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Mémoire de Recherche

Struggle and Progress in the Industrial Age

An Overview of the Situation Through the Spectrum of Cotton Manufacturing

1760-1865

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Introduction

Industrialisation was probably the most disrupting phenomenon that affected human civilisation since the domestication of plants, animals and fire.[1] It triggered a redistribution of both economic and political powers, and gave birth to a new social order. Society was no longer divided into three parts – the landed aristocracy, the clergy, and the peasantry -, but counted a new, vigorous element: industrial workers. This movement within the British population was at the origin of fundamental battles for men's rights, questioned the way some populations exploited others, and progressively redefined the world. Those changes were the social reflections of what was happening in the economic world: new means of production such as machine tools appeared, coal replaced wood and became the new source of energy, and of course the steam engine was the key to mechanisation. Not only did a new social order emerge; the whole world was turned upside down, which forced men to review their conception of this world, and to find their place. Fundamental questions and debates were raised, and in the end, positive progress was also part of the transformation.

Since the very beginning of the Industrial Revolution, cotton manufacture has been a flower of the British economy. Although cotton weaving had not so much managed to settle in the past, and remained in the southern regions of Europe, the rise of mechanical progress brought forward an immense source of development and wealth to the Kingdom. Thanks to some brilliant inventions, coupled with a favourable economic context and natural environment, cotton manufacture benefited from the tremendous inventory genius of the period. The exceptional rise of the British manufacture of cotton has made its effects felt upon the economy all over the 19th century. Its successes but also its failures have each time touched the whole English society, and more particularly in the region of Lancashire, where the weaving of cotton had almost transformed into a custom, a way of life. When it met with success, the economy of the region was also successful, while when production got depressed,

1 McCloskey, Deidre (2004). "Review of The Cambridge Economic History of Modern Britain (edited by Roderick Floud and Paul Johnson), Times Higher Education Supplement, 15 January 2004"

workers suffered great hardships. In that regard, the study of cotton manufacture is revealing of the global context within the British manufacturing world.

Yet, it is important to notice that prosperity and depressions of the cotton world were, as opposed to the coal or iron productions, entirely dependent on raw cotton production and imports, originating mainly from the United States. This means that, unlike coal and iron which found their great success in their being so abundant, cotton relied upon foreign factors. Moreover, this highlights the particular interest of the cotton industry, for its development was not due to its being in the soil, within easy reach, but rather to the great success of its manufacture, that is to say to human achievements. This can be seen as an asset and a default at the same time. Indeed, it developed in England and was very successful, but this could have happened anywhere else in Europe, since the material exploited did not originate from Britain, which shows the superiority of the British industry in terms of technology. However, the supply of raw cotton relying upon importation also appears as a weakness, victim of the turmoil that affected the United States, and particularly of the debate about the abolition of the slave trade, and later of slavery itself. This is the reason why a study of the interconnection between British cotton manufacture and slavery is full of interest. It mixes slavery with the industrial revolution, while those two concepts usually are opposed, slaves being compared and opposed to industrial workers in many respects, in debates that aimed to determinate which one of the two was the more miserable.

Cotton manufactures have participated in the process of industrialisation since its very beginning, in the early 1760's, with Richard Arkwright's invention of the spinning jenny. From that moment on, its growth became exponential, and brilliantly went through the turmoil of the first half of the 19th century. Indeed, not before 1861 was this arrogant prosperity challenged, with the naval blockade settled during the American Civil War. How did cotton manufacturing span through the process of industrialisation? In what way was it at the front row of the changes that took place during this period? What do its success and failures reveal of the new economic and social order? This study aims to tackle the changes that occurred during the Industrial Revolution, with a particular interest given to the economy of cotton. Those changes paved ground for social battles, which built the society we still live in nowadays. The angle of the world of cotton highlights the way those changes interplayed with each other, which makes

it all the more revealing of the issues of the Industrial Age.

The first part of this paper aims to define the actual changes that took place during the Industrial Revolution in Britain, and to situate cotton within this revolution. The trend of invention that was in the air at that moment proved determinant in the process of industrialisation, and thus in the rise of this cotton power. Particular interest will be given to the way those inventions changed man's view and interaction with his environment. The second part of this study is dedicated to the social aspect of the Industrial Age. Society was deeply moved by population redistributions and the rise of the working-class. Cities developed and their shape evolved, displaying a more attractive and welcoming atmosphere to the new consumers society. The cotton society revealed brilliant men, both in terms of technical achievements and of management; but it also confronted common workers to very harsh working conditions, to diseases and financial insecurity. Finances were indeed very complicated to sustain, for some thinkers this was caused by “wage slavery”, an expression coined to describe the system that changed the way human labour was perceived and dealt with. The disparity brought forward by this new system encouraged social agitation, which is to be tackled in the last part of this work. Indeed, from the last years of the Napoleonic wars, social movements developed, and became more and more frequent. The implication of cotton workers is noticeable, and probably worked in favour of a more positive aspect of the Industrial Revolution, which brought forward some fundamental social improvements. Indeed, by the 1830's, major social victories were obtained, namely the abolition of slavery and the extension of the franchise. To finish, we will see in what way the double dependence of cotton industry upon slavery caused its downfall through a case study of the Lancashire Famine. Also called the Cotton Famine, it was a consequence of the dependence of the English manufacture upon imports of American cotton, which stopped during the American Civil War. The lack of cotton in Lancashire manufactures resulted in great hardships for the workers, and eventually ended with the return of peace in the United States. This marked a turn in the industrial organisation, which diversified itself more and more from that moment onwards, and helped creating defiance towards the liberal system.

I- Cotton in the Industrial Age

> Because these changes affected the pattern of social development in the country so drastically the links between the two must be indicated. Three factors profoundly influence social developments; rapid changes in the size of a country's population, an improvement or breakdown in transport, and changes in the ways in which the majority of people earn their living.[2]

This part will draw a global overview of the context of the industrial age, and aims at situating the place and scale of cotton within this context. Progress that was made at that time provided fundamental changes, that transformed old British society and traditions. First, the rapid evolution that took place will be described and explained, regarding the factors brought forward by Dorothy Marshall, that are the development of transport and the economic shift – changes in population distribution will be discussed in the second part. Interestingly enough, all these aspects are to be found in the cotton economy, but in quite a singular way. Therefore the second step of this part will focus on the rise of cotton manufacturing in England, analysing both its integration within the whole process of industrialisation, as well as its proper pattern of development: in what way was it different? What made it so successful? To finish, what were its failures?

A- The Industrial Revolution in Great Britain

1- Economic Shift

a- Mechanisation

One of the characteristics of the Industrial Revolution it that work was fundamentally transformed by the rise of mechanisations of all sorts. For ages, systems of production had remained unchanged, should it be in the field of textile, as well as in ironwork or agriculture. Time and space were therefore defined and shaped by this local handwork organisation. Each village was supposed to provide its inhabitants with all the necessities, produced by villagers themselves. The world was smaller to a countryside man, who would not travel further than

2 Dorothy Marshall. "Industrial England, 1776-1851". *(*London: Routleg and Kegan Paul, 1982) p3

the closest villages in his whole life, possibly selling his extra-production on a town market. The development of mechanisation, and therefore of more important amounts of products, allowed but also forced villagers to look further and to search for the most interesting market, which became accessible thanks to the development of transportation. Their perception of the world changed, they met with way more people, travelled longer distances, faster and faster, as well as they could produce goods at a much faster rhythm. In their changing vision of the world, not only was their perception of space disrupted, their relationship with time also evolved. Time was no longer animated by living pace, subject to natural laws such as draught, flood, or even to the cyclical alternation between night and day; all this gave way to the age of machines, and detached men from their natural rhythm.

The rise of machinery also added a new intermediary element within the production line, which made it inevitable to have products that were more transformed in the end. Mechanisation, which was initiated in the very first place by workers themselves in order to make their work more productive and therefore less exhausting, followed the relentless call of profit. Rather than relieving workers from a certain amount of hard, physical work, it actually made them realise they could produce more within the same space of time, and encouraged them to increase their production. Gradually, as a reaction to the growing amount of goods available on the market and following the law of supply and demand, demand grew in consequence. The modern frantic race for profit was on, initiated by mechanisation.

b- Industrial Capitalism

Capitalism is an economic system based upon investment and innovation in order to create wealth. Before the rise of such a system in the 18th century, the mercantile system used to rule the world, with this process of borrowing money in order to buy goods that would be sold at profit in order to pay back that very money with interests. Mercantilism mainly spread around the Indian Ocean. The 18th century was characterised by the development of joint stock companies, which could finance bigger trade missions. The risk was therefore well better managed thanks to this division of investments, and this created wealth, although only for a small part of the population.

Industrial capitalism was slightly different in terms of scale and practice. According to

Joyce Appleby, it is "an economic system that relies on investment in machines and technology that are used to increase production of marketable goods."[3] Industrial capitalism first developed in Britain in the 19th century. At that time, Britain dominated all the seas of the world, and gained quite a lot of money from its trade with the colonies, which includes slave trade. This development was also helped by the climate of civil unrest that resulted from 17th century English Civil War. Indeed, before the war, royal prerogatives and lots of other regulations restrained the economy. During the turmoil, the crown could no longer enforce those regulations. Moreover, in the 16th century, agricultural productivity increased remarkably, which allowed farmers to invest in agricultural technology. Productivity, economy, but also demography were affected by these changes: the English population also highly rose. This progress resulted in higher wages for English workers, which in turn allowed them to consume as long as there would be available goods, then encouraging the improvement of productivity.

The enclosure movement also appeared at that moment, when landlords also turned towards privatisation and profit: they reclaimed and privatised fields that had been held in common by multiple tenants for centuries. This resulted in a dramatic growth of the agricultural production, which came together with the impoverishment of many farmers. It therefore came as logical that manufactures gained a large amount of hands: as fewer people were required to work in agriculture to feed the population, there were more workers available for factories.

Yet capitalism is not only an economic system, it as also a cultural system which is "rooted in the need of private investors to turn a profit."[4] By the early 19th century, minds started to change, to adopt capitalist values and to take risks. Indeed, the idea arose that, if the world was dominated by markets, then men should participate as actors, which marks the rise of men and women as both consumers and producers, and their desire to consume manufactured goods could spur economic growth: "the main spur to trade, or rather to industry and ingenuity, is the exorbitant appetite of industry which they will take pain to gratify."[5]

3 Joyce Appleby. "The Relentless Evolution: A History of Capitalism." (New York: W.W. Norton & Company, 2011) 78.

4 Appleby 81.

5 Appleby 84.

The industrial age was marked by terrible working conditions such as long-hour days, low wages, miserable working conditions, or child labour. Two solutions appeared, that are either labour unions which directly fought in favour of the worker, or Marxist socialism, which was more ideological. Marx's revolutionary idea was that of class struggle: struggle is what makes classes what they are. Through conflict, classes develop a sense of themselves. Two main classes mattered in 19th century England: the workers and the capitalists. Capitalists owned most of the factors of production, that are land and money. Workers owned their labour power, and wanted the highest wages possible, while capitalists looked for the lowest possible cost of work. This inevitably resulted in a class struggle.

c- Technical Progress

Technical progress is of course at the heart of the process of mechanisation, it is both its impulse and its inspiration. Several types of progress can be identified, but the steam engine is the invention that embodies them all. The steam engine indeed is the most famous and the most important, for it affected almost all of the fields of activity. In some cases, the simple adaptation of the steam engine to the already existing machinery proved sufficient in increasing significantly its production. This is for example what happened to the weaving machines. However it also triggered original inventions, and original creations, of which man had been dreaming for centuries. The fantasy of a machine doted of movement, that did not rely upon muscles, became reality with the apparition of the auto-mobile and then of the train.

2- Transportation

Transportation is one of the major changes that occurred during the Industrial Revolution. Part of the whole process of mechanisation, it can also be regarded as the symbol of this very mechanisation. As shown above, English society was being industrialised, following the pace of mechanisation, and one of the things that makes this revolution so unique is that, unlike the invention of printing, it touched a large part of the population, from the very beginning. Industrial workers were confronted with mechanisation all day long in factories,

while industrialists and upper social classes enjoyed the benefits of this mechanisation through consumption. Modern, mechanised transportation was the first device shared by the whole population, regardless of social origin, where they would meet and share the same confined space for a certain amount of time. Therefore this new way of travelling broadened the access to the world to a majority of the population. One of the reasons for this broadening was its cheapness, but also its rapidity: unlike wealthy people, most of the working class people simply did not have enough time to travel, as going from one city to another by stagecoach sometimes took days. Thanks to trains, it became possible for them to spend a week-end in London, or a few days by the sea. This was a landmark change in the social organisation, as travelling to resort places was progressively less and less regarded as a privilege, and these resort places consequently became less attractive to the upper classes. This acceleration of movement and displacement therefore was a tremendous welfare for the global population, and redefined the social structure in terms of classes, but it also redefined its organisation in a very technical way: time and space were transformed. More homogeneous, this was also a starting point to the foundation of our modern society. A place of modernity and improvement, thanks to which lower class people got access to novelty, but also through which classes where confronting each other, making them even more aware of their differences. Consciousness of their social status which might have fed the class struggle according to Marx's definition.

a- From Muscles to Machines

Since very ancient times, muscles had been the only way for humans to travel and transport goods. Walking was the very first means for people to move from one place to another, sometimes over hundreds of kilometres. Progressively, with the development of agriculture, man started domesticating animals, and thus used them for transportation. Travel on horseback became the most common transportation device, and remained so until the rise of the Industrial Revolution and the development of mass transportation. Animals gradually were replaced by machines, travels took less and less time, and landscapes were transformed by all sorts of new commodities.

The first transformation affected water transportation, with the digging and building of a

"widespread network of canals"[6]. These canals, which already existed in Holland and France, saw their first great wave of expansion between 1765 and 1775, and then in the 1780's and 1790's. In the case of canals, the interest lied not so much in speed, but rather in its capacity of transporting large amounts of heavy goods. Coal, steel, but also grain and animals therefore travelled over long boats. However they were not totally dedicated to the transfer of goods, men could also enjoy the slow pace of canals if they wished to, or if it was the only form of transport they could afford.

Roads were also on the verge of a revolution. Indeed, horse travelling in itself was quite reliable, and allowed to cover large distances in a relatively reduced amount of time. Yet, when it came to stagecoaches, the matter was different. Indeed, stagecoaches required roads, and the worse these roads were being attended, the longer the journey would last. Mud, water, holes, rocks, could all prevent a stagecoach from continuing its journey. Those undetectable elements might have turned a large number of usual journeys into nightmares. Mister McAdam was the man who changed road travelling forever, by creating a surfacing material which significantly smoothed paths, thus making them much more comfortable to travel on, but also much more reliable. Thanks to this invention, punctuality was finally possible, which made stagecoach transportation enter the modern, industrial world.

Concurrently with canals and roads, the train adopted a prominent role in the development of the English economy and society. Economically, the train greatly contributed to the Industrial Revolution. Transportation was actually one of the key elements of this revolution, as it was characterised by the entry in an era of movement. Materials and goods needed to be transported from their place of extraction to their place of transformation and then to various places where they would be sold, so was it for coal, steel, iron, but also got the food meant to feed city workers. The train allowed the transportation of all those items at a very cheap price, and at an unprecedented speed. Moreover, people could also enjoy the pleasure and comfort of train voyages. Not necessarily more comfortable than the stagecoach for the third class, it was at least five times faster. This was probably the major asset of the train: its speed. It was an ideal tool, for it combined the tremendous capacity of canals with the speed that straight rails and the steam engine allowed. Transportation was therefore in

6 Marshall 9.

itself a revolution, in terms of economy, of ways of life, but also of time and space.

b- "Annihilation of Space by Time"[7]

This expression was first coined by Karl Marx in *Grundrisse*, which he wrote in 1857-1858 at a very high speed, as a sort of draft to his future *Capital*. He derived this idea from his analysis of capitalism. If capitalism was the system that pushed markets to conquer the whole world and to make the most profit of it, then in practice the notions of time and space inevitably had to be put forward. Conquering the Earth would require efficient means of transportation in order to cover large distances in a reduced amount of time:

> While capital must on one side strive to tear down every spatial barrier to intercourse, i.e. to exchange, and conquer the whole earth for its market, it strives on the other side to annihilate this space with time, i.e. to reduce to a minimum the time spent in motion from one place to another. [8]

Therefore, the development of different modes of transportation displayed above, as well as the improvements regarding sea navigation, contributed to the "annihilation of space by time". By constantly travelling faster, man consequently reduces the size of the world proportionally to its speed. "If in these decades [of the early 19th century] the population was doubling, the speed at which men could be transported from one place to another had increased fivefold."[9] This means that the travelling size of the world was significantly reduced. Voyages that used to take years would be reduced to a few months, making the whole world potentially accessible to just about everybody. While men could seldom be assured to return from long expeditions that took them away from their homes for years, thanks to these improvements, crossing the Atlantic almost turned into a health walk.

