moved to the neighboring county sides. Production consisted of a long chained of processes. First, the wool was sorted, cleaned and sometimes died. Next, it was either combed, to separate the long hairs from the short to make a fleecy roll with the fibers lying roughly parallel. (Charles More, 2000, P.225).

1.5.3. The Silk Industry

Small places became centers of production: London, Derby, Stockport near Manchester, Macclesfield where the manufacturing of thrown silk employed, in 1761, nearly two thousand five hundred workmen. Those Centers Witnessed no change when compared with Lancashire and Derbyshire. Both, produced more because of the cotton spinning machines that were invented. The cause which hampered the progress of the English silk industry were the excessively high price of raw silk, and the discouraging competition of the French and Italian industries. They depended on their raw materials, partly on foreign sources. For example, raw silk and organ sine were brought from China, Italy, Spain and Turkey, flax from Ireland the Baltic and North America. (Smelser Neil J, 1959, P.85).

1.5.4. The Metal Industry

The period that witnessed the extraordinary growth of the cotton manufacture, the birth of machine industry and the organization of the factory system, witnessed also a parallel development in the metal industries. Before the Industrial Revolution, England did not produce iron. In the 1780s as the total demand for it would hardly have exceeded 100,000 tons. War in general and the navy in particular, encouraged the iron industry. Inventions, too helped its rise. In fact, there major inventions were adaptable; the smelting of iron coke (instead of charcoal); the inventions of puddling and rolling. puddling and rolling came into use in the 1780s. (Engels Friedrich, 1844, P.154).

1.5.5. Coal-Mining

Other leading industries in Britain were like the textile industry, closely linked with agriculture. This was true, especially the coal-mining. It was the owners of the land who controlled the working of the underground steams. At the beginning of the eighteenth century, steam pumps were invented to remove water from deep mines and from these pumps the steam-engine developed and this was the main cause of the Industrial Revolution. More steam –engines, and more factories, meant more coal had to be dug, and some millions of tons were dragged from underground to belch smoke and soot over the land. Gradually, the miner working with a pick was being replaced by machinery which cut the coal and carried it away to the pit-head. Much was being done to make coal-mining cleaner and more efficient. Hence, in the middle of the eighteenth century, coal-fields concentrated on Northumberland and Durham, Cumberland, Lancashire, and Scotland. (Clark G, 1995, P.83).

1.5.6. Pottery Industry

Before the beginning of the eighteenth century, Britain witnessed a shortage of tin and lead. She was dependent on pottery, she imported porcelain from the east. While in the early part of the eighteenth century there were potteries at Lambert, Chelsea, Bristol, Worcester, Liverpool and other urban centers such as North Stafford-shire where clays of various kinds and lead glazing were close at hand. While clays from Devon and Dorset mixed with calcined

replaced the coarser and duller of clays of Staffordshire. The Industrial Revolution brought about the emergence of other industrial such as the chemical industry and engineering. (J HUMPHRIES. 2002. P128).

1.5.7. The Chemical Industry

In mid-eighteenth century and the nineties, the chemical industry flourished. Its rise was attracted by saltwater: coal and supplies of Sulphur acid. The beginnings of the production of the industrial Sulphur acid was due to John Roebuck, a trained chemist, joined with Samuel Garbett who established works at Birmingham, in which the acid was produced in vessels of lead. In 1773, Soda was made for soap makers, while lead for the potters and litharge for the glassworks established earlier at Sturbridge. In 1800, the chemical industry flourished in Scotland. (Glasgow, 1881, P.143)

1.5.8. The Civil Engineering Industry

Britain was the first country to develop civil engineering as a large-scale industry and the first to provide techniques, finance and equipment to carry out major civil engineering projects throughout the world. Prominent figures in the early development of civil engineering included: James Brindley (1716-1772), builder of canals was planned in the 1750s: the canal construction accelerated in the 1770s and reached its peak in the 1790s. the canal era saw momentous changes in economic life. In addition, parallel changes were made in the road system of Britain. The number of turnpikes increased vastly, especially in the early fifties, and again in the early nineties. (Vincenti, 1990, PP.188-9).

1.6. Technological Advances

The great motivation behind the improvement of Britain were the technological advances. Before the Industrial Revolution, a few factories existed, but with small industrial importance because they were made of few loom spinning –wheels. Moreover, the workers could not work at home, the beginning of the story started when Thomas Lomb sent his brother John Lomb in Italy, so that he could learn the techniques of spinning and weaving which was mastered only by the Italians. There. John learned working on the machinery that he brought from home in 1717, but an awful incident happened. The Italians sent a woman to Derby for the purpose of killing John Lomb who was poisoned in 1719. However, the brother's silk

factory stood on island at Derby. And in 1765 seven silk industries were achieved employing hundreds of people. (Gordon Robert J, 2000, PP.18-21)

Besides, the example of the industry of iron, and coal in Britain, there were others. In the second half of the century changes occurred. The growth of population, demand for good, advanced means of transport, wild mechanical processes together; these factories gave birth to the Industrial Revolution.

The technology witnessed an advance which was due to several effects that came together at the same time to be the cause of the Industrial Revolution. Money had an impacting role in improving transport by the end. At the end of the eighteenth century some families had made a huge sum of money where they put it in banks for their own benefit.

Fortunately, food production increased, this made a large number of population settled in towns, and pushed others to come from country sides where they lost their lands because of the enclosure, and they looked for work. In the old days, these people in the villages grew their own food, made their own clothes, and managed to live with their own means, but they became landless. So, they found themselves obliged to buy everything they needed like food clothing, and so on. It was an opportunity for the shop man to produce, and sell more goods than before. So, those landless people had to buy many things, because workers were responsible for their production.

By the early eighteenth century, they created an ordinary machine for the necessity of job, in order to make large quantities of simple goods in a short time, with a cheap price. As a result, the mass production could be used with a success for the first time.

Every machine respectively realized one simple system that presented the idea of the division of labor among workers. This came to be an important factor of the Industrial Revolution. Then, by the seventeenth century, the principle problem that was keeping back the growth of Industrial Revolution; was the fuel because there was a lack in wood, and anyway it could not provide the beat necessary to produce iron and steel either for both large amount, and high quality.

