Industrial revolution in england on the malthusian catastrophe

History, Revolution



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The Industrial Revolution is sometimes criticized for the negative impacts it brought to the society. However, it is a very interesting, and an undeniable fact that the revolution actually prevented the Malthusian Catastrophe, which could have affected England severely, through starvation, poverty, and diseases.

This essay evaluates how, and in what ways England had been affected by the Industrial Revolution both negatively and positively. Most importantly, the research will focus on the ways in which the Industrial Revolution may have prevented the Malthusian Catastrophe in England. This essay, however, will not assess the impacts of the Industrial Revolution in any other countries, nor will it assess factors other than the Agricultural Revolution, efficiently produced goods, and the Enclosure Movement.

The most important variables considered will be England's societal and economic conditions before the revolution began, and how they changed after the revolution was progressed. Causes of the Industrial Revolution, the progress it made, and the negative social, or political impacts brought about in England will also be considered to evaluate the research question. Although the three factors played important roles in preventing the Malthusian Catastrophe, which could have brought disastrous impacts to the British society, they also bought negative impacts on the society, providing poor working conditions, and taking rights form the farmers This problems will further be evaluated in the actual essay.

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Industrial Revolution: The Impacts of the Industrial Revolution in England on the Malthusian Catastrophe

Introduction

" In a state therefore of great equality and virtue, where pure and simple manners prevailed, the increase of the human species would evidently be much greater than any increase that has been hitherto known" In 1798, Thomas Robert Malthus published an essay on the principle of population, describing the increasing number of human populations in the 18th century. In his essay, he came out with two postulates: one, food is necessary for human survival, and two, passion between the sexes will not go away. Along with the two postulates, Thomas Malthus undoubtedly declared that ' subsistence limits population level, since subsistence decreases while population increases (Thomas)" and that this would affect the larger socio cultural system in terms of misery, vice, diseases and poverty. Malthus further augmented his idea through carrying capacity theory, noting that " populations as a whole tend to grow exponentially or geometrically, whereas natural resources grow arithmetically if they grow at all. When a population reaches beyond the amount of resources available to its survival, it has reached its carrying capacity. When a population reaches its carrying capacity, a number of limiting factors such as disease or famine, can occur to bring population down and back to naturally acceptable limits.(Strachan)" However, as a result of the Industrial Revolution in the eighteenth century, his prediction towards Europe didn't take place. The first Industrial Revolution, which proceeded throughout the decades, began in Britain for a greater economic specialization, and to bring an economic shift through changes in industry. Before the introduction of the Industrial Revolution, there was a great social inequality among the populace in Britain (Hooker). Land was processed mostly by wealthy people, while lower class people struggled to survive, dying with malnourishment and diseases. Besides, there was a countless land of farms, while Britain possessed no real factories. However, following the introduction of the Industrial Revolution,

new factories were opened, more jobs were created, and wages rose (Kreis). Most importantly, it stopped the Malthusian Catastrophe, which could have brought devastating impacts on Britain. Three factors might have played significant roles in stopping the catastrophe, which are: Efficiently produced goods, Agricultural revolution, and the Enclosure Movement.

Industrial Revolution: Efficiently Produced Goods

The Industrial Revolution, which began in the eighteenth century in Britain, is well acknowledged for the mechanization of production systems. "In earlier centuries, the focus was how to produce more used in the modern has changed everything (Kreis)." Before the introduction of the Industrial Revolution, Britain was a country where men worked from dawn to dark and the laborer lived not in the sun, but in the poverty. In factories, production was merely dependent on laborers; hence it took a large amount of money and time, without productions being made promptly. In addition, many people worked at home in rural areas while a few worked in shops and in towns (Margaret). On the other hand, the industrial bourgeoisie was eager for higher profits, lower costs, and accelerated production, and they sought alternatives to improve the production of goods. In account of these reasons, machines and new inventions were considered outstanding for everyday use. The Industrial Revolution began with new machines. Within the relatively narrow confines of production technology in a number of industries, more numerous, and more radical inventions, including the telephone and assembly line, occurred during the Industrial Revolution than ever before in

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so short a period, and the Industrial Revolution eventually took manufacturing out of the home and workshop (Margaret).