Not only did progress in transportation change men's perception of the world they lived in, they also physically and technically changed it. Indeed, the improvement of roads, the digging of canals, and the construction of railroads modified the landscape forever. To build them, forests had to be cut down, mountains had to be pierced from one side to the other, and

7 "The Annihilation of Space by Time." Karl Marx, "Grundrisse der Kritik der Politischen Ökonomie" (1858), [Outlines of the Critique of Political Economy], p539. Quoted in "studying Marx's Grundrisse," 2 Jan. 2007. <http://grundrisse.blogspot.fr/2007/01/notes-for-our-discussion-on-pp533-690.html>.

8 Karl Marx in the Grundrisse

9 Marshall 13.

rivers were diverted. After the tremendous organisation inferred by the development of agriculture, the setting of infrastructures for transportation marked a new significant modification of the landscape. Moreover, the manner in which timetables got more and more precise thanks to progress also changed the way people perceived travels: one could expect a precise hour of departure and arrival, making journeys far less tiring and annoying, but also less dangerous, which opened the way for women to travel on their own.

c- Social Impact

The democratisation of transports of all kinds was not a mere improvement of an already existing commodity, but rather a deep change in the distribution of privileges and advantages within the British society. While long-distance travelling had long remained an upper class prerogative, it extended to the whole population. People who lived in the countryside, living on their farms, or selling the goods produced in their small workshops to villages nearby, these were people who would not travel further than the few neighbouring villages. To them, the world was generally reduced to the places reachable by foot-walk. With trains and stagecoaches becoming more and more competitive, workers who could afford a couple of days off work could now spend some time in resort stations, or in great cities. This can be considered as the very beginning of holidays, although this term must be used carefully, and most of the workers did not have access to such a leisure. Yet, access to rapid long-distance journeys for the lower classes was a major change, and opened a new era to social communication.

Among this new population of voyagers, women were not the last ones to enjoy the pleasures of travelling. On the one hand, travelling had become far less dangerous. For instance, the fact that stagecoaches stuck on the road after an accident became rarer, which made the number of attacks on those stagecoaches drop. On the other hand, this greater security opened the way to a new branch of women's emancipation: they no longer had to be accompanied by their husband or any responsible male, under the pretext of their needing protection. They would travel on their own, make their own experiences. The image of a

woman on her own far from her estate was very unusual until that time, but with their access to travel, people gradually got used to seeing a woman travelling alone. This evolution is indeed particularly interesting because of its physical aspect; this social change was visible, and that is one of the characteristics of the transportation changes: people could actually see the world change around them and witness it easily.

The social landscape of the train therefore was very broad and also very new: single women, children, families, the upper, middle, and lower classes were all mixed together. For the first time in history, there was a place where they would meet and share some time in the same reduced space. Confronting the other inevitably made those travellers aware of the differences that distinguished them from the other classes. Easily observable in such a place as the train, where you often sit for hours next to strangers, one of the main activities being to observe the other. This is of course the perfect embodiment of Marx's theory of social struggle: what makes social classes is their awareness of the differences opposing them to the others. However, the train was not really a place of open struggle; people rather tended to avoid talking to each other more often than not. It is at that moment for example that books appeared in trains and other means of transportation. The struggle took place somewhere else, and is to be described more into details further in this work. It was mainly caused by the evolution of population that England witnessed during the Industrial Revolution. The concept of "class solidarity" that defined the new working class came to be partly thanks to transports though, for "the Durham miner might well have inhabited a different planet from that of the London porter or the East Anglian ploughman"[10] before the 19th century.

B- The Cotton Revolution

> The cotton manufacture of England presents a spectacle unparalleled in the annuals of industry, whether we regard the suddenness of its growth, the magnitude which it has attained, or the wonderful inventions to which its progress is to be ascribed. Within the memory of many now living, those machines have been brought into use which have made as great a revolution in manufactures as the art of printing effected in literature.[11]

10 Marshall 92.

11 Edward Baines. "History of the Cotton Manufacture in Great Britain." (London: H. Fischer, R. Fischer, and P. Jackson,1835) p6.

As early as 1835, contemporary critics and intellectuals, such as Sir Edward Baines, understood the importance that cotton manufacture had taken in the British economy. The succession of innovations that took place at that time allowed brilliant minds to improve the production, in the momentum of the Industrial Revolution. The invention of the steam engine was obviously a great impulse to these improvements. However, the will of finding new techniques in order to render the production more efficient came from within the world of cotton manufacture. Weavers tried to use the force of the elements the English landscape provided them, especially the water power of rivers, but also coal and iron.

1- From the Origins to the Entry in the Industrial World

a- From India to England

It is known that cotton weaving appeared in India, in such remote times that no precise date can be found. The secret of this technique was jealously kept secret for centuries, but with the development of commerce, and the successive European expeditions to the East, this art progressively invaded Western territories. The womb of the exchanges between the East and the West being the Mediterranean Sea, it first reached Turkey, Italy, Spain, then went up to the Low Countries, Bavaria, Saxony, and Prussia, and "England was among the latest of all countries to receive the cotton manufacture."[12]

There is no precise date as for the introduction of the cotton manufacture in England. Yet, numerous evidences of regular importations of cotton appear at the beginning of the 16th century, and it is very probable that it was brought by Flemish Protestant migrants. The very first mention of a cotton manufacture is to be found in 1641. Baines asserts that, because of this late entry in the race for cotton weaving, England was not expected to reach such a degree of development and prosperity in this field. According to him, "three things may be regarded as of primary importance for the successful prosecution of manufactures, namely, water-power, fuel, and iron." Moreover, England rapidly showed an interest in the development of this manufacture; for instance, a British mercantile commission was sent to Constantinople

12 Baines 84.

in 1582 to learn about cotton manufacturing and dying. This shows that by the end of the 16th century, England had already had the intuition that cotton could have a positive impact on both the domestic industry and foreign trade, and consequently provide employment. It is at that period that the first brick houses appeared in Manchester in the place of old dwellings, thanks to the development of trade, which had become more and more productive. This bet resulted in a great success, and by 1735, "the manufacture of cotton, mixed and plain, is arrived at so great perfection within these twenty years, that we not only make enough for our own consumption, but supply our colonies, and many of the nations of Europe."[13]

Concurrently with the industrialization of the North, the American South benefited from mechanical progresses, and cotton production also soon became the major economic activity of the region. In England, a shift occurred regarding imports of raw cotton: cotton originating from West India got less interesting, its production having been turned obsolete by American mechanization. Therefore, American cotton gradually swallowed the whole market, reaching up to 90%. More productive equipments, plenty of workers to operate on those equipments, coupled with a very efficient production of raw cotton, made of cotton weaving one of the most lucrative activities of the 19th century, and turned England into the "workshop of the world".

b- Reinventing Cotton Manufacturing: the Reign of Inventors

It was around 1760 that the British cotton manufacture started its transition towards industrialization, thanks to some decisive inventions. Before that, cotton weaving techniques were very similar to Indian ones, which could be regarded as archaic, considering that they had not evolved for centuries. Yet, the looms were already better built, and the well-established woollen manufacture had made its effect felt on the creation cards for combing. England was ready to welcome this new industry, although it could not expect the scale it would reach. Yet this development was not due to chance, but to the great implication, ingenuity and technical knowledge of some men who invented new techniques, constantly aiming at improving the productivity of the workshops.

There are two dominating activities in the cotton industry, which work concurrently: weaving and spinning. Improvements first came to weavers, with the inventions of John Kay

13 Daily Advertiser, Sept. 5, 1739, *in* Baines.

and his son Robert. However,

> the balance between the weaving and spinning sections had been disturbed by the introduction in the mixture trade of Kay's 'flying shuttle', which by the 1750's had increased the productivity of the weavers. The spinners, however, still grappled with the single-spindle wheel (…) they could not keep pace with the demand of the weavers. Thus the price of cotton yarn increased.[14]

Nevertheless, it did not take long for spinners to come back in the race, and the new machines that were to be created changed the deeply transformed the production: both in terms of quantity and quality, the yarn produced was of superior quality. For the first time, goods were "woven wholly of cotton."[15]

According to most cotton historians, there are two inventions that transformed and improved the cotton industry significantly, and more particularly the productivity of spinners. The first central invention was Hargreave's spinning jenny. The earliest accounts of Hargreave's introduction of his invention in his factory date back to 1767, and it was finally patented in 1770. This invention greatly contributed to the expansion of the cotton trade in the 1770's. Quite at the same period, Richard Arkwright invented a water frame, which was eventually patented in 1769. It allowed the production of cotton warps on a larger scale, and therefore a machine was able to produce more thread within the same time. However, this new water frame obviously had to be much larger, so that it was too large to be housed in a local worker's home or workshop. As a consequence, by 1780, England counted between fifteen and twenty water-frame "factories".[16] Thanks to these improvements of the spinning technique, machines could do what was formerly effected by the fingers of the spinner, but with a more regular thickness, and the thread was more evenly twisted.

Until about 1780, "all the principle works were established on the falls of considerable rivers, no other power than water having then been found practically useful."[17] By the 1780's, the steam engine started revolutionising the world a little bit more, and forever, allowing factories to settle where water power was not available, therefore widening the opportunities of exploitation. Still largely widespread nowadays, the steam engine is "a machine using steam power to perform mechanical work through the agency of heat."[18] There are accounts of the

14 Michael M. Edwards. "The Growth of the British Cotton Trade, 1780-1815." (Manchester: The University Press, 1967) p3.
15 Baines 163.
16 Edwards 4.
17 Baines 186.
18 Encyclopedia Britannica, Steam Engine. <http://global.britannica.com/technology/steam-engine>.

use of steam power over 2000 years, although it really started developing in the 18th century. Thomas Newcomen added a piston to the system, and his machine became the first steam machine commercially used. It was used as a pump in a mine as early as 1712 However the most significant improvement was brought forward by the famous James Watt: his machine was able to produce continuous rotation motion, patented in 1781. With its 10 horse-power, it could be adapted to just about every industrial machine: pumping in the mines, as well as traction vehicles and of course train locomotives. Cotton weaving also benefited from this tremendous revolution, and soon, a 14 year old boy could manage two steam looms and could "weave three and a half times as much as the best hand weaver."[19]

Yet, these inventors were not considered as brilliant heroes when they displayed their inventions. Indeed, new improvements are often subject to the opposition of workmen who feared to lose their jobs. Moreover, the animosity also came from the manufacturers towards Arkwright, an "opposition of the Lancashire manufacturers to the establishment of a new branch of their own trade."[20] The opposition and persecutions brought by these new technologies attest of the revolutionary character of such inventions. Opposition is to be studied in the second part of this work, and the revolutionary aspect will be dealt with in the same manner as previously with the global context of the Industrial Revolution, that is to say in terms of economy, transportation, and population.

2- The Cotton Revolution

a- Economic Shift

Until the middle of the 18th century, the Crown set impediments to the development of cotton manufacturing in England by favouring the colonies to the detriment of the Kingdom. For instance, Parliament forbade the use and production of calicoes in the 1720's: the use of printed goods made entirely of cotton, that is to say against the printing of Indian calicoes that were not produced in Great Britain, were prohibited. This lasted until the Act signed by George

19 Richard Guest. "A Compendious History of the Cotton Manufacture" *(1823)*, pp. 10-11, 37-39, 44-48; in A. Aspinall and E. Anthony Smith, eds., *English Historical Documents, XI, 1783-1832*, (New York: Oxford University Press, 1959) p59.
20 Baines 165.

III, which was the first legislative recognition of a British manufacture consisting wholly of cotton.

As a consequence of this shift in the economic policy, by the 1770's, cotton wool imports had increased fourfold since the beginning of the century, and reached about 4,764,589 lbs.[2122] However, the cotton trade's growth does not follow a cyclical pattern. According to Michael M. Edwards, 1793 can be taken as the dividing line: trade grew rapidly in the 1780's and early 1790's, in terms of quality, quantity, and variety. This period was also marked by a rise in the import of cotton wool, and an acceleration of the building and installation of machines in the cotton-textile areas. All this ended up in 1783, with the end of the war with America. The exports to the former colonies rose, and at home a mass market for cotton emerged, which stimulated production. By 1787, production had outgrown consumption, and prices consequently fell. There was again a boom in trade in the years 1790-1792, and by 1800 the crisis was over, the exports towards Europe and the united States were restored. In 1799, there was an acceleration of the construction of factories and public works in Lancashire, and in 1801, large mills were being constructed in Preston. A wind of change came in 1807, when the USA set their first embargo: ports were closed to foreign commerce, which resulted in a rise of the price of raw cotton. Moreover, the European context of the Napoleonic wars also slowed down the progression of industry, as "Napoleon's commercial policy was a direct menace to the manufacturers' export trade"[23], that is to say he imposed a naval blockade in order to weaken his enemies. By 1807, the same year as the American embargo, "Napoleon was in position to enforce his blockade more vigorously." In fact, the cotton market experienced many fluctuations after 1803, which resulted in an increase of the number of bankruptcies, it made the exporting business hazardous because it had become difficult to plan far in advance, there was also a high risk of losing goods through confiscation or on the route, and finally it was rare to be paid in time.

The turning of the century can therefore be considered as the advent of competitiveness, which brought with it risk taking, and exploitation of the masses in a constant search of efficiency and productivity. The new manufactures were based upon the same

21 Baines 170.
22 Edwards, 7.
23 Edwards 15.

organisation as in the weavers' cottage, which was actually "a steam-loom factory in miniature"[24], and a distinction has to made between the shop weaver, who was under the discipline of his employer, and the independent domestic weaver, who could enjoy greater freedom. Yet, those independent weavers had to struggle in order to maintain their activity, victim of the competitiveness of great industrialists. This is the principle of the survival of the fittest: the strongest, fittest species, will destroy the weaker ones in their fight for survival. The theories of social Darwinism directly derive from the context of the industrial revolution, once again showing how deep an upheaval it must have been.

b- Transportation

Not only did the development of cotton manufacturing go together with progress in weaving and spinning techniques, the influence of this development went much further and transformed whole fields of activity. The example of transportation probably is the most striking, for this is really where it all started. The Liverpool and Manchester railway, opening on 15 September 1830, was build to transport textile, as well as hundreds of passengers. Following the rise of the activity using and transforming cotton in Lancashire, the idea was to provide a cheaper and faster transportation of raw materials, finished goods, and passengers between the port of Liverpool and mills in Manchester and the surrounding towns. Indeed, huge tonnages of textile raw material were imported through Liverpool and then carried to the textile mills around Manchester where water power was available and enabled the production of finished cloth. Because this line managed to fulfil all these needs, it became a tremendous financial success.

As explained earlier, the railroad was a revolution within the industrial revolution, particularly in terms of technical progress, and the Liverpool and Manchester Railway was the first line to display that many advantages at the same time. Indeed, it was the first railway to rely exclusively on steam power, the first to be entirely double-track, the first to have a signalling system, the first to be fully timetabled and the first to carry mail. All this participated in the movement that revolutionised both the social and commercial life of the country. Speed was of course the central issue of railroads, and transformed the way man perceived the world.

24 Guest 23.

Yet it is important to notice that its expansion went together with a development of security, as suggests the invention of the signalling system, or of speed limitation and control. When there is particular interest given to security, it generally means that there is something to be feared around. This great improvement, that literally transformed the world, was also highly frightening to a large part of the population, so were most of the inventions that flowered during the industrial revolution. Thus, for the first time, society was changing at such a fast pace, that it made its effect felt on the lives of ordinary people, who could witness those changes within their lifetime. In that way, progress was both an improvement and a source of anxiety and resentment, which resulted in tensions and struggles.