But, at this time, they used to use coal to transform it into iron or to steel, and this made Britain to be a leader in the production of iron in Europe. This occurred in the period of war where England had to fight against France for the rest of the century. the demand for coal

progressed rapidly. In 1800, Britain brought coal four times as it had done in 1700, and eight times iron. (Toynbee Arnold, 1852, P.83)

In other countries, no one could see this more obviously, as John Wilkinson, a man that he believed in iron; he constructed the vast iron works in Britain, as he also built the world's first iron bridge over the river in 1779. (Brown David J, 1996, PP.44-5).

He witnessed on the creation of the first iron boat, and also, he constructed an iron chapel for the new methodology

Wilkinson was so clever to understand and recognize the value of new inventions. When James Watt invented a better steam engine depending on his iron working skills with this method of craft, it helped other skills like steam engine, that was used only in pumping, and usually in coal mines.

1.7. Conclusion

Through this chapter, we had the opportunity to see the reasons behind the emergence of the Industrial Revolution which occurred in Britain, and continued to spread progressively. More precisely, it described how radical changes reached lands to eventually become a source of wealth and eventually, how the British citizen succeeded to create a new modern world with all its glory, and beauty.

Now, in the next chapter, we will discuss the impacts of those revolutionary measures on the British Empire

2.1. Introduction

The Industrial Revolution marked a major turning point, not only in England but in the whole world. It has made obvious changes in every aspect of human life.

This research paper will be discussing the consequences of the Industrial Revolution starting from its very beginning, from the seventeenth century when it took place in Great Britain. It brought several changes with regard to ideas. Moreover, it made people's way of living easier and more efficient in manufacturing goods which were lower, well organized and technologically advanced. The first sign of the revolution took place in 1736 when the steam engine was developed, this caused the rise of companies, and factories to create goods using machinery rather than a family working together at home. (Hulse, David H, 1999, P.61).

The invention and processes of the Industrial Revolution spurred and sustained making some major impacts on the British society. Let's look at a few of these factors:

2.2. Economic Impact

The Industrial Revolution began at an era of an economic growth production from homes it shifted to small workshops and factories, as economic activities in different communities changed from agriculture to manufacturing. This happened because of the development of factories and the rapid growth of industries in the eighteenth century. The increase in population and expanding of labor force caused a major demand for raw materials. There were not only advance in factories there was improvement even in transportation, agriculture and communication. There also was a vast increase in global trade development of agricultural transportation systems as railroads, canals and a good quality of metal steel.

There was a high demand for labor in the factories and in order to feed each member of the family, children were forced to work. Yet, children were not treated well, they were underpaid and overworked.

The Industrial Revolution could have a positive impact on the British economy, because it was a greatly motivated to build a strong economy and make of Britain an industrial country.

The improvement or change is continuous in the history of any nation. However, after centuries of slow development, Britain became involved in a series of rapid agrarian and slow Industrial Revolution changes which appeared revolutionary after generations, the changes had resulted throughout Britain and formed the most important British economy. Agriculture

was the first change to appear in the open fields and endured for centuries over large part of the country than came the system of enclosure movement. Another reason for the enclosure movement was politic, social and economic improvement.

2.3. Cultural Impacts

The Industrial Revolution changed their living conditions, Communication, transportation, and innovations that were made, because of a new technology. It also changed the way people worked and their jobs. The standard of living increased and desires could be attained because of the Industrial Revolution.

Communication and Transportation also improved. Before the Industrial Revolution, people did not travel very often and if so not very far. But with the development of the steam-engine, people became accustomed to travelling and messaging. With this faster transportation, messages could be delivered faster by month or by the new invention like the telegraph or the telephone. This allowed for faster and more reliable communication.

The standard of living in that period increased and people could afford to purchase desires. Prosperity was spread to all people and purchase of personal appliances and tools. The Industrial Revolution changed the way people lived. Even people at lowest point of the social order had their standard of living changing. People started to create a new culture and left the old in the dust.

Work life also changed during the Industrial Revolution. The workforce became not as skilled, because of the new technological innovations. The workers did not have to be skilled to operate machines that did the hard work. Also, people became more accustomed to work, union life, and the possibilities of strike. The machines that the Industrial Revolution brought also allowed a person to become a job specialist. Workers in this time had high productivity rates and revolutionized manufacturing for the future.

The Industrial Revolution made new financial nodes in Europe. Urban communities started to create around the financial movement that manufacturing plants gave. These nodes got to be focuses of exchange, work and advancement. The economy boomed in these territories as an ever-increasing number of individuals came. Despite the fact that the areas became over crowded, the nodes were playing a major economic role in Europe.

2.4. Social Impact

A number of remarkable social changes occurred within the Industrial Revolution after the 18th century. A gradual increase in education and literacy hit life expectancy rates. Also, the increase in the population started to grow rapidly due to the improvement of living conditions. It brought a rapid movement wave of people into cities where there was a clear separation between work and home, but men had a higher payment, whereas women were encouraged mostly to stay at home and remain housewives. The Industrial Revolution also established a new middle class within the working-class. Middle-class people would only work in new factories and other industries.

The Industrial Revolution had influenced the religious movement called “Methodism”. Countless number of working-class people found comfort in this religious stream as they had moved to cities away from their villages and towns losing connection with their churches.

All the labor unions were illegal. At that time, workers would still protest in secret union between frustrated British workers. Those latter were injured badly from working long and hard. Furthermore, they wanted to discuss increases in pay but they had no political power over the union. So, it soon led to violence. The first Industrial riot occurred in England from 1811 to 1813. Groups of textiles would smash textile machinery replaced their jobs and someone burned the factories. They were called the Luddites and Charhes (Chartists). (Dinwiddy, J.R, 1992, P.371)

The Industrial Revolution is the period encompassing the vast social and economic changes that resulted from the development of steam-powered machinery and mass-production methods. It began in Great Britain and extended through some of the first half of the nineteenth century. The lives of large sections of the population of Great Britain underwent massive changes during the Industrial Revolution. Work became more regimented and disciplined and began to take place outside home. A movement of the population to the cities from the countryside produced dramatic changes in lifestyle.

2.4.1. Children Case

It is generally agreed that the impact of the Industrial Revolution was negative for children. In the industrial districts, children tended to enter the workforce at younger ages. Many of the new factory owners preferred to employ children as they viewed them more docile tractable than adults. Although most families changed their children's earnings into providing a better

diet for them, the physical toll of working in the factories was very great and led to detrimental outcomes for children.