The machines and new inventions that ameliorated the efficiency in producing goods were wide ranging, from a shuttle to an engine. Along with these machines, many factories were able to accelerate production, with lower costs. For instance in 1785, Edmond Cartwright, an English inventor, invented what he called a power loom, after he was inspired by what he saw in a factory, owned by Richard Arkwright (Kreis). The machine, although at first stage, performed poorly with mechanical breakdowns, helped factories improve the speed and quality of weaving after being modified several times. Another example that had presented a great efficiency during the Industrial Revolution in Britain was the Steam Engine, which the first reliable one was developed by James Watt (Patricia). Steam engines were the power being locomotives and ships, which provided a faster source of transportation to bring raw materials to factories and to bring finished products to market. Both these machines were used variedly in different factories and mines in Britain, as they helped to accelerate production, while having to spend less money and time.

It was clear that the new inventions and machines during the Industrial Revolution created an enormous increase in the production of many kinds of goods. The underground movement of coal was speeded up by the utilization of ponies and carts on rail, and the production of coal increased steadily, from two and a half million to more than fifteen million tons by 1829 (Kreis). The flying shuttle, which was invented in 1738, rendered the old process of carrying the weft through the threads of the warp obsolete and enabled the weaver to double output (Patricia). The textile industry marked a great change after the introduction of new inventions, due to transformed methods of making textiles after the introduction of new inventions. Starting from 1831, the British industrial production was doubled, and in 1852, the industrial production doubled again, marking up to 3. 3 per capita (Mokyr). " The evidence is that the discovery of basic principles of machine design, their application to large or small-scale industrial production and the creation of efficient managerial techniques were all independent of the creation of the factory system by nineteenth-century capitalist. The application of machine design to such industries as spinning and weaving in seventeenth and eighteenth centuries often resulted in inventions suited to the circumstances of petty producers: The new machines required little capita and a family sized labor force, and hence were well suited to the perpetuation of Britain industry (Sabel, 1982, p. 39)"

At any rate, the efficiently produced goods played a principal role in stopping the Malthusian Catastrophe. It is to be noted that the Malthusian Catastrophe was said to be a return to subsistence level conditions as a result of economic being eventually outstripped by growth in population. The industrial revolution was the driving force behind social change in Britain, and changed nearly all aspects of life through new inventions and spawned a new economy (Clark). As a result of many new inventions such as the steam engine, locomotive and powered looms, production and transportation of goods radically changed. Furthermore, with new mechanized machinery, factories could be built and the factories used to mass produce goods at a rate that human labor could never achieve. " Machinery replaced some human crafts; coal replaced humans and animals as the source of power to run machines; and the centralized factory system replaced the distributed, home-centered system of production (Rutherford & Ahlgren, 1990, p. 151)." Machinery and inventions invented toward the manufacturing companies clearly replaced the distributed, home centered system of production, and they eventually improved the production as well as economy in Britain. The population in Britain increased, which meant the resources had to be divided among a greater number of people, keeping the standards of living at subsistence levels (Jegede). The rapidly growing population and sustainability of economy worried Thomas Malthus, resulting in him introducing the theory of the Malthusian Catastrophe. However, following the newly invented mechanism, and efficiently produced goods, the Malthusian Catastrophe could have been stopped.

The machines during the industrial Revolution did more during the 1800s to raise people's standard of living than all the actions of legislatures and trade unions. Despite of its economic improvement, and the great increase in production of goods, there're also some negative interpretations toward the new machines invented during the same period of time. Some historians have stressed the negative parts of the machines, as they pointed to the overcrowded and unsanitary housing and the terrible working conditions such as low wage, created by rapid industrialization in the cities (Patricia). Child labor and precarious factory machines were also pointed out. In Britain, nearly half of the work force in the textile industry in 1833 was under the age of 16. " In many cases, the employment of children was quite extensive and the conditions, hours and treatment appalling by twentieth century standards (Tuttle)."

Many interpretations are taken toward the acts of the industrial revolution. While some historians disparage the industrial revolution due to the negative impacts it brought to the society, some historians see it justifiable due to the fact that Britain had achieved a great progress in industry throughout the Industrial Revolution. Machinery that was invented for convenience brings about the transform in the entire humane history. Britain, which once was a rural and agricultural society, changed to an urban and industrial society throughout mechanism. The Industrial Revolution brought many material benefits that still remain established in the modern world. Britain became the central power in world trade after the revolution, as one suggested the next colony of Britain would be the universe. And these facts, allowed Britain stop the Malthusian Catastrophe.