In the cotton region, railroads probably were the most striking improvement, for they touched just about everybody. However, not only did it create fear and anxiety, it also provided comfort and modernity. The train that travelled between Liverpool and Manchester indeed was the first one to experience a fully timetabled system, which was naturally very convenient for individual travellers as well as for important industrialists who expected their items to be delivered. Punctuality allowed greater efficiency, and therefore participated in the rise of productivity. What is more, this train was the very first one to carry mail, which greatly improved written communication, making it cheaper and more reliable. Of course, this improvement in communication resulted in a faster circulation of information: newspaper could be spread all over the region at a very fast pace, allowing people to be aware of the current events. This probably was a key element in the success of some important industrialists and merchants: knowing the value of their goods on the global market, the new strategies of their rivals, but also what was successful and attractive for customers. Thanks to railroads, marketing and communication were born. The example of the commercial travellers, who:

> pervade every town, village and hamlet in the Kingdom, carrying their samples and patterns, and taking orders from the retail tradesmen, and afterwards forwarding the goods by wagons, or canal barges, to their destination […] these travellers are a body of men exhibiting intelligence and acuteness, combined in many instances, with self self-conceit and the superficial information acquired by reading the newspaper.[25]

This traveller used all the technologies that were available to him: new means of transportation in order to be more productive, but also new means of communication, which allowed him to

25 Guest 72.

fit in the global context by understanding it. Therefore the railroad, and the Liverpool and Manchester Railway in particular, made trade and industry enter a new era, in which competitiveness was associated with adaptability and flexibility. What is more, this railroad linked Manchester and its vicinity to the port of Liverpool, creating a physical link between the weaving region and the gate to the Atlantic, to the New World and its markets, but also to slavery.

II- Social Changes in the Industrial Age

A- Evolution of the British Population

1- Redistribution of Population

The Industrial Revolution was characterised by changes in population distribution: people from the countryside gathered in industrial cities, while this very population was dramatically growing. Cities grew bigger, England got urbanised, and new problems emerged. On the one hand, the needs of this larger population which called for larger production were answered by industrialisation. And on the other hand, the development of new ways of production allowed an easier access to manufactured goods, which raised the standard of living and therefore encouraged population growth. Those two interconnected factors were at the origin of the emergence of the working class, in which "the 'average' English working man became more disciplined, more subject to the productive tempo of 'the clock', more reserved and methodical, less violent and less spontaneous."[26]

The working class became the most important class of English society in the first half of the 19th century. Sometimes described as the mass of people who have nothing to sell, it was very large in number, and characterised by its heterogeneity: composed of people from very different social, cultural, geographical origins. All these people were part of the working mass, in which the prevailing value was the solidarity of the economic group to which one belonged, as opposed to the social hierarchy in place until the 18th century. Those people were more often than not exploited by industrialists, made to work long hours in exchange of miserable wages. They lived in neighbourhoods, often unsanitary, around the great industrial towns. All this transformed workers into the description given above: they were subjected to the wills of their employers, transformed by the mechanical world they lived in.

26 E.P. Thompson. "The Making of the English Working Class." (London: Penguin Books, 1991.) p451.

a- Population Growth

The Industrial Revolution was characterised by an unprecedented population growth. Birth rates increased dramatically, and never really dropped down since then, while mortality was constantly moving backwards. [27] According to the works of Gregory Kings, 1687 English and Welsh population was around 5.5 million[28] By the mid-eighteenth century, this amount had reached about seven million, and by 1801 it had attained 9,168,000. By the year 1851, this figure had been multiplied by two. This population growth naturally resulted in a greater concentration of people within the same areas, creating a "mass" effect, which intensified the problems regarding housing, clothing and feeding.

Progress in the medical field that allowed a fall of the childbirth death rate, as well as the increase of that very birth rate, led Malthus to his very famous thought of a check on the birth rate in *Essay on Population* (1798); in which he stated that, if food supply increased by arithmetical progression while population increased by geometrical progression, great sufferings were to be expected. This work was very influential to its contemporary readers, who did not know how to interpret the way the population had doubled within their own lifetime. *Essay on Population* crystallised the fears of these people and showed them the possible consequences of such a growth. Thus it influenced the way people considered each other, and the social classes with the highest birth rates (namely the lower classes) somewhat dangerous, which in turn nourished class struggle.

b- Industrial Cities

It is generally said that living conditions in industrial cities were absolutely disastrous. Very bad sanitary conditions, no sewage disposal, stinking streets, diseases, promiscuity and so on, are such images that come to mind when speaking about those industrial boroughs. Depicted in many literary works of the time, this became the common perception of the living conditions of the working class. However it is important, when considering those living conditions, to compare them to both their past and future situations, to take into account the notion of evolution, and therefore take advantage of our historical sight. Thus, according to

27 Marshall, 229
28 Gregory King, quoted *in* Dorothy Marshall 3.

Dorothy Marshall, people had always been "inadequately housed"[29], and population growth simply increased the hardships of the masses, who had to gather in exiguous neighbourhoods. Concentration actually worsened the problem in some boroughs, where extreme poverty and misery proved Malthus true. Sanitary conditions were so bad that life expectancy did not rise above 25 years old for the working class in some cities.

Two different sources of pollution affected the health of people living in the cities. The first one touched just about everybody, the poor man as well as the rich, for it could not be stopped thanks to money nor kept away by walls: air pollution caused by industrial activity wormed everywhere. The sky was overcast by a thick "smog"[30] cover, people had no choice but to breathe it night and day, most of them contracting lung diseases in the long run. Added to that was the pollution created by the uncontrolled growth of cities. Because new constructions emerged so quickly, no adequate regulation had been established on house building, therefore sanitary necessities were often marginalised, privileging economy at the expense of comfort and health. The central and recurrent problem appears to be sewage. To continue with air pollution, the disposal of garbage was so inappropriate that it sometimes made it impossible for residents to open the window (there was seldom more than one) of their house, for the smell was so bad: huge piles of waste were being stored in the backyards, and every now and then local authorities came to clean up the yards, yet this was too rare to be efficient. Liquid waste was generally simply thrown in a ditch created for that purpose in the middle of the street, guiding them to the closest river. If this system had been working in villages in the past, the large concentration of people in the new industrial cities soon saw the limits of such a disposal: ditches got clogged up, liquids started stagnating right in the middle of the streets, again creating a terrible stink. Moreover, not only did this pollution inconvenience residents, it also seeped down to groundwater or to rivers when it managed to reach it. It is easy to imagine the way it polluted this very water, which was to be used and drunk by nearby inhabitants: poor workers as well as wealthy industrialists, no one could escape.

The unusual amount of epidemics that spread within these boroughs suggests once again that this system was tearing man apart from his natural state: man is not meant to live

29 Marshall 4.
30 Contraction of the words "smoke" and "fog"

in such crowded areas. The early years of the industrial era were marked by the explosion and intensification of already existing hardships, such as poor housing. Man got overwhelmed with such a rapid expansion and evolution, and suffered the consequences of his own uncontrolled creative genius. However, in many areas, living conditions were not that bad, as insists Dorothy Marshall; and in most of them those conditions progressively improved, thus proving man's great adaptability to the modifications of his way of life.

c- Heterogeneity

The development of towns inevitably mixed different groups of people, in terms of age, as well as social, cultural and geographical origin. Child labour probably is the most convenient example when picturing the mix of age groups. Indeed, children had always been working in the fields with their parents, or helped their families with lumber. Yet, all these activities remained inside the family circle. With industrialisation, children left the family sphere much earlier, to be mixed with older generations, and do the same work: they became workers. This of course participated in the redistribution of the social structure, and even created a new type of competition among workers. The younger people started working, the more available workers there were, the less work.

Attracted by the high rate of employment offered by industrial towns, people moved from the country to the city, coming from all over English territory, and sometimes even further: a mass of Irish migrants also arrived at that period. This mix of populations also was unprecedented, and promiscuity emphasised the cultural shock. People had been used to living in villages, with their own stories and particular customs, usually on the land of their ancestors. All of this was disrupted, people lost their culture. Moreover, the economic gap between England and Ireland – England being a rich country compared to Ireland – attracted this constant flow of Irish peasants. At first, they came in order to fulfil the need of additional workers in the harvest season, however, with the growth of the Irish population, work grew rarer and rarer on the Emerald Isle, and many migrants came to find permanent employment. Thus, heterogeneity was another source of tension, this time within the working-class itself.

2- Rise of a Consumer Society

The consumer society appeared in the 17th century in England and the Netherlands, when workers formed a new home market for industrialists. This was the result of an increase in the standard of living, coupled with a greater availability of exotic goods, as well as the creation a new consumer goods, which motivated buyers and "drew consumers into greater participation in market exchanges and greater reliance on wages, salaries and fees."[31] This of course also called for a greater production at a more profitable cost: that is to say that those customers who needed an ever-growing amount of items and novelties, were their own victims, because they were also the ones who would have to suffer the cost of mass production as workers. Nevertheless, their being their own victims was a situation learnedly orchestrated by the ruling class, managing to simultaneously create need and want within a single population. Another consequence of the emergence of this new society was that consumerism no longer was an elite privilege. Therefore, the higher classes had to find new luxuries and refinements, in order to maintain their privileged status, a headlong rush that still exists today, and that, according to Marx, was at the origin of more social struggle, as it was a way for the elite to display its wealth and privileges.

a- Consumer Revolution

The consumer revolution spread in England from about 1600 to 1750. It is often considered as the prelude to the rise of the consumer society, in the 19th century. This revolution was characterised by a rise in consumption, and in the variety of luxury goods available. It is indeed at that period that exotic products were imported from the West Indies and all over the Caribbean. The tendency of purchasing goods and consuming materials in excess compared to one's basic needs is called consumerism. This tendency already existed in ancient times: Egyptian and Greek civilisations have left accounts of such behaviours. However, the phenomenon intensified throughout the 18th century, and touched most economic and social backgrounds, accompanied by the growth of the new middle-class. Moreover, prosperity and social mobility were characterised by an increasing number of people with

31 Blackburn, Robin. *British History in Depth: Enslavement and Industrialisation*. BBC History Website: 2011.02.17. <http://www.bbc.co.uk/history/british/abolition/industrialisation_article_01.shtml>.

disposable income for consumption. There were also some improvements in advertisement, and the development of window shops. Finally, fashion took a growing importance, and changed the way people consumed. Necessity no longer was at the basis of consumption; pleasure, but also and most importantly, the social image a particular good had the power to spread, became a fundamental characteristic of the act of buying.

b- Modern Cities

Modern cities were cities where innovation and progress could be seen just about everywhere. In terms of consumption, the period of the Industrial Revolution saw cities flourish with innumerable amounts of novelties and fresh inventions, which transformed the urban landscape into what we know today. First of all, the comfort of the streets was progressively improved, in order to attract leisure customers. With the rise of the consumer society, necessity no longer was the primary impulse of the act of buying. Yet there were improvements to be done in order to create a pleasant atmosphere for customers, to make them forget about the filth of the streets. Thus, it is at that period that shopping galleries developed, safe from the mud and pollution of the street. People could stroll in the streets, not simply go from one point to another. Therefore, the 19th century also saw the development of shop windows. Before that, shops usually were obscure, dusty places in which one entered only to get something very specific. Shop windows allowed merchants to display their items in an attractive way, in order to create want and need in the minds of customers, who became the target of advertisers. The aim was to create need in order to make people consume as much as possible. The comfort and the pleasure of buying went together with an improvement of the safety of the streets. Transportation was of course developing at an unexpected pace, bounding remote suburbs and towns to large city centres. Finally, street lightening probably was the most revolutionary innovation regarding city life. Before that, life usually stopped at sunset, when it got dark. Gas and later electricity brought light in both the private quarters as well as the streets, and was synonym of comfort and security. Comfort because one no longer was dependent of time and weather: an obscure night was not a problem anymore. Obviously, pulling the streets out of darkness also kept away bad-intentioned fellows, which improved the

global security of cities.[32]

c- Impact on Society

Coming out of darkness literally meant greater security, but it was also pregnant with symbolism. Indeed, it also marked the way out of obscurantism for the greater number: people started to see the world in a more enlightened way, to question it and forge their own opinion, which presents another favourable circumstance for social combats: people were aware of their own situation and its unfair character; pressure and tensions simply activated the fight. Yet, this enlightenment that brought greater security also meant less privacy: society got access to an insight view on each and everyone individual, leading people to compare themselves to one another, and this was ground for the growth of the importance of social images. Being potentially observed forced people into more and more control of their own image, which in turn benefited consumption. Changes in consumer behaviours were not only due to personal, private needs, they were also characteristic of the way people started to worry about their image as consumers. To belong to a specific social class, to earn status, meant owning specific items. Not being part of the consumer society often meant not being part of society at all.

By the 19th century, being a consumer somehow meant dedicating one's life to consumption, which obviously required a certain living standard. To sustain this living standard, one had no other choice but to accept a job whatever the the cost in terms of working conditions. This is precisely the system of wage slavery, which will be studied into details further in this work. To sum it up briefly, wage slavery is a system in which industrialists maintain a fragile balance among their workers; a balance between need and comfort. The working class had to be wealthy enough in order to be a consuming mass, but should also remain poor and miserable enough in order to need work, and to accept any working conditions for very low wages. In that sense, workers were enslaved to the system: although they were legally free, in practice they were not. Again, this increased tensions within British society.

32 Youtube documentary: The Industrial World: Documentary on the Beginning of the Consumer Based Society (Full Documentary)

B- The Cotton Society

1- Cotton Industrialists

Men who became known as cotton industrialists are numerous, and their success was due to a combination of several factors. First and foremost, they were brilliant, innovative men. Yet, their choice of settling around Lancashire was decisive in their success story too. The region brought them water power and a large amount of labourers. Thanks to these favourable factors, Arkwright opened ten cotton mills in the Midlands between 1769 and 1784. However a very inventive man, he did not manage to apply steam power to his frames. In that regard, he was overwhelmed by the younger generation, made of people like Samuel Unwin who became a prominent hosier, but also Robert Peel, father of the famous Prime Minister. While Arkwright had remained focused on technical improvement, people like Peel understood the importance of the welfare of his workers, and got engaged in the fight for social improvements. Nevertheless, Peel and Arkwright were prominent magnates of the cotton industry, and could afford devoting time and money to technical and social matters. That was not the case for most manufacturers, who had to work their fingers to the bone in order to make a living of their activity. Those people were very demanding, and imposed sustained efforts to their workers.

a- Richard Arkwright: Technical Improvement

Sir Richard Arkwright (1732-1792) was an inventor and a leading entrepreneur, also known as the father of the Industrial Revolution. Last child of a large Lancashire family, he was educated by his cousin, and became a barber. It is at that moment that his abilities as an inventor can truly be appreciated: he invented a waterproof dye for wigs, which was quite successful. This success assured him regular and comfortable incomes, which allowed him to diversify his activity. Thus, as a Lancashire child, he got interested in spinning and carding machinery. In 1769, with his friend John Kay, a clockmaker, he patented the spinning frame, which would later become the water frame when associated with water power. This new machine rendered cotton spinning less expensive. Later on, Arkwright improved Lewis Paul's

carding engine, making it easier to operate on. However at that moment, while he was in full expansion, he needed money. His association with Jedediah Strutt, a wealthy hosier manufacturer, provided him with the capitals he needed to expend. Together, they built the world's first water-powered mill at Cromford. Again, this was very successful, and by 1774, about six hundred workers were employed in his factory, and he was copied by many others. The success was so great that Cromford village soon became too small, there were not enough hands. Because Arkwright never failed finding a solution to a problem, he built cottages in order to attract new workers: he encouraged weavers with large families to come and settle around Cromford. Children from the age of seven could work in his factory, and by the 1790's, about two thirds of his workers were children. Thus, Richard Arkwright was not concerned with social matters; still, his aptitudes for organisation and his determining inventions and improvements made him known as the creator of the modern factory system. He managed to combine power, machinery, semi-skilled labour, in order to exploit a brand new raw material: cotton.[33]

b- Robert Peel: Bringing Regulation Inside Factories

> Some like the Peels, came from respectable yeoman stock, families who had always combined farming with some branches of the textile industry. For ambitious men with this background the transition to mechanical spinning was easy. By the turn of the century Robert Peel was already a wealthy man. Men such as these, with the necessary drives and business acumen who had got in on the ground floor in the early 19th century were becoming the magnates of the textile world. [34]

Sir Robert Peel, 1st Baronet (1750-1830), was a British politician, industrialist, and an early textile manufacturer. He was also the father of Sir Robert Peel, who would later become Prime Minister. Peel was born from a family of yeomen. When he came of age, he joined partnerships in order to raise sufficient capital to set up spinning mills, using Arkwright's invention, they settled around water streams to provide energy to their water-powered plants. The need of water power forced most young industrialists to settle in areas where human labour was rare, because too remote from the main cities. Before building cottages in order to import new working populations, the shortage of labour was compensated by the employment of pauper children as apprentices. Peel made a fortune out of this activity.