Children were preferred workers in textile mills because they worked for lower wages. Child labor tended to be orphans, children of widows, or from the poorest families. Children were needed for low pay, and nimble fingers. Child labor was not an invention of the Industrial Revolution, they were first exploited by their parents on the farm. Now, for the first time in history children were important factors of an economic system, but at a terrible price.

Children were required to work under machines all day, in tight areas to clean and oil. Young children worked to near exhaustion, to where they would fall asleep over machines. If they were caught sleeping or showed up to work late, they were beaten and tortured by their masters. Cruelty and torture was enacted on children by master-manufacturers to maintain high output or to keep them awake. The children's bodies became crooked and deformed from the work in the mills and factories. Their bodies and bones became so weak that they couldn't hold themselves up, and their backs permanently hunched.

Children in the mines did not have it any better. They would start working at the age of 4 or 5, both boys and girls. A large proportion of children working in the mines were under 13 and a larger proportion from ages of 13-18. (Hartwell, 1971, PP.328-9). Mines were not built for stability, rather, they were small and low and children were needed to crawl through them. The conditions in the mines were not remotely safe, children would often have limbs crippled, and bodies distorted or be killed. Children could get lost within the mines for days at a time. The air in the mines was injuring to breathe and often caused painful and fatal diseases. (Ibid. P.334).

2.4.2. Social Changes

The impact of the Industrial Revolution on adults is more complex and has been the subject of extensive debate amongst historians for the past one hundred years. Optimists have argued that industrialization brought higher wages and better living standards to most people. Pessimists have argued that these gains have been over-exaggerated. They argued that wages did not rise significantly during this period. Furthermore, that whatever economic gains were actually made - these must be offset against the worsening health and housing of the new urban sectors. (E.P. Thompson, 1963, P.711). Since the 1990s, many contributions to the standard of living debate has tilted towards the pessimist interpretation. Most of the work has been within the economic history framework. There have been attempts to measure variables

such as real wages, mortality, and heights. More recently the historian Emma Griffin has marked a departure from this approach by using a large number of working-class autobiographies to consider how working people themselves conceived those changes. She has argued that some working men did see improvements in their lives at that time, through higher wages and a greater degree of autonomy and self-determination. (Griffin, Emma,2013, P.2)

2.4.3. Family Structure and Evolution

The traditional marriage of the laboring class during the Georgian society, engaged women to marry men of the same social status. For example, a shoemaker's daughter would marry a shoemaker's son. And marriage outside this norm was not common. Marriage during the Industrial Revolution shifted from this tradition to a more sociable union between wife and husband in the laboring class. Women and men tended to marry someone from the same job, geographical location or from the same social group. But throughout the Industrial Revolution miners were the exception of this new trend. A coal miner's daughter would marry a coal miner's son.

The traditional work sphere was dictated by the father, and he controlled the place of work for his family. However, factories and mills undermined the old patriarchal authority. Factories put husbands, wives and children under the same conditions and authority of the manufacturer masters.

The norm for women in the latter half of the Industrial Revolution, who worked in the factories or mills tended not to have children or already had children that were grown up. However, Mothers who worked in the factories and mills would often use narcotics to put their small infants to sleep. This was a common trend, because mothers would work 14 to 16 hours a day, leaving their infant with a babysitter for most of the day. Narcotics were Godfrey, including ingredients of opium, treacle, water and spices. Mothers would, use Godfrey/opium on their small infants as much as three times a day, one before work, one after in the afternoon tea time, and the last one when they got home off work. Infant mortality rate in some areas was as high 16.7% and Godfrey/opium did contribute to the cause of mortality. (Wohl, Anthony S,1983, PP.34-5).

2.4.4. Life Affected from Working Conditions

Safety was very poor in early industrial factories and mines and there was no injury compensation for the workers as well. The injuries from machinery would cause whole finger to be cut off, mild burns, severe arms and legs injuries, amputation of limbs and death. However, diseases and cancer were the most common health issues that had long-term effects to the workers. Cotton mills, coal mines, iron-works, and brick factories all had bad air, which caused chest diseases, coughs, blood-spitting, hard breathing, pains in chest, and sleepless nights for the workers. (Williamson, p. 162).

Housing for the workers were overcrowded and unclean, making it suitable for the hazards of typhoid, cholera, and smallpox. Workers during these times did not have sick days, and forced themselves to work to provide money to support the family. Traditionally women and girls were always in charge of cleaning the house, but since the women were spending just as much time working as the men, they had no time to clean the house. The housing was tiny, dirty, and sickly for the working laboring class during the Industrial Revolution, and the workers had no personal time to clean or change their own atmosphere even if they wished to.

2.4.5. Reforms for Change

The first factory act Health and Morals of Apprentices Act of 1802(Meiklejohn, Andrew , 1958, P.10) tried to help the condition for workers. The act tried to make factory owners more responsible for the housing and clothing for the workers, but with little success. This act was never put into practice, because magistrates failed to stop or forced mill masters.

The 1819 Cotton Mills and Factories Act forbade the employment of children in cotton mills of children under the age of 9. Limited the hours of work for children 9-16 to 12 hours. This act is a major step towards a better life for children. They were less likely to fall asleep during the work, therefore less injuries and beating occurred to them in the work place. (Fielden, M.P. John,1836, P34).

The Cotton Factories Regulation Act 1819Set the minimum working age to 9, and Set the maximum working hours to 12 per day. (Ibid)

Michael Sadler was one of the pioneers in addressing the living and working conditions of the industrial workers. In 1832, he led a parliamentary investigation of the conditions of the

textile workers. The Ashley Commission was another investigation committee that studied the plight of the mine workers. What came out of the investigation was that with increased productivity the number of working hours of the wage workers also doubled in many cases. The efforts of Michael Sadler and the Ashley Commission resulted in the passage of the 1833 Act which limited the number of work hours for women and children and money babies. This bill made children from ages 9 to 18 not to work more than 48 hours a week, and spent two hours at school during work hours. The Act also created the factory inspector and provided for routine inspections of factories. This guaranteed that factories will follow laws of the reforms. (P. Gaskell,1833, PP.161-2).