Industrial Revolution: Agricultural Revolution

The Industrial Revolution, which began in the eighteenth century in Britain, also led to the Agricultural Revolution, which saw a massive increase in agricultural productivity and net output. The Great Britain was based on agriculture, and rural lives. Despite the great gains in industry throughout mechanism, agriculture remained the nation's basic occupation, and therefore, enclosure movement, mechanization, four-field crop rotation and selective breeding were used to improve the agriculture (Gay). Agricultural Revolution is another major factor why the Industrial Revolution could bring to an end of the Malthusian Catastrophe. In Britain, before the Industrial Revolution was introduced, food was produced locally, and agriculture could provide for but a few large commercial towns. Somewhere around seventy five percent of the British population made their money farming, but in the winter, they couldn't farm, while in a mean time, farmers had to plow and plant by their own hands. Throughout the 18th century, landowners became increasingly interested in finding new ways of farming, as ways of increasing the food supply had to be found due to the increasing population (Gay). Therefore numerous methods for farming were introduced during the

Industrial Revolution, which eventually led to the Agricultural Revolution. With the start of the Agricultural Revolution, agriculture and farming families changed, and there occurred massive production in agriculture, including crops and grains.

The machines and new techniques that ameliorated the efficiency in farming in agriculture were wide ranging, from breeding to machine. Along with these techniques and machines, many farmers were able to accelerate agricultural production, without having to spend a long time. For instance in 1730, Joseph Foljambe came out with an invention, called the 'Rotherham plough', the first iron plough to have any commercial success (Kennedy). The machine, which was made of iron and mould board and share, was covered with an iron plate that made it lighter to pull and more controllable than the previous ploughs (Alan). The machine, during the Industrial Revolution, was

usually used to turn the soil more effectively with less draft, wear, or strain on the ploughing team, which helped farmers with farming (Kennedy). Another example that provided the efficiency in farming in agriculture was a technique called the three field crop rotation, which Charles Townshend brought to Great Britain after learning it from Flanders (Billet). During the middle Ages, the Great Britain had employed a three year crop rotation, in which different crops are placed in each of two fields. Over the following two centuries, the regular planting of legume in the fields, which were uncultivated gradually increased the fertility, and the planting of legumes helped the farming to increase plant growth in the empty field due to their ability to fix nitrogen in the soil (Harskamp) This technique was used as farmers could grow more livestock because there was more food of higher guality. In addition the manure was used as an excellent fertilizer, as it could produce productive crops. Both these techniques were brought during the Industrial Revolution, and helped the farmers grow more livestock that is in higher quality.

At any rate, the Agricultural Revolution, followed by a wide-ranging of mechanics and techniques invented during the Industrial Revolution, played a principal role in stopping the Malthusian Catastrophe. Many historians note that the Malthusian Catastrophe referred a return to subsistence level conditions as a result of agricultural production being eventually outstripped by growth in population. Thomas Malthus argued that the unprecedented population growth will outpace the agricultural revolution, and this will result in deaths through starvation and hunger (Thomas). However, it did not happen. The industrial revolution was the driving force behind social change in Britain, especially the rural lives. New inventions and new technologies had changed the ways of farming, and helped the farmers grow more livestock. The agricultural productivity of Britain grew significantly in the period of the agricultural revolution, that it was estimated that the productivity of wheat was about nineteen bushels per acre in 1720, and that it had grown to twenty one to twenty two bushels in the middle of the eighteenth century (Turner). Although there still was an increase in population, the introduction of the agricultural revolution, followed by the industrial revolution allowed the population growth to be sustained, and the Malthusian Catastrophe didn't occur.

The machines and techniques during the Industrial Revolution did more during the 1800s to raise people's standard of living in farm lands than all the actions of legislatures and trade unions. The machines and techniques used during the industrial revolution, although played a lot of necessary roles in increasing the agricultural production, have negative interpretations as well. Some historians argue that the agricultural revolution was harmful to some of the farmers as the enclosure movement kicked many traditional farmers off the community owned land they had used, putting them out of work (Snooks). Second, with fewer people needed to grow more food, other farm workers were put out of work. More importantly, the population of Britain rose relatively quickly that the population in 1750 reached the level of 7. 7 million. Poorly managed farms and ranches were also problems that they contributed to pollution through pesticide abuse and emission violations (Snooks). There occurred soil erosion through lack of proper stewardship and animal cruelty through ignorant or willful mistreatment of animals.