33 Baines 149.
34 Marshall 93.

Concurrently with his activity as a textile manufacturer, Peel was very much involved into politics. He was a Tory, supporter of William Pitt the Younger, and in 1790, he got elected as a Member of Parliament for Tamworth county. His personal history, with his ancestors having experienced child labour, together with the reality he could witness everyday at his factory, made him very much concerned with child working conditions, in the cotton industry in particular. Progressively, this concern became a day-to-day combat, and in 1802, he introduced the Health and Morals of Apprentices Act to the House of Commons, in which he called for a limitation of the number of hours worked by children, and for the institution of schooling for every child, provided by mill-owners. Thirteen years later, in 1815, he introduced a new bill, calling for even stricter regulation of hours worked by children in cotton mills. The bill was finally passed in 1819 as the Cotton Mills and Factory Act. In between, in 1847, he had retired from business, and in 1820 he left Parliament. First and foremost a business man, Peel was nonetheless very much concerned with the fate of his workers, in particular that of children: he fought for their protection, in particular for the improvement of education. He is the typical example of manufacturers who got engaged in the fight for social rights, strong of his legitimacy as being in direct contact with those who suffered and needed help. At the end of his life, he had managed to create a strong company, and had become a cotton magnate.

c- Running a Mill

> But the magnates were not really typical of the average Lancashire or Yorkshire mill-owner. Many of these, at least in the early stages of their careers as industrialist capitalists, were the proprietors of very small concerns. Their standard of living was little, if any, higher than that of the hands they employed. Often they were the first to get to the mill in the morning and the last to leave at night. Many of them were perforce slave drivers, expecting the same effort from their work people but for less reward. […] In most cases they were indifferent to, or ignorant of, the social cost of their profits.[35]

Cotton magnates like Sir Robert Peel were rare, and most of the time, cotton manufacturers faced complicated economic situations, which forced them to adopt very demanding policies. They made their labourers work long hours, endlessly repeating the same task in a noisy, usually unhealthy atmosphere, submitted to the pace imposed by machines. Their position usually was complex, they had to keep an eye on just about everything: imports

35 Marshall 93.

of raw cotton, maintenance of the factory's engines, value of the stock exchange, finding markets for the manufactured textile. Manufacturers were, as Marshall states it, very much invested in the life of their business, and usually dedicated their own lives to it, for it was their own enterprise. This is also the reason why they were so demanding to their workmen, whom they expected to be completely devoted to their jobs too. Here is the thin limit between free work and slavery, to be detailed in the part about wage slavery. Men who do not work for their own benefit can not be expected to devote their entire life to work. Yet this was not obvious to unscrupulous mill owners, who did not hesitate to make people work night and day, sometimes starting at the age of four. Very young children were indeed used to reach the more exiguous areas, and the very strict rules allowed their overseers to beat them when they fell asleep. Thus, to impose order in their factories, mill owners had very little limit regarding the strictness of rules.

2- Craftsmen and Everyday Life

a- Living on Cotton

Working cotton defined the worker's way of life, which had some specificities. For example, cotton was one of the central factors of the improvement of hygiene, together with soap, because cotton shirts were much more hygienic than wool.[36] Therefore, it was one of the reasons of the lowering of mortality rates. However, not only did cotton workers benefit from the advantages of wearing cotton, they were also confronted to dramatic health problems due to the climate of the cotton mills. For example, the warm and wet atmosphere that was necessary to the weaving of cotton weakened organisms, especially during winter, when workers came and went from the cold outer world to the warm body of the factory. Therefore, cotton weavers were particularly subject to lung diseases, especially when they also had to breathe cotton dust and remains. Thus, most of the workers were to face cancers before the end of their career.

As noticed above, imports and exports were subject to the unforeseen development of

36 Thompson 353.

international relationships. The overseas market only got more significant from 1806 to 1815, while during the period of turmoil, between 1798 and 1806, the home market was superior. Before that, from 1780 to the early 1790's, the principal demand for cotton goods came from the working and middle classes. Cotton was easy to wash, dry and iron, but also very cheap. Not only did all these factors encourage its use for health reasons; fashion also adopted a prominent position from 1780 onwards. Regarding the working classes, according to Professor Ashton, there was a very close relationship between a bad harvest and a reduction in the demand for textile.[37] This shows that textile was still a secondary expense for those people, and was therefore very much subject to important fluctuations as it was not considered as a primary necessity. What is more, this probably also added to the class consciousness, for wealthy people could keep buying cotton goods while eating correctly. Clothes are outward signs of wealth, just as jewels, and could be seen at least as a denial of the realities most of the people endured, at last as a provocation, as an emphasis put on class distinction. Clothes therefore were one of the major signs that inferred class consciousness, which stirred the development of tensions.

b- Working Conditions in Cotton Mills

The transition from traditional weaving to the manufacturing system was brutal. Workers were confronted to a completely different frame and rhythm of work. While weaving used to be a family business, settled in the very family house, and work being divided among the family members, entering the factory radically changed traditions. Suddenly, people were made to work within large teams, outside the family circle. Moreover, the rhythm that used to be set by the advancing of a specific task, now was set by the machine, and working hours were precisely scheduled. Thus, work no longer was organised and planned by tasks, but by time. What is more, to maintain order, mill owners often resorted to very strict, printed rules, and retributions were commonplace to punish workers who did not respect the rules. For instance, Arkwright's factory insisted on the importance of punctuality: the gates opened twice a day, at 6am and 6pm, and workers who were not there on time lost two days' pay. Manufacturers were almost almighty within the sphere of their mills.

37 *in* Edwards 28.

Progressively though, legislation started regulating industrial working conditions, and the cotton mills were among the first ones to be looked at. The reason for this probably is the unusual proportion of female workers within this field. Indeed, "women were heavily concentrated into weaving"[38], and at the end of the 19th century, they even represented over sixty percent of the workforce. Throughout the 19th century, weaving was the best-paid large-scale female occupation in Britain, even so they remained completely dependent of men, in matters of rights, but also to get a job, and were vulnerable to sexual harassment, which was one of the evils of the factory world. Not only was there an important proportion of women in cotton mills, there was also a dramatic number of children. Those children either came from weavers' families, and worked in order to "boost the family's earning power"[39], or were imported from London workhouses. Some children started working at the age of four, although legislation progressively forbade child labour under ten years of age. Nevertheless, by the middle of the 19th century, most of the cotton mill workers had started working as children. Hence, considering the huge proportion of both children and women in cotton mills, laws regulating the cotton industry became stricter by the 1830's, in order to protect this fragile population. Thus, in 1847 and 1850, measures such as a ten-hour working day or Saturday afternoons off had been adopted by the cotton mills.

c- A New System: Benefits and Tensions

The social effect of the industrialisation of Lancashire and the whole cotton region was multiple. It changed the manners and habits of the people, who became political citizens: they were more concerned with the world that surrounded them, for the industrialisation took them out of their family sphere and confronted them to the rest of the world. There was also of course the establishment of Sunday schools, and the spread of education, which went slowly, but marked the beginning of an organised and regular education. "But it was in the textile districts that the changing economic status of women gave rise to the earliest widespread participation by working women in political and social agitation."[40] Indeed, the large proportion

38 Walton, John K. "Factory Work in Victorian Lancashire." BBC History Website. 25 Jul. 2015. <http://www.bbc.co.uk/legacies/work/england/lancashire/article_2.shtml>.
39 Walton, John K. "Factory Work in Victorian Lancashire." BBC History Website. 25 Jul. 2015. <http://www.bbc.co.uk/legacies/work/england/lancashire/article_2.shtml>.
40 Thompson 454.

of women in the weaving region which was at the origin of the improvement of industrial legislation was also characteristic of the way the cotton industry was the womb of women's emancipation, which is to be detailed in the last part of this study. Yet, industrialisation was also at the origin of some degradations, and the mix of improvements and degradations created tensions between workers and industrialists: again, class struggle was underlying the whole system. Thus, "the women, children, and the elderly, who lacked strength and skill, and who worked for a master, probably experienced no golden age."[41] Indeed, a great majority of workers did not enjoy the social battles and improvements that did characterise the period, that were actually still only benefiting a minority. Moreover, it is also at that period that the gap between industrial workers and country farmers became significant, with the degradation of the image of peasantry. The "highly-civilised dense manufacturing population" was opposed to the "scattered half-informed peasantry."[42] It was actually the whole society that got fragmented with the rise of industrialisation, or rather re-fragmented, as the working class had to find its place within a new social order.

C- Wage Labour

Slavery was one of the central issues of the first half of the 19th century, in most of the Western World. While France had started forbidding slavery within its empire in the early years of the century, it took Britain much more time; not to mention the United States, where slavery was abolished after a disastrous civil war, in the second half of the century.[43] This is of course talking about the literal meaning of slavery, the traditionally accepted definition, in which a man is deprived of his freedom, and made to work for the benefit of another man, without any gratification. In each country, the abolition was the result of long and often violent ideological battles, opposing abolitionists to anti-abolitionists. Yet, the 19th century was also characterised by more global social battles, in favour of the rights of the emerging working class. The defenders of this new class usually argued that the ill-treatment of workers had a negative impact on the living conditions of those workers, which in turn influenced their productivity and damaged the manufactures' incomes. The arguments of this debate are to be

41 Edwards 10.
42 Guest 59.
43 See: Chronology, Appendix 1.

detailed in the last part of this work, however one of them seems of particular interest in relation with the abolitionist debate. Because these two debates took place at the same period, there were of course men who were in favour of both, or against both, but there were also people who defended one as opposed to the other. Thus, there were men who were anti-abolitionists, who at the same time defended the rights of workers. Their argument is quite interesting: slavery could not be considered such a bad situation compared to that of industrial workers; at least slaves were guaranteed a home and a meal everyday. That formula, as simple as it is, had a tremendous impact and was one the most influential within the anti-abolitionist sphere, as well as amongst the defenders of the working class. It actually virtually turned workers into slaves, and this was called wage slavery by 19th century thinkers.

1- Arguments

a- Overview

Wage slavery corresponds to a situation in which a person's livelihood depends on wages or on a salary. An analogy between wage labour and slavery is drawn, playing with the similarities between the notions of owning and renting. It is actually a criticism of social stratification. This Marxist concept describes the pressures of a hierarchical society that force human beings to perform jobs that deprive them from their "species character". These pressures embrace the threats of starvation and poverty as well as social stigma and status diminution. The earliest accounts of such similarities date back to Cicero, in the Ancient Rome. Indeed, back in the Antiquity, some workers struggled to make ends meet within the system of wage labour. However, further research has shown that wage labour actually takes its origin in slavery: slaves were given a certain amount of money in order to make their living. This was still the case in some plantations in the United States for example. From that point of view, it is undeniable that slavery and wage labour are linked with each other. This argument was used by the defenders of chattel slavery (mainly in the South of the United States), and by opponents of capitalism, who were also critics of chattel slavery. Modern studies tend to show that the situation of industrial workers was indeed worse than that of slaves, whose material

conditions were "better than what was typically available to free urban labourers at the time."[44]

b- Marx, Engels, Proudhon

Karl Marx, as well as some anarchist thinkers such as Bakunin or Kropotkin, regarded wage slavery as a class condition put in place by the system of private property encouraged by the state. The failures of this system, according to them, lay in a few major elements that were and still are at the heart of the capitalist world, that are: property not intended for active use, concentration of ownership in a few hands, lack of direct access for workers to means of production and consumer goods, and the perpetuation of a reservoir of unemployed workers. Therefore, according to the Marxist ideology, the few hands that concentrated ownership deliberately deprived workers from their access to property, and maintained them in a state of need: a need of work, that the possessing class had the almighty power of giving and taking back. This is, again, the exact same scheme of relationship as that settled by the master with his slave; entertaining a state of need, so that the worker will remain submissive.

Thus, witnessing the effects of the Industrial Revolution, Marx and Proudhon extended the comparison to the context of societal property not intended for personal use. They insisted on the unnatural aspect of the system: the fact that some men were forced to work for the benefit of others was not natural, these men were rather forced by the circumstances to sell their work to some Lords, and had no other choice. If they do not have a choice, then they are not free, which again draws them to a certain form of slavery:

> It is the impossibility of living by any other means that compels our farm labourers to till the soil whose fruits they will not eat, and our masons to construct buildings in which they will not live. It is want that compels them to go down on their knees to the rich man in order to get from him permission to enrich him. […] What effective gain [has] the suppression of slavery brought him? He is free, you say. Ah! That is his misfortune [...]These men have the most terrible, the most imperious of masters, that is, need […] They must therefore find someone to hire them, or die of hunger. Is that to be free?[45]

To Marx, individual autonomy was a key value, the original state of man, and the Capitalist society was infringing it. Within his theory of class struggle and, this individual

44 Margo, Robert A.; Steckel, Richard H. (1982). "The Heights of American Slaves: New Evidence on Slave Nutrition and Health". *Social Science History 6*: 516–538.
Fogel, Robert William. "Without Consent or Contract: The Rise and Fall of American Slavery." New York, 1994, NY: W.W. Norton.

45 French journalist Simon Linguet, *in* Marx, Karl (1969) [1863]. *Theories of Surplus Value*. Moscow: Progress Publishers.

autonomy was either sold, or rented, or at least alienated in a class society. In fact, the system of social classes could not work together with the natural state of individual autonomy. Therefore, once again, the new order brought forward by the industrialisation of economy and society was against all natural laws, just as slavery was. Engels went further, and his demonstrations sometimes suggest that the condition of industrial workers was even worse than that of slaves. As said before, this has been shown and proved by recent works in terms of material conditions. Yet, about a hundred years before that, Engels thought in a more philosophical way, considered their situation as human beings, their ideological place and image in society regarding the treatment they received. He said:

> The slave is sold once and for all. The proletarian must sell himself daily and hourly. The individual slave, property of one master, is assured an existence, however miserable it may be, because of the master's interest. The individual proletarian, property as it were of the entire bourgeois class which buys his labour only when someone has need of it, has no secure existence.[46]

c- Opposition

However relevant these arguments might appear, opponents soon arose, highlighting the fact that the labouring class had always been exploited by the ruling one. Farmers had been working very hard to feed their lords for centuries. In fact, their opinion was that the ruling class had always exploited the labouring one, and this had to be accepted as a sort of natural rule. The actual bone of contention was the question of freedom: the difference made by the opponents relied upon the fact that serves were free people, whereas slaves were considered as property. For instance, Abraham Lincoln and the Republicans considered that slavery and wage labour were different because in the end, wage labourers would have the opportunity of working for themselves, for their own benefit, as opposed to slaves. If their career went well, and they managed to work effectively, they would reach the desired state of self-employment. The problem was that, in the unfolding of the 19th century, the artisan tradition slowly disappeared, devoured by industry. The famous Frederick Douglass, a former slave who managed to escape from his plantation and became a fierce abolitionist in the United States, experienced both chattel and wage slavery. He considered that both should disappear.

46 Engels, Friedrich. (1969) [1847]. "The Principles of Communism". *Marx & Engels: Selected Works, Volume I.* Moscow: Progress Publishers. pp. 81–97. Retrieved 9 March 2013.

Whatever the argument one chose to adopt, this debate highlights the social hardships and tensions that had been reached in the 19th century, and the causes of the social combats that took place at that time become obvious.