According to a cotton manufacturer, he stated what follows: "We have never worked more than seventy-one hours a week before Sir John Hobhouse's Act was passed. We then came down to sixty-nine; and since Lord Althorp's Act was passed, in 1833, we have reduced the time of adults to sixty-seven and a half hours a week, and that of children under thirteen years of age to forty-eight hours in the week, though to do this latter has, I must admit, subjected us to much inconvenience, but the elder hands to more, in as much as the relief given to the child is in some measure imposed on the adult."(Fielden, M.P. John, 1836, PP34-5)

1. Regulation of Child Labor Law 1833.
2. Established paid inspectors to inspect factories on child labor regulations and enforce the law.
3. Set the maximum working in a week to 48 hours.
4. Made children to spend time in school. (P. Gaskell,1833, P.202)

The first report for women and children in mines were in 1842 Mines and Collieries Act 1842. This act made children under the age 10 could not work in mines and also no women or girls could work in the mines as well. The second report for children commission 1843 reinforced this act to the public. (Ibid)

Mines and Collieries Act 1842 which Set a minimum age for children to work in mines at 10 and Made it that no woman or girl could work in the mines. (Ibid)

The Factories Act 1844 made women and young adults work 12-hour days and children from the ages 9 to 13 were to work 9 hour days. As well as making mill masters and owners more account for injuries to workers. The Factories Act 1847 or also known was the ten-hour bill, made it law that women and young people work 10 hours, and maximum of 63 hours a week. The last two major Factory acts of the Industrial Revolution were introduced in 1850,

and 1856. These acts made it that factories could no longer dictate work hours for women and children. They were to work from 6am to 6pm in summer, and 7am to 7pm in winter. These acts took a lot of power and authority away from the manufactures, and allowed women and children to have more personal time for the family and for themselves. (C. W. Cooke-Taylor, 1841, P.88)

1. Factories Act 1844 limited working hour to 12 per day for women and children, it also set maximum working hours for children of 9-13 for 9 per day. Furthermore, mill owners were more accounted for protection for workers. (Ibid)

2. Ten Hours Bill 1847 limited working hours to 10 per day for women and children, and set a maximum hour in a week to 63 for women and children. (Harrison, A, 1847, P.97)

3. In Factories Act 1856, factory masters could not dictate work hours.

Prevention of Cruelty to, and Protection of, Children Act 1889 founded to stop the abuse of children in the work and family sphere of life. (David Batty, 2005, P.23)

The Elementary Education Act 1870 allowed all children within the United Kingdom to have access to education. Education was not made compulsory immediately (not until 1880) since many factory owners feared the removal of children as a source of cheap labor. However, with the simple mathematics and English they were acquiring, factory owners had workers who could read and make measurements. A great contribution to the factory. (Armytage, Walter H. G, 1970, PP.121-33)

2.5. Political Impacts

Even in the political field, the Industrial Revolution had various impacts. The first laws and requirements set out minimum wages which were given and there were safety and pension requirements. Child labor were fired along with compensations. Via labor and trade unions, workers fought for their interests. The Government had also dealt with the spread of diseases by creating services in 1856.

Hence in the 19th century industrial countries carved out vast colonial Empires convicts from England were usually taken to America. America soon declined to accept any more convicts after the American war of Independence during 1783. Therefore, English convicts had to be sent somewhere else and the transportation to Australia was the solution. Gold was

then discovered in South Wales leading to the arise of new comers and Victorian gold rush. later on, European explorers travelled across oceans and settled in America and Australia.

Britain became a constitutional monarchy officially in the eighteenth century, the majority of people were deprived from the right to vote and only few people were given the political power like wealthy male landowners.

The Whigs and Tories were the most dominant political parties during the eighteenth and nineteenth centuries, these two parties represented the upper class. But, there were some differences about ideology and the way of thinking.

The Whigs were against the king and they were against also the fact that it was an absolute power. The Whigs party wanted to restrict him and they wanted a constitutional monarchy, they were known as liberals. The parliament had the right to intervene if there were conflicts between him and the king. The Whigs represented merchants, businessmen and later on the industrialist in 1851.

The Tories supported the king in everything he did; he was not restricted by power. They were for preservation of traditions, they represented the landlords. The king supported Tories unlike the Whigs. During the eighteenth-century George III was the King of England, he favored the Tories, so they were dominant in parliament, they were the majority of the House of Lords. All the members of the House of Lords were the Tories dominated by the King until now. The House of Common were also rich people by elections, but the Tories used some illegal ways to win the elections.

The electoral system in Britain, was not an official law to make it function. Britain was divided into two countries and each country was divided into boroughs, some boroughs were controlled by copy holders, others were given their rights. Industrialist were able to win in order to have a political power to gain seats. Tories were responsible for corruptions in electoral systems. The corrupted electoral system in Britain was one of the main reasons that led the emergence of the reformist movement of 1815-1832. (Johnston, Ron; Pattie, Charles; Dorling, Danny; Rossiter, David, 2001, P.44)

All facts pushed the Whigs to organize the reformist movement in 1815, there were a lot of groups, industrialist, workers, radicals, they represented the Whigs in their movement, and stimulated by different motives, but their aims were similar. It was the extension of the franchise to all men in Britain. The second aim was equal and just re-distributed. The

parliament had to be re-distributed again to assure justice in seats parliament. The third aim was to break the monopoly of the Tories over political decision.

The employment had replaced factories by machines. In 1799, some of these rioters were known as luddites and started to break up the machinery which had put them out of work. The government supported the factory owners, and made the breaking, the machinery punishable by death. The government was afraid from a revolution like the one of France.

