

Social studies iii

Business



A series of revolutions may be well considered to be the precursors to the Industrial Revolution. Optimum conditions were provided by crucial advances and developments in agriculture, technology and transportation for England to become the first industrialised country. Enormous, far-reaching changes characterised this epoch, in which the city life, the social structure and the economy of a country were profoundly transformed and England would never be the same.

Well was it named a Revolution. The Industrial Revolution Causes Certainly, the Industrial Revolution marked a before and after in the manufacture of goods in England. Aylett (1985) states that in the first decades of the eighteenth century, families would make goods in their own homes or cottages. This is why this production process was called domestic system or cottage industry. The most important one was the cloth industry. However, as both the cloth British export and the internal market were increasing at the same pace as the population, the domestic system began to prove insufficient to cater for the burgeoning demand.

The negative aspect of the cottage industry was that it was time-consuming and ineffective. Therefore, there was a need to boost the production, thus a series of devices was developed for large-scale manufacturing.

Notwithstanding the fact that the early inventions were machines to be used in the cloth industry, it would not take long to spread to the rest of the industries, ergo marking the start of the factory system. Moreover, the aforesaid population growth was another major cause of the Industrial Revolution. According to Richards and Hunt (1950), the more people there were, the stronger the need to supply them with manufactured goods.

Montagna (2010) accounts for the key whys and wherefores of such an enlargement of population.

Firstly, there was an increase in life expectancy and in the number of births as well. Furthermore, most of serious diseases were practically eradicated, in addition to a more significant amount of food at people's disposal, hence a healthier life. It is worth mentioning that a circle began, since the population continued to grow together with the industry. The latter would give larger remunerations to the workers than what they could expect to earn in the villages. As a result, people would marry and have children at a younger age.

What is more, the new factories supplied the populace with enhanced garments and houses. Schultz (1968) emphasises that “ important was the significant growth of population in England after 1740 through improved midwifery, medicine, and foundling hospitals. The expanding population reduced the labor shortage, expanded the home markets, and from 1720 to 1760 helped British exports to double in value” (p. 205). An additional reason which influenced the Industrial Revolution to happen was the scientific advances.

As reported by Richards and Hunt (1950), it was thanks to a stable and favourable environment that science could develop. Seeing that, since the seventeenth century, thoughts and actions were no longer under the Church's sway, the English scientific thought and knowledge were able to broaden. By way of illustration, it was in 1662, during the reign of Charles II, that the Royal Society was founded. Evidently, the scientific progress is to be held accountable for the building of machines that led to the revolution. One

of the key inventions was the steam engine. Eichman (2000) explains that it was “ a new, cheap, and efficient source of power” (p.

4), which was first built in 1698 by Thomas Savery, bettered by Thomas Newcomen in 1712, and finally refined and finished by James Watt in 1785 (see Appendix 1, picture 1). A further advantage was that Great Britain was rich in natural resources. As Matthew (2009) points out, England enjoyed plentiful raw materials, such as water, copper, limestone, tin and particularly and more importantly, large deposits of coal and iron. Hooker (1999) remarks that coal is a more convenient substance than wood to melt metals, owing to its easier and more efficacious burning and its low cost. As the British Broadcasting Corporation [BBC] (2010) claims, coal was primarily consumed for house warming, as an ample energy supply for steam engines and mills, to make iron and for gas lighting.

As regards the iron, it was mostly utilised in the building of machinery, factories, bridges, rails, steam engines and some means of transport. Lastly, better communications were a momentous milestone. In the words of Eichman (2000), “ the story of the Industrial Revolution is also the story of a revolution in transportation” (p. 5). The British Isles boasts several rivers and harbours which could be used to carry goods. Enhancement regarding waterways was brought about by British engineers, on the one hand, and an American inventor, on the other.

The former deepened harbours and created canals to connect cities and coal fields with rivers. In addition, they built several bridges and lighthouses; and the steamboat, an American invention, arrived in England in the early 1800s.

Moreover, early British roads were rather rough. An attempt to improve them was the building of toll roads, which, unfortunately, rapidly deteriorated. New developed roadbuilding techniques were soon brought from Scotland, and surfaced roads allowed for more flowing and quicker travelling.

Further, rail systems were also boosted. Not until 1804 was the first steam-powered railway engine created. Such locomotives were employed by both the coal and the iron industries. Nonetheless, it was not till the late 1830's that this means of transport was popularly utilised to carry goods and passengers. The Revolution According to Montagna (2010), the beginning of the textile industry was inside English homes when housewives turned raw material into a finished product. The age of mechanisation, from the 1700s onwards, was to change this completely and also bring about discontent among the common class.