2- Particular Interest Within the Cotton Manufacture

The comparison drawn between the situation of slaves and that of industrial workers naturally takes a particular interest within the field of cotton manufacturing in England. If workers are to be associated with slaves, and the cotton they work on is produced by chattel slaves, then there are slaves at both sides of the production line, the activity relies almost entirely on slavery. Therefore this activity associated both types of slavery, and one may assume that its almost complete reliance upon that system had an impact on its development and evolution. Both in financial and ideological terms, probably inadvertently, cotton manufacturing was deeply influenced by the system of human exploitation it relied upon. The successive phases of its abolition, and the way the textile industry reacted to it, witness of the profound interconnection that existed between slavery and cotton.

a- Financial Implications

An account of the financial impact of slavery upon cotton manufacturing is necessary to understand the interest it took on in terms of pure business. To take the chain of production at its start, the analysis of the impact of chattel slavery upon the British cotton manufacture is absolutely amazing. The studies of Eric Williams, although they are still controversial, have even shown that the industrialisation of Britain was probably the cause of the development of the Atlantic slave trade, rather than one of its consequences.[47] If this industrialisation was the germ of such a trade, the reliance, dependence, and maintenance of British cotton manufacturers upon slave cotton is unquestionable. Not to mention the transatlantic slave trade in itself that was also determinant in the rise of the cotton economy in England. Thanks to the activity of Bristol and Liverpool merchants, who were at the heart of the slave trade, economic development reached the region of Lancashire, where new consumption habits

47 Eric Williams. “Capitalism and Slavery.” (Chapel Hill: The University of North Carolina Press 1944.) p. 52.

appeared for the first time. [48]

The development of wage slavery was in direct link with all this. Because, at the end of the 18th century, British merchants had trouble finding markets for their goods due to international conflicts, they had to find substitute markets, which they found in the colonies. Profits made in the colonies allowed them in return to invest more regularly in England, which encouraged the creation of larger manufactures. The prosperity of these manufactures allowed manufacturers to pay their workers at credit, which resulted in a constantly increasing production. Their interest in paying their employees on a regular basis lied in the fact that in return, those employees would raise their standard of living by changing their consumption habits, hence becoming a new market for those manufacturers. This was the birth of wage slavery. Thus, not only did wage slavery provide a gigantic, cheap mass of workers to industrialists, it also made a brand new market emerge. The balance between the state of need of those workers - which maintained them submissive – and the relative comfort they could afford, was fragile, and skilfully maintained. Wages should not be too high, but they should not be too low neither, otherwise consumption would be endangered.

b- Ideological Aspect

> Workers envisaged factory regulation in terms of an equalisation of the balance between labour and capital, which would restore the independence and livelihood of working men. The property of men in their skilled labour entitled them to regular work under fair conditions and to a degree of moral independence and respect. This 'artisan ideal' seems to have extended beyond the ranks of artisans narrowly considered, to embrace mule-spinners, weavers, wool combers and other textile workers.[49]

The question of freedom was at the heart of the claims of textile workers, just as it was at the heart of the abolitionist combat. Workers wished to be independent, to work for themselves instead of working for the benefit of a strong industrialist. Yet, as seen earlier, the artisan tradition was slowly but surely being overthrown by industries. Thus, although workers were legally free, technically they were not. It is in that sense that they were slaves. They were not the property of an individual master, but rather enslaved to the system, which was,

48 Robin Blackburn. "British History in Depth: Enslavement and Industrialisation." (BBC History Website: 2011.02.17). <http://www.bbc.co.uk/history/british/abolition/industrialisation_article_01.shtml>.

49 Robert Gray. "The Factory Question and Industrial England, 1830-1860." *(*Cambridge: Cambridge University Press, 1996.) p. 27.

according to Thoreau, the worst possible enslavement: "It is hard to have a Southern overseer; it is worse to have a Northern one; but worst of all when you are the slave-driver of yourself."[50] Those workers were free but had no other choice but to work for the benefit of another.

c- Crisis on the Crown's Territory

When the Empire abolished slavery in its colonies, it principally affected West Indian sugar plantations. This had an impact on the British Isles in terms of price, but people were touched as consumers, not as workers. When the United States abolished slavery, and therefore changed the way raw cotton was produced, the influence on cotton weavers was tremendous. The Lancashire crisis will be studied more into details further in this work, but it is significant here of the way British cotton manufacturers depended on slavery, on both sides of the production.

> As long as the English cotton manufacturers depended on slave-grown cotton, it could truthfully be asserted that they rested on a twofold slavery, the indirect slavery of the white man in England and the direct slavery of the black men on the other side of the Atlantic.[51]

When the American Civil War broke out, a naval blockade was settled on the Atlantic, so that no more American products could reach Europe, including raw cotton. This resulted in a dramatic crisis of the British cotton industry. Lancashire was particularly touched, workers starved around useless factories. The brutal cut on slave raw cotton thus traumatised both workers and industrialists, who did not get any money from their switched off factories. The outcome of this dramatic situation even seems to highlight the fact that, not only were industrialists also victims of the crisis, they were actually also enslaved to slavery, so to say. Indeed, when the situation in America came back to normal after the end of the Civil War, and cotton exports were restored, cotton manufacturers did not manage to retrieve their former situation: cotton workers had diversified themselves, and no longer exclusively relied upon the cotton market. The situation was thus turned up side down, discovering the state of need they had carefully maintained among their workers. In this way, the state of need really is an

50 Henry David Thoreau. "Walden" (Fully annotated ed.). (New Haven, CT: Yale University Press.) P49.

51 Karl Marx, New York Daily Tribune, October 14, 1861. Historians Group of the Communist Party. "The Lancashire Cotton 'Famine', 1861-1865." Our History. 6 Jun. 2015. <http://www.amielandmelburn.org.uk/collections/shs/pdf/cotton.pdf>.

inherent part of wage slavery, or wage labour, and power is on the side of those who manage to create this state of need. This observation will be of key importance in the social battles led across the 19th century, and further on.

3- A New Definition of Man

The debate brought forward by the question of wage labour actually forced man to clearly define the notion of freedom, which led them to the re-definition of manhood: could slaves be considered as Men, were they human? Multiple types of new questions were brought forward, and called for a more precise definition of the civil status of men, but also of their status as living beings: were they human? If so, what made them human, and therefore did they have any inalienable rights that were to be guaranteed? All these questions had been asked and answered in the French "*Déclaration des Droits de L'Homme et du Citoyen*", however, in 1790, the Industrial Revolution was only in its early years, and the changes it brought transformed modern societies, which required a redefinition of the terms. Modern men, who worked in huge manufactures and lived in gigantic cities, were different from the farming men who existed since the birth of civilisation. The fundamental changes, that have been described above, emphasized plural-centenarian tensions and moved societies so deeply, that a climax was reached and exploded in a variety of social struggles and fights, which resulted in the entrance in a new era, that of social progress and protection.

III- Cotton Manufactures and Social Agitation

Within Western societies, social struggle has been a central issue since very ancient times, and reached an outcome in Great Britain when industry was at its height. Therefore, the changes explained above must have deeply disrupted social patterns to finally manage to initiate a movement that was strong enough to progressively win the battle. Within the context of cotton manufacturing, this matter takes a double interest, as it directly intertwines the struggle of the working class with the fight against slavery: obviously, the cotton industry was totally dependent of the production of raw cotton imported mainly from the United States. After a brief depiction of the abolitionist fight in the British Empire and in the United States, the emphasis will be put on the influence of the socio-economic context on the debates. The rise of the working class was a striking and overwhelming consequence of industrialisation, and this new social class appeared so rapidly that regulatory measures regarding working conditions came generally quite late, which left plenty of time for the workers to experience terrible working conditions. This was considered as a new type of slavery by some people, especially inside the anti-abolitionist sphere.

Both slavery and workers' exploitation were being fought at the same period, the aim of this third part will therefore be to analyse the different steps of those two battles, and to try to understand why it occurred at that moment. Again, the cotton landscape tremendously highlights those two battles: there were many rebellions among cotton weavers against the system, but also attempts to improve the situation of workers by cotton manufacturers; just as there were lots of slave rebellions in the United States, and determinant figures who gave their voices and lives for its abolition. What is the impact of the industrialisation of society on these battles? What do they represent, and more precisely what do they reveal? To finish, a case study of the Lancashire cotton famine will provide an overview of the evolution of the cotton industry on the long run, and will allow us to analyse the way workers were protected in times of distress, thirty years after the Great Reform Act.

A- Social Agitation in Britain, 1815-1830

1815 was a turning point because for the first time in twenty years, peace was restored. Yet, this new context was paradoxical because the British economy was organised for war, therefore, peace actually marked the start of a period of social and economic distress. At the end of the war, prices – especially corn – fell, and unemployment rose. As a consequence, violence developed, tending to turn into a revolution. Indeed, there was agitation, people called for a reformation of the political system, especially regarding electoral representation. During this period of transition, the Industrial Revolution had a massive impact, it reinforced the economic, social, and political pressure. This economic distress that appeared after the war was characterised by the distortion between the short-term consequences of the war on the economy on one hand. On the other hand, longer-term trends such as the Industrial Revolution and the demographic changes it induced also required some changes in the political life of the country.

1- Overview: Twenty Years at War

a- The French Wars

By the end of the 18th century, the European World was shaken by the French Revolution on many levels. Politically, but also socially, ideologically, and economically, the order was deeply disturbed. The impact was such that, in the following years of the revolution, France's neighbouring countries were torn between the revolutionary impetus and the strength of the established authority. Thus international tensions soon arose, and the first confrontation started in 1792, opposing the French First Republic to several European monarchies. Until Napoleon's arrival, these wars are known as the French Revolutionary Wars, spreading from 1792 to 1802, and are usually divided into two periods: the War of the First Coalition (1792-1797), and the War of the Second Coalition (1798-1802). This period was characterised by a large French success, with the conquest of the Italian Peninsula, of the Low Countries, and also

of the Louisiana Territory in North America. This success allowed France to spread its revolutionary concepts and principles. With the coming to power of Napoleon, the revolutionary character of the fight faded a little, but wars went on. The Napoleonic Wars, that run from 1803 to 1815, were a new series of major conflicts between the French Empire and most European powers formed into various coalitions. In fact, these were merely the continuation of the Revolutionary Wars. After Napoleon's ultimate defeat at Waterloo in 1815, the British Empire became the foremost world-power for the following century, which became known as Pax Britannica. This century (1815-1914) was a period of relative peace in Europe. Britain took profit of this climate and traded goods and capitals at a very large scale with countries all around the world.

b- Situation at Home: William Pitt the Younger

The French Wars occurred under the reign of King George III, mainly supported by his Prime Minister William Pitt the Younger, an expert in finance and former Chancellor of the Exchequer. When France declared war to Britain in 1793, George III allowed Pitt to increase taxes, to raise an army, and to suspend the right of habeas corpus, in short terms, Pitt settled a war economy. The war was extremely expensive, and became a heavy burden on British finance, but Pitt's policy protected the balance of the budget, sometimes through austere measures. Thus, in 1797, in order to protect the gold reserves of the Kingdom, a law was passed to prevent individuals to exchange banknotes for gold. The same year, an income tax was introduced for the first time in Britain, in order to compensate the decline in trade. During his second ministry, from 1804 to 1806, Pitt used Britain's superior economic resources: he mobilised the nation's industrial and financial resources, so that the national output remained strong, and profitably used the well-organised business sector, which he turned towards a war economy. France tried to ruin Britain by cutting off the continental markets, but this was a failure thanks to smuggling. The war economy increased the national debt, but was supported by tax payers and investors: a strong patriotic sentiment flew over Britain at that period. For instance, in 1803, in response to the threat of a French invasion, there was a massive volunteer movement. However, the social climate was not particularly pleasant: as said before, the right of habeas corpus was suspended, but reformist movements, inferred by the French

Revolution, were brutally suppressed. Indeed, the regain in enthusiasm for parliamentary reform, which had almost disappeared since Pitt's last defeat in 1785, revived, but faced a repressive legislation that aimed to silent reformers, notably with the Seditious Meeting Act and the Combination Act. What is more, efforts were also made to improve the situation with Ireland, especially after the French landing attempt of 1798, and ended up with the 1801 Act of Union, which united Ireland to Britain, giving birth to the United Kingdom. However, no consideration was allowed to the religious reform. Thus, the French Wars were characterised in Britain by both a strong, powerful economy, and successive cuts in social rights and privileges.

2- Aftermath of the Napoleonic Wars: Sources of Discontent

a- Coming Out of the War Years: Social and Economic Distress

During the war years, prices had doubled. By 1816 they were actually only thirty per cent higher, and by 1830 they had fallen well below the 1790 level.[52] These falling prices created deflation: there was less currency, and, after twenty years of war, people had to suffer from an economic crisis. What is more, this crisis was coupled with a disincentive for industry: as the economy had become a war economy, it did no longer correspond to the necessities of society. With the outbreak of peace, the economic reconversion became problematic: it was no longer necessary to produce large amounts of steel and iron, and the government no longer bought grain to the farmers, as there were no more soldiers to feed. Moreover, while men were serving in the army during the war, they had been replaced in industries. Thus, when they came back to their home towns, they did not get their jobs back: factory owners had replaced them by machines. This situation obviously created tensions, as men praised for a return to traditional modes of production, while industrialists saw the profits such machines brought them. Those unemployed workers expressed their rage against the machines through violent actions, which poked even more the social climate. Yet, this brutal transition also allowed Great Britain to increase its productivity. However, this developing productivity did not prevent the country from an industrial recession. Indeed, during the war, government contracts had

52 Marjorie Bloy. "A Web of English History, The Age of George III." 18 Jul. 2015. <http://www.historyhome.co.uk/c-eight/distress/distress.htm>.

stimulated the economy of weapon production, and also of textile: it is at that period that Britain truly became "the workshop of the world." At the end of the war, competition had to be re-introduced, and industrialists had to adjust to a competitive market. Craftsmen were the front line victims of this transition.

With the Industrial Revolution, Britain had turned from an agrarian and commercial economic system to a manufacturing and capitalistic one. The industrialisation of the country did not happen without trouble though. Mechanisation in the factories had several consequences. For instance, replacing hand-looms by power-looms was catastrophic for workers, who lost their jobs because their hands had been replaced by machines. As a response to this, violence against the machines developed, especially from 1811 to 1816, as a means for workers to express their discontentment. Moreover, wages globally fell as a consequence of the structural and cyclical unemployment. Finally, for those who had managed to keep their jobs, industrialisation was also accompanied by very difficult working conditions, which were not regulated at that moment. While factories were growing larger and larger, more and more people were required to work in definite areas, therefore a rapid displacement and concentration of population occurred. These people had been uprooted, they had lost their village culture and solidarity, to find employment but also poor housing, poor hygiene and inadequate local administration. This spectacular concentration of population was worsened by the dramatic population growth that touched Europe at that period. In Britain, the population increased by sixteen per cent between 1811 and 1820.

Unemployment was a consequence of the economic crisis. As a result, there was a rise in poor relief spendings, which were paid from the parish rates. In 1815, the amount was about £ 5.5 million; in 1817 it had risen to £ 8 million. This very rapid increase made the middle class angry, for they were paying more and more taxes to protect poor people. This social and economic distress was also characterised by a lowering of wages, especially for agricultural labourers and hand-loom weavers. Indeed, during the crisis, plenty of people were ready to accept a job at any price, which allowed factory owners to offer lower and lower wages. What is more, wages were also depressed as a consequence of the 1795 Speenhamland system, which had been introduced in order to avoid a revolution. It gave the possibility of supplementing wages from parish rates, which were to be indexed on the price of

bread. This was obviously another source for social tensions.

b- The Problem of Parliamentary Representation

The economic and social hardships of the post-war period were naturally accompanied by growing tensions, which frightened Parliament and the ruling class in general. Indeed, Parliament had not been reformed since the revolt of the barons, therefore, representation was no longer appropriate to the new society, especially considering the changes inferred by the Industrial Revolution. As explained before, Britain had turned from an agrarian and rural society to an industrial and urban one. However, parliamentary powers had remained in the hands of the landed aristocracy, which was no longer representative of the majority of the population. The whole matter for Commoners and Lords was to protect their interests, which were doubly threatened. On the one hand, economic and social distress had created such hardships and tensions that popular movements could explode at any time, which would endanger Parliament. On the other hand, because representatives were not aware of the actual problems of the people, their reactions were not appropriate -unfair taxation, the Corn Laws -, and did not solve anything, but rather increased the tensions. Thus, both the problems and the solutions were sources of tensions, which started to make it obvious that misrepresentation was the heart of the whole problem, and that reform could not be avoided anymore. The fear of a French-type revolution was of course in the air, tensions increased, and the British people started manifesting its discontent.