Besides, the situation of reform movement remained the same till 1830. In 1830 there were elections in the House of Commons, The Whigs succeeded in elections and formed the majority in the House of Commons. So, they organized the bill of reform that was the equal for franchise. But the bill of Reform Act of 1832 gave the right to vote for a larger number of wealthy industrialist. The right to vote was given to those owned and rented a property. The Reform Act of 1832 led to re-distribution of seats in parliament, overpopulated areas had more seats in parliament, while populated had a few seats in parliament, but workers did not have the right to vote. At the end, the reform Act was called 'Great betrayal'. (Phillips, John A., and Charles Wetherell, 1995, PP.411-436)

Chartism was the working-class movement which existed from 1839 to 1848. Its origin went back to the London working men's associations led by Mr. Loretto who was the founding fathers of Chartism. Charter meant a bill which contained about twenty pages, But Chartism movement was interested in six points: (Mark O'Brien, 1995, PP.24-28)

- Universal suffrage the extension of men who voted by secret ballot.
- Economic issue of Britain.
- Abolition of property qualification of members of parliament who should own a property.
 - The Chartism movement wanted to eliminate this point.
 - Equal electoral districts, Chartism wanted another re-distribution of seats of parliament.
- Payment of members of Parliament.

Chartism included also some middle-class reformers who wanted peaceful negotiations to make change in the monetary system in Britain. They thought that the problem was in payment that is why they wanted to reform the third, movement northern which was led by O'Connor who wanted political change in Britain. Chartism movement included also those

who wanted to eliminate machines and go back to cotton industry because they were destroyed.

Another movement included miners who worked in mines. So, the northern movement used arms in order to make change. Chartist used riots, Strikes, Public meeting wrote petitions to Parliament, while some of them used peaceful means, but the Chartist movement was not successful, there were reasons that made Chartism unsuccessful:

- Chartism movement lacked unity and cohesion, there was no harmony between the members of Chartism movement, and some of them joined the anti-com laws league contradiction between the peaceful and violent means.
- Lack of financial help and weak leadership. This means that leaders were struggling with one another and they had different point of views.

There used to be the existence of a more important issue: free trade protectionism. There was a repeal of the corn Law in 1839. (SC James,1989, P.156) The industrialists started to repeal the corn Law for this reason they decided to form the anti-form league and tried to convince the British people to justify the benefits of free trades. In public meetings, they held three laws of bread Russian, French, and the English one was the smallest but they had the same price, this was to show British people the lack of foods in England.

2.6. Religious Impact

The Industrial Revolution was occurring first in Britain in the early eighteenth century, and did not affect only the physical lives of people but, even the spiritual one. It has witnessed a huge movement away from the countryside to the growing towns and cities. With this process, there was a natural break down in the 'community' of the village that surrounded the village church and saw the local priest as a close member of the community. Naturally the larger industrial societies began to see a detachment of society away from 'God' and prayer, however there was a huge growth in church movements such as "the Methodists" which was a protestant religious movement that broke away from the church of England, and gained a lot of followers in the new industrial towns. They gave women real status, and proved to be much more conscious of the need of the new industrial working class. Leading members of society wished to promote 'thrift, hard work and sobriety;' turning the working classes away from drink and loose living. The teetotal thought behind Methodism was something employers seized on and the Industrial Revolution saw a huge growth in the Methodist Church. Also,

groups such as the Salvation Army grew through the new cities, and church groups promoted working class hobbies such as the Brass Band movement. Victorian England still largely saw the Church at the heart of life in spite of the new cities. (McDowall David, 1989, P.121-5)

2.7. Environmental Impacts

Even though this was a time of economic growth and development, the Industrial Revolution impacted on the environment in negative ways. With the drudgery and toil of daily life made easier. Thanks to technological advancements, the world saw a major increase in population. This led to environmental changes simply because there were more people consuming more natural resources. Not only was the population growing, but there was also a rapid growth in living standards thanks to the economic prosperity of this era. Higher living standards led to forests being cut down to make way for expanding cities and to provide lumber for construction.

There was also an increased demand for raw materials used during the mass production of non-essential items within factories. These factors led to the depletion of natural resources. Factories would spew smog and soot into the air and release pollutants and chemicals directly into rivers and streams, resulting in increased air and water pollution.

Industries expanded coal came into use by the late 18th century and the beginning of nineteenth century. During the Industrial Revolution, factories steam engines and trains all required large scales of coal which led to smog and soot damaging the environment as well as everyone's respiratory systems. Acid rain was discovered in eighteens fifties 1850. Yet, another issue occurred because if coal powered plants this negatively impacted the forest plants, soil, fish, air and water. Factories would dump their chemicals and people would throw their wastes into nearly rivers increasing water pollution. Those social impacts caused an event in central London known as "The Great Stink" in which during hot weather the stink of human and industrial wastes would cause Cholera and killing of a great deal of population. (Atkins, William A., and Phillip Koth, 2012, PP.35-42)

2.8. Historical Impacts

From man-made to machinery items, from working in a household to the new factory age we owe it all to the Industrial Revolution. As a matter of fact, if it wasn't for the revolution, houses were built cheaply towns over crowded there was an improvement in the water supply and as stated by Paul Hudson 2013 "... So many people become billionaires almost from

scratch in such a short period of time”. Technological advance and transportation became faster and communication easier because of the birth of this revolution. (Paul Hudson, 2013, P.207)

2.9. Conclusion

We have seen through this chapter the main impacts of the Industrial Revolution on the British society, economy, politics, and religion and how Britain could become strong and powerful in all domains that helped in the development of Britain and made it a great Empire that could not be destroyed easily.

The last chapter will be dealing with the consequences of the Industrial Revolution.

3.1. Introduction

The Industrial Revolution was a defining moment in the history of Britain since it brought many changes and results. There were different outcomes due the industrialization of Britain that made it an Industrial country, and a solid pole of expansion. The Industrial Revolution changed the British life into another nation and brought such a variety of positive changes and helpful one. This chapter will manage the principle after effects of the Industrial Revolution in Britain which made the life of the British individuals better and got rich.

3.2. Working Conditions

The working conditions were terrible during the Industrial Revolution. As factories were being built, businesses were in need of workers. With a long line of people willing to work, employers could set wages as low as they wanted because people were willing to do work as long as they got paid. People worked fourteen to sixteen hours a day for six days a week. However, the majority were unskilled workers, who only received about \$8-\$10 dollars a week, working at approximately 10 cents an hour. Skilled workers earned a little more, but not significantly more. Women received one-third or sometimes one-half the pay that men received. Children received even less. Owners, who were only concerned with making a profit, were satisfied because labor costed less.

Factories were not the best places to work. The only light present was the sunlight that came through the windows. Machines spit out smoke and in some factories, workers came out covered in black soot by the end of the day. There was a plethora of machines with not many safety precautions. This, resulted in many accidents. The workers received only a break for lunch and a break for dinner.