Some of the most outstanding improvements were John Kay's flying-shuttle (see Appendix 1, picture 2), Lewis Paul's roller spinner (see Appendix 1, picture 3) and James Hargreaves' jenny (see Appendix 1, picture 4). The first device was a true improvement as it made it possible to double the work of an only weaver. The roller spinner, on the other hand, was a major step in the search of a more efficient spinning. Montagna (2010) concludes that "Hargreaves' jenny, a device which enabled the operator to simultaneously spin dozens of threads' was a foremost success which was widely implemented" (p. 3).

Not only was the textile industry having crucial improvements in machinery but also developing dissatisfaction among workers. As observed by

Montagna (2010), the working conditions inside these new factories were inhumane, ranging from foul air due to the lack of proper ventilation, to the development of health problems as a consequence of the unhealthy situation. As regards the coal industry, Montagna (2010) notes that “ the working conditions and practices of coal mining in the 18th and 19th centuries were risky, at best, and suicidal at worst” (p. 4). The workplace was naturally hazardous and anyone in contact with these conditions was certainly prone to illness.

As the machinery improvements had not yet occurred, human hands were the ones in charge, being small children and women the most desirable due to their thin complexity, which made their entrance through the tunnels much easier. It was a common scene to see an entire family working inside the mines. Their job consisted in filling baskets with coal and bringing it back to the surface. As stated Montagna (2010), after the implementation of carts on rails as a means of coal transportation from and into the tunnels, its production increased considerably and reached the 15 million pounds by 1829. In contrast with the brutal working conditions in the textile industry, there were several ameliorations inside the mines.

Montagna (2010) maintains that “ improvements (...) came in the form of improved tunnel ventilation, underground and surface transportation, the use of gunpowder to blast away at the coal seams, and tunnel illumination through the use of safety lamps” (p. 4). With respect to the iron industry, it was reported by Richards and Hunt (1950) that Britain was immersed in a crisis due to the lack of development on the iron deposits and the dependence on other countries to provide it.

This was mainly because English forests were becoming extinct and there was no sufficient fuel for the smelting and forging process. The solution was to come with Abraham Darby in the beginning of the eighteenth century and his coke-smelting process, a major shift in the way of treating iron. Richards and Hunt (1950) explain that “ he reduced coal to coke – by which stage it has lost most of its sulphur and become almost pure carbon (...

) and with this he found that good pig-iron could be produced from the rough ore” (p. 21). This process was not made public until Darby’s son did, turning the city of Coalbrookdale one of the most outstanding coal centres in England. Another crucial development was Henry Cort’s puddling process by which the iron produced did not contain carbon and was much more durable, being at the same time as agile as the previous used by Darby. After all this improvements and changes the Iron Age began in Britain.

ConsequencesAs pointed out by Newton (2010), the Industrial Revolution reformed and renovated many aspects of the British society from economy to demography, and by the end of the eighteenth century, the metropolitan centres became known scenery due to the rising population moving closer to factory areas. Technological improvements also developed a breakthrough in capitalism, which led to the replacement of land owners by industrial capitalists as commanders of Britain’s economical power. According to Bond, Gingerich, Purcel, and Maclem (2003), in the social aspect, industrialization brought considerable changes. The implementation of the enclosure movement left thousands of workers unemployed, who were forced to unwillingly move to industrialised areas with their families. As the population

increased, towns grew around factories and entire families survived under extremely unhealthy conditions.

Furthermore, scarcity made it impossible for numerous families to maintain a standard of living, and as a result, most of the members were to work, even small children who were usually sent to textile factories at about the age of eight. This chaotic situation led to the rupture of family bonds and the lack of education for children, who usually became illiterate workers. As regards economy, Richards and Hunt (1950) remark that “ the result (...

) was a vast increase in production and hence in the national wealth” (p. 26).

By the middle nineteenth century England had become an affluent power and was one of the major manufacturing countries in Europe, which was a crucial factor to maintain the level of education and economical prosperity in the whole nation. Added to this was the creation of novelty industrial forces, such as the engineering industry and others as original and unique. It is worth mentioning that these new factories developed more and new tools and materials to aid the neighbouring branches. In the politics field, as claimed by Bond et al.

(2003), a shift in the electoral system was urgent and urged by the increasing power of the working class. This gave birth to the Reform Bill of 1832, which brought a larger quantity of men to vote and enabled the lower classes to take part in some minor decisions. In the middle nineteenth century, the working class gathered and asked for several changes to the Parliamentary system, which were based on a radical document written by the Working Men’s Association. This became known as the Chartism ideology

and demanded, as Bond et al. (2003) state, “ universal male suffrage, annual parliaments, vote by ballot and equal electoral constituencies” (p. 4).

Conclusion It is a foregone conclusion that the Industrial Revolution in England brought radical changes in several aspects of life and enabled the creation of new and sophisticated improvements which are still used in these days. Although there were some adverse circumstances due to it, it is an undoubted fact that such crucial events in history are compulsory to give birth to renewed and prosper eras.