3- Manifesting Discontent

a- Social Agitation

The atmosphere was not the same in every region, yet agitation was developing everywhere in England. In Birmingham, there was a moderate movement uniting employers and employees, while in Manchester, there were violent confrontations over the use of technology in the textile industry. However, there was no evidence of a planned agitation, there was no coordination, but rather dispatched agitators. In 1816, for example, in Spa Fields, London, Henry “Orator” Hunt, a radical speaker and agitator, organised several

meetings. The first one took place on November 15, and gathered about 10.000 people. Henry Hunt delivered his speech to a peaceful crowd, requesting electoral reform and social relief. The aim was to find popular support to a petition, to be presented to the Prince Regent. Despite the success of the petition, Hunt was not allowed to enter the Regent. Therefore, a second meeting was organised on December 2, this time gathering 20.000 people, twice as much as the first one. The official meeting was supposed to remain peaceful, however, revolutionary Spenceans, led by Arthur Thistlewood, took this as an opportunity to take control of the government by invading the Tower of London and the Bank of England. The crowd got confused when Spenceans purposefully brought disorder: Hunt could not be heard properly, and confusion resulted in mob actions, rioting and looting. The cavalry was sent to suppress the movement, yet in the end very few people were convicted. There is still a doubt regarding Hunt's implication in the action. This event participated in the rise of a pre-revolutionary atmosphere, together with several influential others, in which weavers were very active.

b- Luddism

Luddism is a phenomenon that appeared in England in the 1810's, which designates the "members of any of the bands of English workers who destroyed machinery, especially in cotton and woollen mills, which they believed was threatening their jobs (1811–16).[53] Luddites were, so to speak, righters of wrongs of the cotton mills. The movement started in the second half of the 18th century, and probably owes its name to Ned Ludd, a weaver who smashed two stocking machines in 1779. Luddites were particularly active in the period between 1811 and 1816, they were globally against stocking frames, spinning frames, and power looms. The problem with those machines was that they could be used by less-skilled workers, which firstly lowered the average wage, and secondly less people were required to produce an equivalent amount of material. Professional hand-loom weavers and spinners, who had acquired traditional skills through time and practice, suddenly saw their knowledge become obsolete, their position taken by unskilled workers, and eventually lost their jobs. This movement was violent, it consisted mainly in burning mills and destroying machines into pieces; and it was also very risky, as Parliament rapidly legislated in favour of manufacturers, in order to protect

53 Oxford Dictionaries, "Luddite", <http://www.oxforddictionaries.com/fr/definition/anglais_americain/Luddite>.

their properties. A popular anecdote states that at some point, there were more soldiers of the British army fighting luddites than those who were fighting Napoleon on the Iberian Peninsula.[54] The movement spread all over England, and took such a scope that the British government decided to set an example with a mass trial, which took place in York in 1813, and ended up with several deportations, and even some executions. As a consequence, industrial sabotage became a capital crime, defined by the Frame Breaking Act. Again, the cotton industry counted among the most virulent activists of the pre-reform period. c- Weavers in the Streets

Cotton manufactures were the theatre of violent action against the modernisation of the means of production, and this phenomenon was characteristic of a profound anxiety, a rage, a disorder that was deeper than a simple anger. There were for example riots in the neighbourhood of Blackburn, consequently to the invention of Hargreave's spinning jenny in 1767, during which machines were destroyed and the inventor taken to Nottingham by force. This violence probably was not only due to the suppression of employments, but also to a deep fear of novelty, especially of such impressive, buzzing machines, that looked like terrifying monsters. This fear was so powerful that "not merely the working classes, but even the middle and upper classes, entertained a great dread for machinery."[55] Yet, violence against the machines was not the only mean of expression for oppressed workers. There were also many demonstrations and marches, some more violent than the others, and once more, among the few that became the most famous, at least two were led in the weaving region. On 10 March, 1817, Lancashire weavers went on a march, intending to reach London to inform the Prince Regent of the desperate situation of the cotton mills, and also to protest against the suppression of the right of habeas corpus. They started from Manchester, and wore a blanket on their backs, to have something to sleep on at night; which afterwards gave its name to the march. Marchers did not reach Derbyshire though, as they were arrested by the cavalry. People were tried, but the affair ended up relatively peacefully. The atmosphere was radically different in 1819, when Hunt, the "orator" of Spa Fields, organised another mass meeting in

54 Eric Hobsbawm. (1964) "The Machine Breakers" in *Labouring Men. Studies in the History of Labour.*, (London, Weidenfeld and Nicolson) p 6

55 Baines 147.

Manchester, at St. Peter's Field. He made a radical speech, called for radical parliamentary reform, in front of an enormous crowd, of about 70.000 people. The Manchester Chief Magistrate panicked: he was afraid the middle-class yeomanry could not cope with the situation, and asked the cavalry to disperse the crowd. The cavalry charged, this time resulting in fifteen casualties and between 400 and 700 men severely injured. The massacre was afterwards nicknamed Peterloo massacre, in reference to the battle of Waterloo. This event marked the official opposition of Parliament to reform, with the Six Acts that were passed a year later, and which forbade any meeting for radical reform.

B- Revolutions of the Early 1830's

1- Abolishing Slavery

> The natural evolution of the British capitalist society led to the eradication of slavery, as slavery was linked to protectionist policies in favour of the planters, which eventually proved detrimental to British capital.[56]

a- Abolition and Emancipation

The abolition of slavery in the British Empire was a long process, result of numerous and controversial debates. Two major phases can be distinguished in the abolitionist process: first, abolition, which corresponds to the ending of the slave trade. This first phase was very complex in the sense that it involved plenty of nations, among which England, France, but also the United States. Interests in the Atlantic trade were legion, mixing manufacturers, slave traders, and planters. Britain was actually the first country to abolish slave trade, in 1807. Following this abolition, which was considered by abolitionists as a simple step towards complete freedom for enslaved people, the emancipation campaign began, pledging for a complete ending of any kind of chattel bondage. Again, Britain was the first nation to entirely abolish slavery, in 1833, with the Slavery Abolition Act. Led under the impulse of William Wilberforce, this act was an ideological victory. In practice, the situation was much more complicated, as it created a new workforce to assimilate in the society, which created another motif for social tensions. However, this abolition remains a tremendous step forward, and the

56 Cécile Révauger. “Abolition of Slavery, the British Debate, 1787-1840.” (Paris: CNED-PUF, 2008.) p95.

debate in itself is revealing of the evolution of minds that characterised this period.

The way this debate was led also was unprecedented. For the first time, women took position in the debate, and participated in the advancement towards abolition. Women, mostly from the middle and upper classes, gathered in societies to discuss the matter, sometimes against their husbands' will. Their engagement was actually determining of the outcome of the debate, as George Thompson already stated it in 1834: "Where they existed, they did everything... In a word, they formed the cement of the whole Antislavery building – without their aid we never should have been united."[57] And the movement was widespread, as "all in all, at least 73 ladies' associations were active at some time between 1825 and 1833, and at least 34 in the 1834-1838 period."[58] Taking part into the debate was a strong engagement, and women played an important role, which shows the way society was changing: for the first time, women were active outside the private sphere: they entered the public domain, despite the relative resentment of most of the conservative class.

b- Impact on Cotton Manufacturing

The progressive abolition of slavery in the British Empire did not really affect cotton weaving, for, as said earlier, the supplies of raw cotton no longer came from India, but from the United States. Given that the United States had taken their emancipation from the British Crown by 1776, slavery remained in place for a few more decades, until 1865. The connection between slavery and cotton manufacturing should therefore rather concern American slavery, and as the last part of this study will show it, the American abolition of slavery was at first damaging to English cotton, but in the end it also proved thoughtful, and made the system evolve. The British abolitionist campaign remains revealing of the evolution of the economic policy of the country: the old paternalistic system was dying, being replaced by the capitalist supremacy, which was such that even such an ancient institution as slavery was wiped away within a few decades. Although the Industrial Revolution brought new hardships, such as the so-called wage slavery, it also smashed the social order into pieces, and reconstruction progressively embraced the whole society, with the French revolutionary egalitarian ideal as a framework.

57 Révauger 115.
58 Midgley, Clare, "Women Against Slavery" *in* Révauger, 115.

2- 1832: The Great Reform Act

a- Reforming Parliament: a Delicate Debate

Since the French Revolution, there had been a feeling that the British system was not democratic enough. Indeed, it was controlled by the landed interest, and excluded the emerging classes, namely merchants and industrialists. The development of industry and the rise of urban concentration made parliamentary reform more and more necessary, in order to balance representation. The debate about the question of representation opposed two political camps: the Tories and the Whigs. The Tories were globally composed of the landed aristocracy, they were against reform and rather pledged for the statu quo. The Whigs represented the emerging industrial urban middle-class, and wanted more economic freedom, and more political power. In the late 1820's, tensions began to emerge within Parliament, which can be seen as a prelude to reform. First, disunity spread within the Tory party: the Tories represented the vested interests of the old system, and controlled 203 of the 276 nomination seats; therefore, when Canning succeeded Lord Liverpool in 1827 and launched a new policy, more favourable to the middle-class and to Catholic emancipation, this split the Tory party into reactionary and liberal factions. When Wellington came to power in 1828, he failed in his attempt to reunite the party, with the proclamation of the Catholic Emancipation Act in 1829, which deepened the divisions between the country Tories and the ministry.

While the Tory party faced this crisis, economic recession was also weakening the country: after a high boom in 1825, a new economic crisis emerged in 1828, which triggered a new wage of popular agitation for reform by 1829. It is at that moment that Thomas Attwood created the Birmingham political union. In the mean time, the Whigs had been disunited by Canning's moderate Tory reform, yet they remained reformists for three main reasons. Firstly, this was part of their political platform: a popular reform as a means to return to power. Secondly, they took into account some philosophical abstractions, under the influence of Jeremy Bentham and utilitarianism: they did not want to be associated with radical utopians, but rather advocated a moderate revolution. Finally, their social strategy was to avoid a French style revolution and the dangers of an alliance between the working-class and the middle-

class. The solution to that was to give the middle-class a role to play in representation, in order to ease tensions.

b- The Representation of the People Act 1832

When King George IV died in 1830, his son William IV got the throne, Parliament was automatically dissolved, and new elections were organised. The social and economic context in England was very unstable, and a new revolution had spread in Paris. From that moment onwards, popular support for reform emerged all over the country, first lawfully and peacefully through political unions, which advocated petitioning and public oratory, and managed the stream of support. Still, the Tories won the elections at a short majority, and Wellington became Prime Minister. But he was very unpopular, and his party deeply divided; thus, after a few controversial declarations, he was dismissed by Parliament, less than a month after his election. He was replaced by Lord Grey, a Whig in favour of reform. A first bill was introduced in the House of Commons on March 1, 1831, but did not meet with a majority, and actually created such tensions within the House that it had to be dissolved by the ministry. Nevertheless, this first bill had brought hope for reform among the people, so the Whigs won an overwhelming majority at the 1831 general election. This time, the bill easily went through the Commons, but was defeated by the Lords. The country reacted violently to this defeat, notably in Bristol where rioters controlled the city for three days, and the political unions decided to get together within the National Political Union. Support for reform was growing stronger, and better organised: a large majority of the country wanted to see parliamentary reform become reality. The third bill was introduced in December 1831, and went through the Commons with an even larger majority. Considering the national social climate, the Lords understood that they could not reject the bill a third time; therefore they rather modified it, restoring the rotten boroughs for example. This resulted in a constitutional crisis, known as the Days of May, during which the ministry advised the King to introduce additional peers in favour of reform in the House of Lords in order to pass the bill through. The King refused, Lord Grey resigned, and the King called the Duke of Wellington back. Political agitation was such that the country was on the verge of a revolution, and Wellington found no support, forcing King William to reintroduce Grey as Prime Minister. Wellington pressed his Tory fellows of the House

of Lords to give up opposing the bill, which was finally accepted and became a law by Royal Assent on June 7, 1832.

The Reform Act imposed a redistribution of seats, abolishing some and creating new ones, with sixty three new seats reallocated to English industrial towns. There was also a rationalisation and extension of the franchise to the propertied people in the counties and in the boroughs, respectively required a £50 and £10 household qualification. Altogether, the size of the electorate was increased by fifty per cent, with about 217.000 new voters: one out of thirty male inhabitant could now vote. Secret ballot was not included though. However, there was little immediate change in the composition of the House of Commons: there was still an over-representation of the rural South, because of an inadequate redistribution. Government thus remained very aristocratic.

c- Limited But Determining Improvements

1832 is a turning point because it embodies the convergence of diverse social, economic, and political interests, in favour of the majority of the population. From that moment, the party system developed, and royal influence declined: royal patronage was less influential, regarding the new importance for public opinion and for the press. Parliamentary reform had not been looked at since the Middle Ages, under King Henry IV. This emphasises the fact that this reform was exceptional, it had been hoped for by the British people for decades, and the whole question is why did it happen at that particular moment? It seems that the changes that have been displayed since the beginning of this study are at least one of the main reasons, if not *the* reason. Society had changed in such a way that it marked the beginning of a new era, and the Reform Act is the symbolic account of the ruling class' recognition of this new era. The important role played by cotton workers seems to attest of their prominent engagement in the Industrial Revolution, in the sense that, although at some point they were in opposition with industrialisation and mechanisation, they were also the ones who helped society to move towards modernity. Cotton workers were of every combat, and actively involved in the definition of our modern societies. Cotton industrialists yet also counted among some of the most progressive businessmen:

> Success often brought with it a sense of responsibility and a wider outlook. Sir Robert Peel and John Fielden were not the only manufacturers to become members of Parliament; cotton was well represented in the Commons after 1832. It was these men who campaigned against the worst conditions in the textile factories. It was the elder Peel who sponsored the first bill to improve the treatment of pauper apprentices in cotton mills and who, later, in conjunction with Robert Owen, himself a manufacturer from New Lanark, steered the first Act to better the treatment of free children.[59]

Their personal convictions coupled with the realities of the mills confronted them with very concrete problems. The significant proportion of women and children in cotton mills made those social questions even more central in the mills, their outstanding number proportionally intensified the necessity of regulations and improvements. Thus there were several associated aspects of the cotton industry that explain its deep implication in social combats. Firstly the numerical aspect and its prominent place in terms of scale of production and therefore of producers, i.e. workers. Secondly, a social aspect with the particularly significant proportion of women and children, and finally the involvement of its members, workers as well as manufacturers, in the fight for social and economic reform.

3- Social Advances in Cotton Mills: Child Labour

Child labour was commonplace in cotton mills, probably more than in any other fields of industry. Henry Houldsworth, a mill owner from Glasgow, witnessed that there were "10.000 persons employed in the factories of the district, excluding New Lanark."[60] According to the informations given to the Peel Committee – held in 1819 to gather informations about child labour – within the 41 mills of the region, more than half the workers were children. While some tasks required men's strength, most of the jobs comprised machinery maintenance and cleaning, tasks that could be accomplished by women and young children. In some cases, very young children were even the only ones able to complete the task: when it came to the maintenance of a machine, only the smallest children could reach the narrowest parts. Those children were usually asked to work as hard as any adult worker, for much lower wages. Thus, during the second half of the 18th century, children could spend more than fourteen hours a day inside the mill, largely completing unskilled work, which was the most boring, repetitive

59 Marshall 95.

60 New Lanark Website, "Children and Cotton." 8 Aug. 2015. <http://www.newlanark.org/learningzone/clitp-pauperapprentices.php>.

and tiring. All in all, their welfare actually largely depended on the benevolence of their mill owner. Some of these children worked in order to complete the income of the families, but a large part of them were pauper apprentices. These young children usually came from the nearest city, more often than not they were orphans or vagabonds. Mill-owners offered them a job, a place to live, as well as some food and clothing, in exchange of their signature of an apprenticeship contract, which could engage them to work for the mill for up to ten years. Here again, accounts vary regarding the treatment of these children:

> We slept in long rooms, the girls on one side of the house and the boys on the other. There were a good many beds in each room and we had clean sheets oftener than once a month, our blankets and our rugs were perfectly clean, the rooms were whitewashed once a year and were aired every day, we had clean shirts every Sunday, and new clothes when we wanted them.
>
> Thomas Priestly, 1806.
>
> We went to our work at 6 in the morning without anything at all to eat or fire to warm us. For about a year after I went we never stopped for breakfast. The breakfast was brought to the mill in tin cans on large trays. It was milk, porridge and oat cake. They brought them into the room and everyone took a tin and ate his breakfast as he could catch it, working away all the while. We stopt at 12 o'clock and had an hour for dinner, but had the cleaning to do during that time. It took some of us half an hour to clean and oil the machinery. We went to dinner which was potato-pie five days in the week.
>
> Apprentice, Cressbrook Mill.[61]

Mill-owners such as Robert Owen, Robert Peel, and Lord Shaftesbury, fought in favour of the improvement of the social protection of labouring children. In 1802, the Health and Moral of Apprentices Act limited work to 12 hours a day for apprentices in cotton mills. In 1819, further to the Peel Committee, the employment of children under 9 years of age was forbidden, and children under 16 were not to work more than twelve hours a day. These regulations were only to be applied to cotton mills. In 1833, a year after the Great Reform Act was passed, Shaftesbury's Factory Act extended the ban on the employment of children under 9 to all textile mills, and reduced the working hours to 9 per day for children under 12. Moreover, children under 18 would not work more than 12 hours a day. This Factory Act was a turning point in the process of legislating on child labour; although there had been laws in the past that intended to regulate child labour, mill owners were free to or not to respect them, as nothing was set to enforce those regulations. In 1833, Factory Inspectors were appointed to enforce the new law. Cotton mills enjoyed a particular regulation regarding child labour, and

61 New Lanark Website, “Children and Cotton.” 8 Aug. 2015. <http://www.newlanark.org/learningzone/clitp-pauperapprentices.php>.

some of the most significant defenders of children's rights were cotton mill owners. Although regulation appeared step by step, children benefited from the revolutionary trend of the early 1830's, which initiated their actual, day-to-day protection.