Children were paid less than 10 cents an hour for fourteen hour days of work. They were used for simpler, unskilled jobs. Many children had physical deformities because of the lack of exercise and sunlight. The use of children as labor for such long hours with little pay led to the formation of labor unions.

Labor Unions were formed because workers finally wanted to put a stop to long hours with little pay. They demanded more pay and fairer treatment. They did not want children to work in factories because of the danger involved. Labor unions organized strikes and protests. However, as more immigrants came to the United States, more workers became available. These workers were willing to work, even if others were not because of unfair treatments.

This lessened the effect of the labor unions since businesses had no shortage of workers. This is why most labor unions were unsuccessful.

For the first generation of workers—from the 1790s to the 1840s—working conditions were very tough, and sometimes tragic. Most laborers worked 10 to 14 hours a day, six days a week, with no paid vacation or holidays. Each industry had safety hazards too; the process of purifying iron, for example, demanded that workers toiled amidst temperatures as high as 130 degrees in the coolest part of the ironworks (Rosen William, 1800, p.155). Under such dangerous conditions, accidents on the job occurred regularly. A report commissioned by the British House of Commons in 1832 commented that "there are factories, no means few in number, nor confined to the smaller mills, in which serious accidents are continually occurring, and in which, notwithstanding, dangerous parts of the machinery are allowed to remain unfenced" (Sadler,1985, P.23). The report added that workers were often "abandoned from the moment that an accident occurs; their wages are stopped, no medical attendance is provided, and whatever the extent of the injury, no compensation is afforded" (Ibid). As the Sadler report shows, injured workers would typically lose their jobs and also received no financial compensation for their injury to pay for much needed health care.

Life in the factory was most challenging for the first generation of industrial workers who still remembered the slower and more flexible pace of country life. Factory employers demanded a complete change of pace and discipline from the village life. Workers could not wonder over to chat with their neighbors or family as they would have done while working in the country. They could not return to the village during harvest time to help their families, unless they wanted to lose their jobs. Instead, they were no longer their own bosses; foremen and overseers supervised a new working culture to ensure that workers' actions were focused and efficient. A few workers were able to improve their lot by going into business for themselves or winning a job as supervisors, but the majority saw very little social mobility. (Engels, Friedrich,1892, PP.156-60)

3.3. Living Conditions

As business began to boom and the national markets grew, more people began to move to the Northeast because they wanted jobs. Most people lived in the "slum" Five to nine people lived in a single room which was as big as an apartment. Not only were there not enough rooms, but more people got sick as well. Because everyone lived in terrible conditions, and so

close to one another, diseases spread rapidly and lack of medicine and medical care resulted in many deaths. At the time, population was increasing rapidly because of more people were moving in, so apartments became more crowded and in worse conditions. These were the people that lived their life that had to fight for jobs and competed to live.

As industrialization occurred, the middle class emerged. The middle class was a group of skilled workers, managers, clerks, accountants, and others, had the money they needed to survive, and had money left over for other leisure goods. This extra money enabled them to live comfortably. Most moved away from the cities because they thought the "slum" was unhygienic and unpleasant. This led to the beginning of suburbs, or socially segregated neighborhoods. However, the majority of the people living in industrialized areas lived in terrible, harsh conditions because of the lack of money and the overwhelming population.

Working in new industrial cities had an effect on people's lives outside of the factories as well. As workers migrated from the country to the city, their lives and the lives of their families were utterly and permanently transformed.

For many skilled workers, the quality of life decreased a great deal in the first 60 years of the Industrial Revolution. Skilled weavers, for example, lived well in pre-industrial society as a kind of middle class. They tended their own gardens, worked on textiles in their homes or small shops, and raised farm animals. They were their own bosses. One contemporary observer noted, "their dwelling and small gardens were clean and neat, all the family were well clad, —the men with each a watch in their pocket, and the women dressed in their own fancy, —the Church crowded to excess every Sunday, —every house well furnished with a clock in elegant mahogany or fancy case. Their little cottages seemed happy and contented, it was seldom that a weaver appealed to the parish for a relief peace and content sat upon the weaver's brow" (Thompson, 1971, P.269). But, after the Industrial Revolution, the living conditions for skilled weavers significantly deteriorated. They could no longer live at their own pace or supplement their income with gardening, spinning, or communal harvesting. For skilled workers, quality of life took a sharp downturn: "A quarter [neighborhood] once remarkable for its neatness and order; I remembered their whitewashed houses, and their little flower gardens, and the decent appearance they made with their families at markets, or at public worship. These houses were now a mass of filth and misery." (Ibid)

In the first sixty years or so of the Industrial Revolution, working-class people had little time or opportunity for recreation. Workers spent all the light of day at working and came

home with little energy, space, or light to play sports or games. The new industrial pace and factory system were at odds with the old traditional festivals which dotted the village holiday calendar. Plus, local governments actively sought to ban traditional festivals in the cities. In the new working-class neighborhoods, people did not share the same traditional sense of a village community. Owners fined workers who left their jobs to return to their villages for festivals because they interrupted the efficient flow of work at the factories (Stearns,1998, PP.73-74). After the 1850s, however, recreation improved along with the rise of an emerging the middle class. Music halls sprouted up in big cities. Sports such as rugby and cricket became popular. Football became a professional sport in 1885. By the end of the 19th century, cities had become the places with opportunities for sport and entertainment that they are today (Hobsbawm, 1969, P.164).

During the first 60 years of the Industrial Revolution, living conditions were, by far, worst for the poorest of the poor. In desperation, many turned to the “poorhouses” set up by the government. The Poor Law of 1834 created workhouses for the destitute. Poorhouses were designed to be deliberately harsh places to discourage people from staying on “relief” (government food aid). Families, including husbands and wives, were separated upon entering the grounds. They were confined each day as inmates in a prison and worked every day. One assistant commissioner of the workhouses commented, “Our intention is to make the workhouses as much like prisons as possible.” Another said, “Our object is to establish a discipline so severe and repulsive as to make them a terror to the poor and prevent them from entering” (Thompson, 1989, P.267). Yet, despite these very harsh conditions, workhouse inmates increased from 78,536 in 1838 to 197,179 in 1843 (Thomson,1989, P.268). This increase can only be viewed as a sign of desperation amongst the poorest of the poor.