C- Cotton Weavers and Slaves: the Lancashire Cotton Famine

One of the things that links cotton weaving and slavery together probably is the supply of raw cotton. There was a rapid growth in the quantity of cotton wool imported, particularly after 1785.[62] Indeed, cotton planters were able to adjust their production and to increase it, unlike the supply of flax or wool. The traditional source of cotton until the 1780's was the British West Indies, but the quality was not sufficient. Meanwhile, in February 1788, a cotton gin was introduced in the Bahamas by Joseph Eve. Then, in 1792, it was introduced in Southern United States by Eli Whitney. Facing the increasing demand for cotton goods on the home market, cotton imports from the British West Indies grew of about fifty percent between 1786 and 1790. Yet, "the British West Indies was not capable of supplying the fast-growing needs of the industry,"[63] which is the reason why England turned towards the United States to provide them with raw cotton.

The way the industrial system boomed during the second half of the 18th century and the first half of the 19th century was accompanied by fundamental social changes that came just as fast as the economic development. The rise of liberalism that came with it brought new problems - which had so far been prevented by protectionist measures on imports – and workers, who on the one hand benefited from the context through the extension of their rights, also were on the front raw each time something went wrong. The Lancashire cotton famine is a crying example of the paradox of liberalism. This famine once again allows us to draw a link between slavery and industry - in a different way though – for it was directly due to the American Civil War, which was the dramatic ending of the debate about the abolition of slavery. This part aims to highlight the way the industrial system was dangerous, and non-viable on the long run, through a study of the fatal dependence of the British cotton industry on American cotton and therefore on slavery, and its consequences in terms of economic and social

62 See appendix 5 on the supply of cotton wool.
63 Edwards 79.

hardships. It is also a fairly interesting overview of the evolution of the protection of workers.

The tensions in Lancashire reached a climax during the American Civil War. English weavers felt the effects of the conflict, and were victims of it during the so-called Lancashire Cotton Famine. Was it the abolition of slavery as such that damaged cotton manufacturing? Was there really a fundamental economic difference? Or any other reason for the distress caused by the abolition in America? The following part will try to answer those questions.

1- Lancashire: a Casualty of the American Civil War

a- Prosperity Never Lasts

In the middle of the 19th century, a depression touched the textile industry of the North-West of England. It was caused by an ongoing overproduction in a time when world markets were contracting. This coincided with the interruption of baled cotton imports from the United States due to the American Civil War. Because eighty percent of the raw cotton used in British factories came from the United States, this ended up in what is known as the Lancashire cotton famine, which lasted from 1861 to 1865.

In the years 1859-1860, there had been an economic boom in cotton factories. Machinery had reached such a degree of efficiency that the commercial balance was turned upside down: while hand weavers had been struggling with just-in-time productions, not being able to answer the constantly growing demand for cotton cloth, their power strengthened and intensified with the development of automatic production. They could then anticipate the demand, and offer a greater variety of cloth. At the same time, in America, the production of raw cotton was higher than ever, and the cotton disposals were almost unlimited. Thus, the over-production of woven cotton, together with the over-abundance of raw cotton in warehouses and dockyards, made prices collapse, and the demand for raw cotton fell while its price increased. By 1861 Lancashire, where prosperity and development had attracted a large amount of workers from London, had become an impoverished region, the only thing that could be found was unemployment. Local relief committees were set up, in order to bring some economic relief to the region.

b- Civil War in America

Slavery has been part of the American society from its earliest times, therefore, when it came to contemplate its abolition, it was the whole American social order that was being disrupted. The United States usually are described as the country of diversity, made of two antagonist parts, which followed two different patterns of development. The North was an urban region, in which society was organised around industry, while the South remained deeply rural, with an economy based upon the plantation system, which relied upon the work of the slave population. It is actually as if the Old World and the New – the latter being exploited and enslaved by the first – were united on the same territory: the United States clustered 19th century ideological debates. From that, enjoying the advantage of historical perspective, it comes with no surprise that those two different systems would not be able to share the same land forever. Thus, after an escalation of tension and violence since the beginning of the 19th century, the election of Abraham Lincoln as President of the United States was the last straw that broke the camel's back. When Lincoln was elected on November 6, 1860, several Southern states were threatening to leave the Union, regarding his favourable position towards the abolition of slavery. Before his inauguration on March 4, 1861, seven Southern States had seceded from the Union, all of them with an economy based upon cotton plantation. Despite Lincoln's objection to a civil war, compromises failed, and the eleven seceding states formed the Confederate States of America. Also known as King Cotton, the new Confederacy thought that European industrial powers which were highly dependent on American cotton– England being the most important one – would take part in the conflict in favour of the South. But Europe did not get involved in the war, and the Civil War began on April 12, 1861, when Confederate troops fired on Fort Sumter.

c- Union Blockade

The blockade was issued by Abraham Lincoln under the Proclamation of Blockade Against Southern Ports on April 19, 1861. The aim was to weaken the Confederacy by impeding any naval exchange, imports or exports. Under Winfield Scott's Anaconda Plan[64], naval communication became almost impossible, preventing the confederacy from importing

64 See: Appendix 8: Map of the Anaconda Plan

food and weapons, but also from exporting goods, hence putting an end to the trade of plantation goods destined to Europe. Southern cotton exports were thus dramatically reduced, which proved damageable to the Confederacy's hard currency. Indeed, cotton exports fell by 95 percent: within the three years prior to the war, ten million bales were being exported; this number dropped below 500.000 under the blockade, this limited quantity passed through by a couple of blockade runners. Across the Atlantic, this sudden, dramatic diminution of raw cotton supplies was disastrous to the textile industry. The workshop of the world was deeply affected, and suffered terrible hardships.

2- Famine in Lancashire

a- Aspects of the Famine

Cotton was Britain's biggest import since 1825, supplying the dominant force of the economy: the cotton industry. At the beginning of the blockade, in 1861, warehouses and dockyards were full with American raw cotton, so that Lancashire could still keep working for about four months without any imports, and the time needed to enforce the blockade provided them with one supplementary month. Thus, the cotton mills of Lancashire could sustain their production for at least five months. When the Civil War broke out, people thought it would not last longer than a few months, and that cotton stocks would be sufficient. But by October 1861, warehouses and dockyards were empty, and the war was far from its ending. Rapidly, mills closed, soon resulting in mass unemployment and poverty. Distress spread quickly, so that by the beginning of the new year, soup kitchens started to open. In October 1862, a year after the true beginning of distress, the Factory Inspectors' Report stated that only 11 percent (40.146) of the workers were employed full-time, 33 percent (134.767) on short-time, and 51 percent (197.721) were fully unemployed.[65] More than half the working population of Lancashire, representing almost 200.000 people, was therefore left unemployed. The policy of the mill owners was not favourable to an improvement of the situation, they rather privileged their economic interests. Thus, although the exhausting 12-hour days could have been divided

65 Historians Group of the Communist Party. “The Lancashire Cotton 'Famine', 1861-1865.” Our History. 6 Jun. 2015. <http://www.amielandmelburn.org.uk/collections/shs/pdf/cotton.pdf>.p5

between at least two workers, or working hours reduced instead of wages cut, only a tenth of the working population kept their jobs. For those who kept working, the already hard tasks became harder with the arrival of Surat cotton to replace the American one. This new cotton came from Egyptian and Indian subsistent farms, and was of a much lower quality, which made it more fragile and more complicated to spin and weave, resulting in heavy fines for workers who did not complete their tasks properly and wasted thread.

b- Relief

Until 1862, no relief committees had been set up, so that workers could only rely on their own savings, or on the Poor Law, which was profoundly despised. At first, the British government brought relief in the form of tokens that were distributed to traders. Two other alternatives were presented to the unemployed masses: they could either emigrate to the United States, filling the need for cotton workers on the New Continent, or joining the US Army, or they might move to Yorkshire and work in the woollen mills. In Blackburn alone, 4000 workers and their families left the city to find relief somewhere else.[66] For those who stayed, they could pretend to poor relief measures, just like any usual pauper or drunkard, which of course created bitterness and resentment. Firstly because no distinction was made between the former cotton workers who had been working hard to earn their livings, and the paupers who did not or could not work.

> We're mixt wi't stondin paupers too,
> Ut wilno work when works t'be 'ad",
> dialect poet, Joseph Ramsbottom.[67]

The second source of resentment came from the fact that non-governmental relief largely came from outside Lancashire, which means that the suffering cotton workers got no support from their factory owners. Resentment created tensions, there were several accounts of riots, for instance in Stalybride, in Dukinfield, and in Ashton in 1863. In response to these riots, government relief would take the form of employment rather than tokens, under the Public Works Act, which set a new construction programme, which was far more welcome. £1.200.000 were allowed to local authorities to finance works of public utility, yet in facts, this

66 Ben Johnson, "Historic UK." 29 Jul. 2015. <http://www.historic-uk.com/HistoryUK/HistoryofEngland/Lancashire-Cotton-Famine/>.

67 Michael Rose. *Lancashire Cotton Famine, 1861-1865.* Spinning the Web. 18 Jul. 2015. <http://www.spinningtheweb.org.uk/a_display.php?irn=10&QueryPage=&lang=>.

mainly benefited paupers.

In 1863, the riots were also a way for those who were still working to express their anger: in some mills, "wages were so low that it was better to be on relief than employed."[68] Thus, by December 1862, half a million workers benefited from relief. Still, manufacturers were reluctant in providing this relief, as, for instance, only one cotton area – Whitworth – imposed "for employers not to collect or ask for cottage rents during the distress."[69] Thus, workers had to endure the burden of distress, still they were expected to be grateful for the little help they received, which was given to them almost as if it was undeserved. The committees that tried to provide relief called for both a local and national support, which shows that the nation had its own implication in the American Civil War, highlighting the fact that these two countries were economically interdependent, and that slavery was at the heart of the problem once again.

c- Workers' Position

According to economic historians such as W. O. Henderson, Eugene Brady and Douglas Farnie[70], the economic situation of Lancashire shows that there would have been a depression, even without the American Civil War, because of the speculation of cotton traders explained above. There seem to be evidence of traders who refused to buy raw cotton although it was available, because prices were too low, not interesting enough for business. Nevertheless, the official reason for distress was the Civil War, and the combat of the Northern part of the United States against slavery. European powers did not take part in the conflict to defend their economy, because it would have been a support to slavery. In the case of Britain, this had been absolutely impossible since the abolition of slavery in 1833, but it was also economically uninteresting, as Marx highlights it: "it would have been cheaper to feed the whole of the cotton districts for three years at state expense, than to wage war onto the United States on their behalf for one year."[71] What is interesting in this conflict is the position adopted by the workers themselves. On December 31, 1862, they met in Manchester, and took the decision to

68 Historians Group of the Communist Party. "The Lancashire Cotton 'Famine', 1861-1865." Our History. 6 Jun. 2015. <http://www.amielandmelburn.org.uk/collections/shs/pdf/cotton.pdf>. p3

69 John Watts. "The Facts of the Cotton Famine." (Manchester: Alexander Ireland and Co Printers, 1866) p 52.

70 Quoted in Michael Rose, "Lancashire Cotton Famine, 1861-1865," *in* Spinning the Web <http://www.spinningtheweb.org.uk/a_display.php?irn=10&QueryPage=&lang=>.

71 Marx. The Civil War, 130

side with Lincoln, in spite of the misery Lincoln's naval blockade caused them. In response to their support, Lincoln wrote to them, acknowledging their sacrifice in a letter sent in 1863. Relief ships followed this letter, filled by grateful Americans of necessary goods, to enforce brotherhood between Lancashire and the Union.[72] This engagement of the working population in favour of the abolition of slavery, at the expense of their jobs and lives, can be seen as the victory of human consciousness over the capitalist system, and was vastly praised by Marx in his essay on the American Civil War:

> The obstinacy with which the working class keeps silent, or breaks its silence only to raise its voice against intervention and for the United States is admirable. This is a new, brilliant proof of the indestructible excellence of the English popular masses. [...] [It was not the wisdom of the ruling class, said Marx, but the heroic resistance of the working class of England to their criminal folly that] saved the rest of Europe from plunging headlong into an infamous crusade for the perpetuation and prolongation of slavery on the other side of the Atlantic.[73]

Indeed, it seems that cotton workers had perfectly understood the interests at stake in this episode, thus expressing their anger and despair at the intention of cotton industrialists, and realistically blamed the inappropriate use and display of employment and relief.

3- Aftermath of the Lancashire Cotton Famine

With the end of the American Civil War, on June 2, 1865, the naval blockade was suppressed and cotton imports were restored. However, Lancashire would never be the same afterwards. The first reason for that was the significant waves of migrations that had been initiated by the famine. Skilled and unskilled workers had deserted the region to find employment elsewhere, therefore, when work was available again, there were not enough workers to complete the tasks. The second aspect of the famine was that, in order to survive, some people had turned towards new activities, thus diversifying the economy of the region.

> "To set against these problems, after the 'Hungry Forties' and the unemployment of the 'Cotton Famine' in the early 1860s, the Lancashire 'cotton towns' became relatively prosperous places. Falling food prices, and high family incomes where several people were earning, increased families' spending power, producing the world's first working-class consumer society. From the 1870s and 1880s, growing numbers of people could afford to enjoy

72 Jason Rodriguez. "Lincoln Oscars Manchester Cotton." The Guardian <http://www.theguardian.com/theguardian/from-the-archive-blog/2013/feb/04/lincoln-oscars-manchester-cotton-abraham>.

73 Karl Marx, in "The Lancashire Cotton 'Famine', 1861-1865." Our History. 6 Jun. 2015. <http://www.amielandmelburn.org.uk/collections/shs/pdf/cotton.pdf>. pp14-17

> Blackpool, pay to watch football matches, go to the music-hall, buy sheet music and even pianos, save through the year by shopping at the Co-op, and eat convenience foods as part of a varied diet."[74]

It seems that, just as the social climate had reached its peak of tensions and thus resulted in reform in the 1830's, the Lancashire cotton famine was the expression of the dangerous fragility of the liberal system. The situation in which the British cotton region had put itself in the middle of the 19th century entirely depended of the production of American cotton. The region was completely devoted to the cotton industry, and entirely relied upon American cotton imports, from one single origin. This system was perfectly profitable until one of its actors went wrong, and disturbed the whole machine. From that moment on, after having suffered great hardships, those who stayed did not reproduce the same scheme, and turned towards a diversification of the economy, which was very successful. The region became quite rich, with a rather high standard of living that allowed a consumer society to develop, becoming a prominent home market for British goods. Thus, the cotton industry has always been a pioneering one in Britain; it was the source of tremendous prosperity and wealth, but when its failures started to emerge, it invented a new system, stronger and more efficient. Hence, while the 1830's had improved people's lives as workers and citizens, the cotton famine brought forward the consideration of unemployment in a new light, different from the paupers. The production of cotton threads and cloths in Britain had always been at the forefront of progress.

74 BBC History: Factory Work in Victorian Lancashire <http://www.bbc.co.uk/legacies/work/england/lancashire/article_7.shtml>.

Conclusion

Cotton manufacturing was the reflection of the British industrial economy all over the 19th century, until its ultimate fall in 1914. British cotton conquered the world, and became its primary workshop. It employed a large quantity of workers, changed the traditional pattern of production, and ways of life overall. Producing and wearing cotton cloth became a sign of modernity, and also initiated the concept of globalisation: for the first time, a country managed to master a material that could not naturally be found on its territory. It is the transformation of this very material that was at the origin of such a success, and transformation was made possible by a series of improvements and evolutions of the economy and the national organisation and distribution of labour. Improvements did not come spontaneously though, they were the result of the complex process of industrialisation, which touched just about every field of society, politics and economy. Technically, mechanisation changed the way man perceived the world and interacted with it. The shift from muscles to machines resulted in what Marx called the "annihilation of space by time." The production pace grew exponentially, the limits of the known world were stretched, and became increasingly accessible. Thanks to these developments, bigger trade missions could be set, and economy slowly slipped towards industrial capitalism, in which capital and wealth became the supreme interest, to the detriment of those who had none, namely the workers.

This new apprehension of the world was accompanied by a redistribution of population, and a redefinition of labour organisation. One of the strategies to encourage production growth was to group producers – skilled and unskilled workers – into large workshops, which soon became factories. To work in these new workshops, people coming from different regions gathered around the factory, to live in cottages usually provided by the factory owner himself. The working conditions and traditions were also disrupted; the succession of different tasks no longer gave its tempo to a worker's day, the organisation of the factory would rather have several groups of workers, each of these groups completing a specific, unique task all day long. This impoverished the working conditions, just as the grouping of people in industrial neighbourhoods was detrimental to the average standard of living: sanitation, promiscuity, lack

of comfort were legion in those places. People who experienced this shift, who lived and worked in the industry, became known as the working-class. Indeed, the phenomenon was such that it created a new social class, which means that it actually created a new social order. Modern cities were thus peopled by the new social class, which was being exploited by the ruling class in a double way, called wage labour – or wage slavery – which consists in maintaining a fragile balance between want and need within the working-class population. Workers worked hard all year long to produce consumption goods, which would bring them little money. The whole system lay on this little amount of money: industrialists made it little enough to make it necessary for workers to work long hours, but still, they should have enough to buy the goods they produced. The consumer revolution was indeed another significant change brought forward by the Industrial Revolution.

All these economic and social changes profoundly disrupted the British society, and created social tensions, social "struggle", and the revolutionary atmosphere that resulted from that made the ruling-class fear a popular uprising. However, unlike what happened in France during the Revolution of 1789, very few human casualties were to deplore. As the phenomenon of luddism illustrates it, rage was rather expressed against the machines, those mysterious animals that swallowed their jobs. Cotton workers, who had followed and gone through the process of industrialisation from the very beginning, admittedly attacked manufacturers on a few occasions, but most of the time, their demonstrations were peaceful, and the casualties of the Peterloo Massacre, for example, were only due to an inappropriate reaction of the authorities. Thus, the social revolutions of the 1830's were not brutal, but rather ensued from long debates and actions. Unlike the French Revolution, there was no rupture, Britain simply gradually followed the evolution of its time. The international context, especially in times of conflict, seems to have triggered social evolution and progress, by highlighting the defaults and weaknesses of the system. The strength of the British nation during the 19th century was to manage to go though crises stoically and to come out of it stronger. This was the case during the French wars, but the ultimate crisis treated in this paper, the Lancashire Famine, perfectly illustrates this. People knew famine was caused by the combat for the abolition of slavery, thus they decided to suffer the consequences of the American Civil War on their

territory. Their anger was not directed to American abolitionists, whose cause they considered noble – maybe showing their sympathy to slaves -, but rather to the British ruling-class, which did not manage to bring relief to the home situation. From this crisis, progress and consciousness resulted: people realised that it was unwise to have an economy based upon a single activity, which marked the transition towards a diversification of the economy.

Still, in the mean time, generations of workers suffered terrible working and living conditions, which might mean that the industrialisation of both economy and society has always been something in contradiction with nature and the natural order. According to Marx, production and the work it requires is the thing that gives life material meaning, but men also are by nature social animals, which means that they collaborate and are more efficient when sharing resources. As a matter of fact, capitalism replaces this egalitarian collaboration by conflict. Therefore it is not a natural system, but an artificial one. To solve this, Marx wanted to empower the workers, a part of his manifesto great 20th century Communists did not take into account. This is the reason why industrialisation went together with social struggle, and made so many victims over the past centuries, as an unstoppable machine that unrelentingly imposed its law. However, this extremity reached by the industrial society also brought forward some social improvements, such as the extension of the franchise or the abolition of slavery. It is as if the rise of the working class had initiated a time bomb that grew in pressure with each new hardship experienced, and finally turned the trend in its favour. The very nature of this new class, which is to be a mass of workers, became its strength, and finally gave the lower classes enough influence to call for reform and to be heard. The way cotton weavers dared expressing their anger in the 1810's was probably not due to chance, the feeling of being part of something bigger, strong and vigorous, must have been the underlying impulse to it all. In that way, cotton can be seen as the flower of the Industrial Revolution, for it was there at the very beginning, inspired the most revolutionary inventions, pioneered an economic model, and paved the way to social revolutions all over the 19th century.

Appendices

Appendix 1: Chronology

1590: Cotton cloth of native manufacture was brought to London from Benin

1750: Arose a second rate class of merchants, called fustian masters; these resided in the country and employed the neighbouring weavers

1769: Arkwright's water frame officially patented

1770: Hargreave's spinning jenny officially patented

1774: Repeal of a heavy tax on cotton thread and cloth produced in Britain

1776: Independence of the United States of America

1781: Boulton and Watt invented a steam engine combinable with cotton mills

1789: French Revolution

1790: Mr Grimshaw erected a weaving factory moved by a steam engine, improved by Mr Austin of Glasgow in 1798

1800: A building containing 20 looms was built by Mr Monteith

1801: First official population census

1803: Invention of the dressing frame by Thomas Johnson of Bradbury

1806: Factory for steam looms built in Manchester

1807: Abolition of the Triangle Trade both in the USA and Britain

1812: Robert invented the Power Loom

1803-1815: Napoleonic Wars

1816: Spa Fields

1817: March of the Blanketeers in Manchester

1819: Peterloo Massacre in Manchester

1823: At least 10.000 steam looms at work in Great Britain

1824-1825: Boom at the stock exchange, massive investments in industry

1828-1830: New economic crisis

1830: Death of George IV, William IV became King

1831: New election: large Whig majority

1832: The Reform Act is passed

1833: Abolition of slavery and Factory Act

1837: Queen Victoria came to the throne

1861-1865: American Civil War and Lancashire cotton famine

1861: Lincoln's Proclamation of Blockade Against Southern Ports

1862: Relief committees at last set up for victims of the famine

1863: Riots within the weaving population

1865: Naval blockade suppressed and cotton exports restored

Appendix 2: Occupations of the Principles of Cotton Spinning Firms in the Midland Counties (1769-1800)

Table 3. *Occupations of the Principals of Cotton-Spinning Firms established in the Midland Counties, 1769–1800*

	No. of firms	No. of mills
Bleachers and country hosiers	4	12
Other hosiers	15	16
Mercers, drapers	7	9
General merchants	3	4
Lancashire cotton manufacturers	3	7
Silk trade and manufacture	3	5
Other textile manufacturers	4	4
Former managers of cotton mills	2	2
Framesmith	1	1
All textile categories	42	60
Retail trade (other than mercers and drapers)	3	3
Potters	3	3
Lead and iron industry	2	2
Gentry, farmers, miller	4	4
Building trade	2	2
Miscellaneous	2	2
Non-textile occupations	16	16
All categories	58	76
Not classified (Arkwright, Strutt, and partners)	2	15
Occupation unknown	9	9
	69	100

Notes: (1) The occupation given are those of the principal partner, or group of partners.
(2) The analysis includes only those entrepreneurs who originated a cotton-spinning enterprise, and not those who took over an established mill.

Appendix 3: The Number of Firms and Mills established to Spin Cotton by Power, 1769-1800

Table 1. *The Number of Firms and Mills established to Spin Cotton by Power, 1769–1800*

	No. of firms	No. of mills opened by these firms
Nottinghamshire	27	38
Derbyshire	22	36
Staffordshire	10	15
Leicestershire	4	5
Northamptonshire	3	3
Warwickshire	2	2
Lincolnshire	1	1
	69	100

Notes: (1) Firms have only been counted once, if they operated in more than one county. Arkwright and Strutt have been counted as two Derbyshire firms; other firms are listed under the county of origin.
(2) The list includes all water-powered and steam-powered cotton mills known to have existed in the region in the period. Workshops housing hand-operated machines are not included.

Source: Chapman, S.D. *The Transition to the Factory System in the Midlands Cotton Spinning Industry*. Blackwell Publishing Limited: Economic History Review.

Appendix 4: Number of Workers in Hand-Loom Weaving, 1788-1820

TABLE 8

NUMBERS EMPLOYED IN HAND-LOOM WEAVING, 1788–1820 (THOUSANDS) [2]

Year	*Number*	*Year*	*Number*
1788	108	1813	212
1801	164	1814	216
1806	184	1815	220
1807	188	1816	224
1808	192	1817	228
1809	196	1818	232
1810	200	1819	236
1811	204	1820	240
1812	208		

Source: Smelser, Neil J. *Social Change in the British Industrial Revolution, an Application of Theory to the British Cotton Industry.* Chicago: University of Chicago Press, 1959. P 137.

Appendix 5: Imports and Exports of Cotton Goods

Structural Differentiation in Spinning (concluded)

cotton dropped from 53,180,000 lb. in that year to 7,993,000 lb. in 1808 and 13,366,000 lb. in 1809. During the war of 1812, American exports to Great Britain dropped from 38,073,000 lb. in 1811 to 23,461,000 lb. in 1812 and to 9,279,000 lb. in 1813.[1]

TABLE 5
EXPORTS OF COTTON GOODS, 1805–12 [2]

Year	*Cotton Manufactured Goods*	*Twist and Yarn*	*Total Exports*
1805	£8,619,990	£914,475	£9,534,465
1806	9,753,824	736,225	10,489,049
1807	9,708,046	601,719	10,309,765
1808	12,503,918	472,078	12,986,096
1809	18,425,614	1,020,352	19,445,966
1810	17,898,519	1,053,475	18,951,994
1811	11,529,551	483,598	12,013,149
1812	15,723,225	794,465	16,517,690

TABLE 6
CONSUMPTION OF RAW COTTON, 1801–15 [3]

Year	*Lb.*
1801	53,203,433
1802	56,615,120
1803	52,251,231
1804	61,364,158
1805	58,878,163
1806	57,524,416
1807	72,748,363
1808	41,961,115
1809	88,461,177
1810	123,701,826
1811	90,309,668
1812	61,285,024
1813	50,966,000
1814	53,777,802
1815	92,525,951

What was the effect of these extraordinary conditions on the industry? Porter reported that ". . . from the beginning of the century to the return of peace [1815] is marked by a striking sluggish-

[1] G. W. Daniels, "The Cotton Trade at the Close of the Napoleonic War," *Transactions of the Manchester Statistical Society* (1917–18), p. 5.
[2] Daniels, "The Cotton Trade During the Revolutionary and Napoleonic Wars, *op. cit.*, p. 76.
[3] G. R. Porter, *The Progress of the Nation* (London, 1912), p. 296. These figures, calculated by subtracting the quantity of raw cotton exported from that imported, give only the approximate course of production. Daniels, "The Cotton Trade at the Close of the Napoleonic War," *op. cit.*, pp. 18–20.

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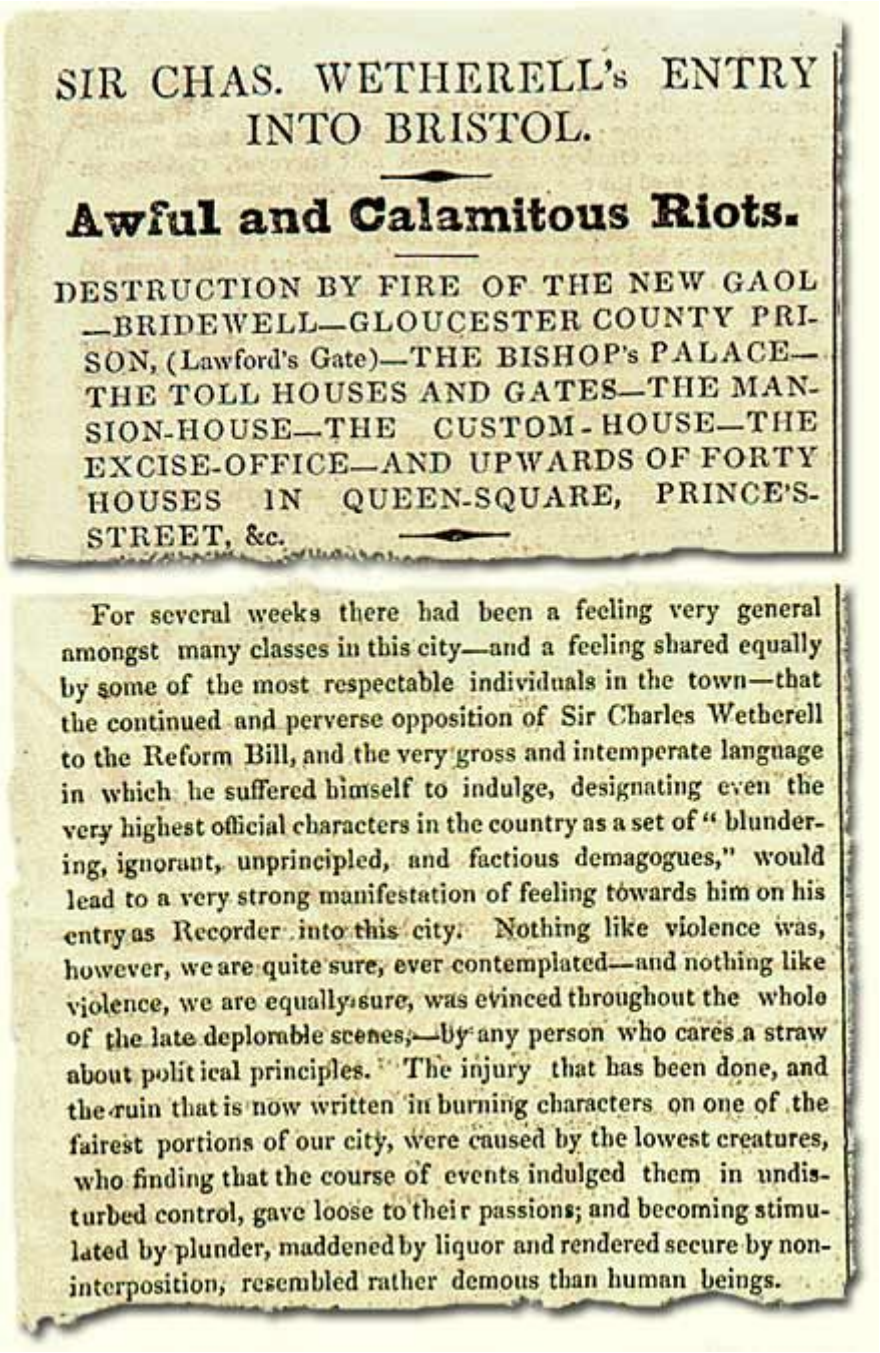
Source: Smelser, Neil J. *Social Change in the British Industrial Revolution, an Application of Theory to the British Cotton Industry.* Chicago: University of Chicago Press, 1959. P 120.

Appendix 6: Map of the County of Lancashire

Source: James Drake, National Archives.
<http://www.nationalarchives.gov.uk/education/politics/g6/source/g6s3b.htm>.

Appendix 7: Riots in Bristol, 1816



SIR CHAS. WETHERELL's ENTRY INTO BRISTOL.

Awful and Calamitous Riots.

DESTRUCTION BY FIRE OF THE NEW GAOL —BRIDEWELL—GLOUCESTER COUNTY PRISON, (Lawford's Gate)—THE BISHOP's PALACE—THE TOLL HOUSES AND GATES—THE MANSION-HOUSE—THE CUSTOM-HOUSE—THE EXCISE-OFFICE—AND UPWARDS OF FORTY HOUSES IN QUEEN-SQUARE, PRINCE'S-STREET, &c.

For several weeks there had been a feeling very general amongst many classes in this city—and a feeling shared equally by some of the most respectable individuals in the town—that the continued and perverse opposition of Sir Charles Wetherell to the Reform Bill, and the very gross and intemperate language in which he suffered himself to indulge, designating even the very highest official characters in the country as a set of "blundering, ignorant, unprincipled, and factious demagogues," would lead to a very strong manifestation of feeling towards him on his entry as Recorder into this city. Nothing like violence was, however, we are quite sure, ever contemplated—and nothing like violence, we are equally sure, was evinced throughout the whole of the late deplorable scenes,—by any person who cares a straw about political principles. The injury that has been done, and the ruin that is now written in burning characters on one of the fairest portions of our city, were caused by the lowest creatures, who finding that the course of events indulged them in undisturbed control, gave loose to their passions; and becoming stimulated by plunder, maddened by liquor and rendered secure by non-interposition, resembled rather demons than human beings.

Source: National Archives online.
<http://www.nationalarchives.gov.uk/education/politics/g6/source/g6s3b.htm>.

Appendix 8: Map of the Anaconda Plan

Source: Anaconda Plan, Wikipedia, 18 Aug. 2015.
<https://en.wikipedia.org/wiki/Anaconda_Plan>.

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