What role, if any, do you think the government should take to improve living conditions in the new industrial cities? Choose the answer that best represents your point of view:

1. Government should intervene as little as possible to improve living conditions for the working class. If the government gives handouts to the poor, there will be no incentive for them to find work on their own. Therefore, poorhouses must pay for themselves through the work of the poor. The free market has proven that hand weavers could not compete with new textile machines, so they need to find new jobs in the new industrial economy. The longer they waited to do so, the worse it would have been for them. Capitalism rewarded those who worked hard, persevered, and looked-for opportunities to succeed.

2. Government should at least help provide training for skilled workers, such as hand weavers, who lost their jobs to new industrial machines. By helping workers making the transition to new industrial jobs, governments would prevent workers from having to end up at poor houses or on parish relief.

3.4. Wealth and Income

Britain during the Georgian era was different from Britain during the Victorian era, because the era was characterized by a quick change in different spheres like medical, scientific, technological knowledge and population growth and many others fields. This was a good move for Britain, as well as it contributed for the economic boom and gave Britain the place as a world power.

The image of the nineteenth century was a period of great opportunity, for men of energy, and skill is one that has been long established. In the past, historians had argued that an industrious middle class made great fortunes in early days of the Industrial Revolution and converted economic success into political power in the 1832 Reform Act. (Phillips, John A., and Charles Wetherell, 1995, PP.411-36) This political power was then used to ensure policy reflected the middle-class interests. Such arguments presented the middle class as a coherent body mobilizing their economic and political power to forge society in their image.

Moreover, with the businessmen associated with the growth of manufacturing, the period saw the increased number of small entrepreneurs. Shopkeepers and merchants under took the transport and retail the fruits of industry and empire. The increased scale of industry and overseas trade, the development of empire encouraged commerce, finance, banks, insurance companies, shipping and railways. The cities increased towns and economy produced new spaces. The Victorian period witnessed expansion of local government through education reform, improvement and growth of the market, the Victorian middle class saw themselves helping the working class in connecting with the growth of cities and increase of economy.

Historians disagreed about whether life improved for the working class in the first phase of the Industrial Revolution, from 1790 to 1850. E.P. Thompson argued in *The Making of the English Working Class* that life clearly did not improve for the majority of British people: “The experience of immiserating came upon them in a hundred different forms; for the field laborer, the loss of his common rights and the vestiges of village democracy; for the artisan, the loss of his craftsman’s status; for the weaver, the loss of livelihood and of independence;

for the child the loss of work and play in the home; for many groups of workers whose real earning improved, the loss of security, leisure and the deterioration of the urban environment” (Thompson, 1983, P.445).

Historians do not even agree if real wages increased for workers during that period. E.P. Thompson argues that they did not. However, most agree that real wages adjusted, for inflation stayed basically steady from 1790 to 1840. Thompson argues that this fails to account for the vast numbers of unemployed. But, after 1840 or 1850, as England entered the second phase of the Industrial Revolution, it appeared that real wages began to increase. For example, one study showed that real wages, adjusted for inflation, increased 50% between 1830 and 1875. (Feinstein, 1998, P.169)

As a result, the Industrial Revolution definitely brought fame and power to England, but practically its impact was not so much pleasing for the English working classes. In the case of Industrial Revolution, we could see that though the wage of workers increased, the children’s wage actually decreased. There was also a disparity in the distribution of income of Thompson showed that the quality of life of English Working classes was on a declining condition. Thus, in the Material benefits for the skilled and non-skilled workers were nonexistent or negligible.

During the Industrial Revolution, there were definitely signs of devastation of English workers. In the first half of the nineteenth century population wealth increased the national product from 25 in 1801 to 35 in 1848, this seems to indicate that the population of Britain did not bring higher wages to the working, their gains were slender when compared to that of wealthy. Though skilled sections among the workers such as craftsmen engineering and technology as well as those in printing, building and jewelry trade did well for themselves, they could have exceeded 20 of the total work force in the first half of the nineteenth century. Thompson argued that workers’ wages did not increase because of the vast number of unemployed people. After 1840, England entered the second phase of the Industrial Revolution. It appeared that the real wages began to increase according to Feinstein, for example: one study showed that the real wages adjusted for inflation increased 50% between 1830 and 1875. (Ibid, P.172)

3.5. Transportation

Before the Industrial Revolution, transportation in Britain was rudimentary (very basic). Roads were poorly built and maintained. Goods were transported on river barges but this was a slow and costly exercise. The railway network was nonexistent, limited to wooden tracks and carriages pulled by horses. It took several days to travel between towns.

The growth of the Industrial Revolution depended on the ability to transport raw materials and finished goods over long distances. There were three main types of transportation that increased during the Industrial Revolution: water ways, roads, and rail roads.

Transportation was important because people were starting to live in the West. During this time period, transportation via water was the cheapest way to move heavy products (such as coal and iron). As a result, canals were enlarged and developed which allowed more boats to pass. Robert Fulton made the first steam-powered engine to power a steamboat, and in 1807 he demonstrated its use by going from New York City to Albany via the Hudson River. His steamboat was able to carry raw materials across the Atlantic Ocean by the mid 1800's. (Outman, J. L., and E. M. Outman, 2004, P.145)

The roads also improved immensely during this time period. Previously, people traveled using animals or by foot, but there were many problems with the conditions of the roads. In 1751, turnpikes were created for easier transportation, especially for the horse-drawn wagons. John Loudon McAdam made "macadam" road surfaces which consisted of crushed rock in thin layers. Thomas Telford made new foundations in roads with large flat stones. Soon after, roads across America were improved based on these techniques. The closest to trains were horses, commonly used to pull freight cars along rails. In 1801, Richard Trevithick made the first steam locomotive. These improvements on waterways, roads, and railroads all made traveling safer, and it allowed goods to be moved more efficiently. (Benson, Sonia, and Jennifer York Stock, 2005, P128).

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Technological innovations made in the textile and iron industries made production of goods faster and cheaper. Advances in steam engine technology led to a number of industries adopting mechanization. As demand for goods increased, a revolution in the transportation industry took place.

Roads were maintained by bodies of trustees. Tolls were introduced. Canals were built so that large barges could be transported, independent of rivers and waterways. Roads and canals were eventually overtaken by railways. Steam engines were used to transport large loads more quickly and cheaply than by road or canal.

Before the Industrial Revolution, there was a time lag in almost everything that took place in the United States. It took weeks and sometimes months just to send a letter or pass information. It took months to send packages or goods across the country. Everything happened at a glacial pace. The Transportation Revolution changed all of that.

The five elements that revolutionize transportation were: road, river traffic, steam-boat, canal, railroads

1. **3.5.1. Roads**

Before the Industrial Revolution, there were very few roads, and even they were in bad conditions. They were muddy, flooded easily, and were filled with boulders. This made travelling by stagecoach or wagon very difficult and dangerous.

That all changed in 1817. In 1817, Congress authorized the construction of the National Road, also known as the Cumberland Road. This road extended from Maryland to the Ohio River at Wheeling, Virginia. This was the first road to cross the Appalachian Mountains into the territory known as the Old Northwest. The National Road was the largest road-building project to occur before the 20th century, and it was a route of crushed stone. Although this is not as advanced as roads later became, it was a huge improvement! Crushed stone was much easier to travel over. It would not get muddy or flood. Along with the National Road. States chartered turnpikes, or toll roads. These roads not only provided easier and quicker travel, but also collected revenue for the states. Roads made transportation by wagon much faster than it was before. (Ibid)

3.5.2. River Traffic

Before the Industrial Revolution, rivers were the easiest and the fastest way to transport goods from the North to the South because the river's current carried all of the goods to where they needed to go. But how would you transport goods by river if you wanted to go upstream? By the flatboat, the previously used boat, it would be extremely difficult and slow.

With the Transportation Revolution came keelboats. Keelboats were built around a rigid timber in the middle with sails; they were built to go upstream. You could also pole or row them upstream if there was no wind. This improved transportation by river because flatboats could quickly transport downstream, and keelboats could quickly transport upstream. (Ibid)

3.5.3. Steamboats

At the beginning of the Industrial Revolution, the invention of the steam engine became widely popular. In 1787, John Fitch demonstrated the first steamboat, which had twelve paddles and was propelled by a steam engine. From 1787 to the 1830s, steamboats were improved. In 1787, James Rumsey created the world's first boat moved by jet propulsion. In 1804, John Stevens built a steamboat with a new high-pressure steam engine. Countless people attempted to improve steamboats so that they could carry passengers and cargo. Robert Fulton was the first to accomplish this task. By purchasing a steam engine built by James Watt, he was able to use the engine to power a 133-foot steamboat, the Clermont. In 1807, Robert Fulton's boat made a journey from New York City to Albany. By the 1830s, steamboats were the convention. They were used as methods of transportation in canals and other navigable waterways. They were used to promote trade. (Ibid)

3.5.4. Canals

Canals are man-made waterways. By building canals, you could connect cities by water and make inland transportation quicker and easier. In April 1817, New York authorized the construction of the Erie Canal. The Erie Canal was a 363-mile canal connecting Albany on the Hudson River with Buffalo, New York. When completed in 1825, the Erie Canal was immediately popular. It was an inexpensive route from New York to the Old Northwest. Not only were goods able to be transported faster, but the cost went down as well. The cost of inland transportation plummeted from \$100 a ton to less than \$8 a ton. The Erie Canal also linked farms in the West to markets in the East. This led to a growth in agriculture and growth of the national markets, otherwise known as the Market Revolution. The Erie Canal

revolutionized transportation and set the path for states to begin building their own canals to promote industrialization. (Ibid)

3.5.5. Railroads

From all the advancements of the Transportation Revolution, the construction of railroads was the most significant one. The first railroads carried goods for short distances, but the idea of a railroad sparked interest. Inventors and engineers wanted to be able to develop a railroad that could be used to carry goods or even passengers long distance. In 1826, a group of businessmen launched the first American railway, named the Baltimore and Ohio (B&O). After the success of the B&O in Maryland, many other companies began building railroads. However, many problems emerged. Railroads were expensive and were hastily built. There were many accidents and delays. Also, different companies used different widths of track, so only certain trains could travel on certain railroads. In 1830, Robert Livingston Stevens solved this problem by designing an iron T-shaped rail. After this invention, railroads grew from three thousand miles to thirty thousand miles in only 20 years. Shipping costs greatly decreased and industry expanded. This also contributed to the Market Revolution. (Ibid)

Technological innovations made in the textile and iron industries made production of goods faster and cheaper. Advances in steam engine technology led to a number of industries adopting mechanization. As demand for goods increased, a revolution in the transportation industry took place.

Transport changed very quickly in the period 1700-1900 as a result of an increased need for better methods of moving goods, new technologies and large-scale investment in the countries infra-structure (communications network. (Ibid)

The changes came in several stages. First, Roads were improved, then Canals were built and finally the Railway was developed. Each change had an impact upon life in the country, each shortened travel times over longer distances and each enabled industrialist to seek new markets in previously out of reach areas of the country. Likewise, they enabled more raw materials and goods to be shipped to and from factories, providing further impetus to the industrial age

3.6. Conclusion

We have seen in this chapter how the Industrial Revolution changed Britain in all sources and made it a great Kingdom based on a strong economy. So, all those factors created good conditions which motivated British people to obtain wealth and composed a great society and an advanced one in many domains such as technological advance. Transportation became faster and communication became easier because of the birth of this Revolution. We had all the advanced requirements.

General Conclusion

General Conclusion

To sum up we have found that the Industrial Revolution appeared in Britain because of many reasons, and it brought with it many changes, It made the British society more advanced than before in all domains. British people started looking around them searching for new ways of living. British experienced some new changes that made it an industrial country based on a strong economy.

British people changed their way of thinking. They relied on many methods to improve their economy, and made the British society more advanced than before. So, the Industrial Revolution succeeded in the improvement of Britain in different fields.

Although the Industrial Revolution marked the most fundamental transformation of the British economic and social life, events presented by the end of the eighteenth century a catastrophe. Industrial revolution had simply made the rich richer and the poor poorer.

In chapter three we found that thanks to the Industrial Revolution Britain became a strong country based on a strong economy and could take a significant, honorable, and great position in the world, thanks to those reasons, Britain was in its gold age, during that period.

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