Despite of the negative interpretations toward the machinery in factories, the fact that Britain had achieved a great progress in farming, and farming production throughout the Industrial Revolution is not deniable. Machinery and techniques that were invented or brought for convenience brought about the transform in the entire Britain agriculture. Britain, although was changed to an urban and industrial society throughout mechanism, its agriculture still remained the nation's basic occupation, and Britain tried to improve the techniques under the basis of improvements in industrial machines. The Industrial Revolution brought many material benefits that still remain established in the modern world. Undergoing the industrial and agricultural revolution, Britain could be the central power both as a rural, and an urban country. This is important because the Malthusian Catastrophe concerned about the food production being outstripped by the increasing number of population. As the food production increased following the newly introduced techniques and inventions, Britain could avoid such a catastrophe.

Industrial Revolution: The Enclosure Movement

Britain was based on agriculture, and rural lives. "Food was produced locally, and agriculture could provide for but a few large commercial towns. (Industrial)" In addition, Most of the British population made their money through farming. However, land owners became interested in the new way of farming, which would increase the productivity. Before the introduction of the Industrial Revolution, there occurred an Enclosure Movement in the 18th century, which revolutionized the landscape of rural Britain (More). As a

century, which revolutionized the landscape of rural Britain (More). As a result of the enclosure movement, instead of communal exploitation of land, property could be managed privately (More). The community in a typical English farmer society was no longer in charge of land, and " there was no longer a loose and lax policy on the occupation of land (agricultural)." It was after the Industrial Revolution, when the process of enclosure was most apparent. "Numerous acts and bills were signed by the English parliament for separate and different parts of land, and the movement revolutionized economic activity by isolating and organizing different farms (Agricultural)". Also, " it's ability of better rising of crops and animals made the enclosure movement become so popular that Trim hedges and compact fields have, for the most part, replaced the wide commons and the scattered, intermixed strips of the old husbandry once practiced over a large part of Britain (Gay)." " The Enclosure movement was not merely an alteration of agricultural technique, nor was it, on the other hand, a series of spasmodic, cataclysmal upheavals, overwhelming an unfortunate peasantry with each successive convulsion (Gay)."

The Enclosure Movement played countless important roles in stopping the Malthusian Catastrophe. One most important role was that it improved the agricultural production. In order for landlords to make the most efficient use of the land, they had to manage the field as they saw fit. This was, of course, impossible under the three field system (System of agricultural cultivation in Western Europe; included one-third in spring grains, one-third fallow)

(Agricultural), which had dominated English agriculture from the 9th century. Since farmers, small and large, held their property in long strips, they had to follow the same rules of cultivation. The local parish or village determined what ought to be planted. In the end, the open field system of crop rotation was an obstacle to increased agricultural productivity. The solution was to enclose the land, and this meant enclosing entire villages. Landlords, by petition to Parliament, started enclosure, and in the 19th century, more than 900 acts of enclosure were passed (agricultural). The enclosure movement could prevent the Malthusian Catastrophe as it ultimately contributed to an increased agricultural surplus, necessary to feed a population that would double in the 19th century. Another important role it played was the mobility of the workers. The Enclosure Movement, although was indirect, and roundabout, also contributed in improving the British economy. The enclosure movement dramatically changed the English way of life, leading to the enormous economic upheavals that had a profound influence on the modern society. As a result of the enclosure movement, many peasants and working class people were forced to move to the cities, where they could get jobs. Consequently, large numbers of people left rural areas to move into the cities, where they became laborers in the factories during the Industrial Revolution (More). In the cities, they played as factory workers, being engaged in increasing the industrial productions.

In fact, the Malthusian Catastrophe referred a return to subsistence level conditions as a result of agricultural production and economy being outstripped by growth in population (Thomas). Thomas Malthus argued that the unprecedented population growth will outpace the agricultural revolution, and this will result in deaths through starvation and hunger. However, it did not happen. The enclosure movement was the driving force behind social and economic changes in Britain, especially the rural lives. By revolutionizing the landscape, and also by appropriate public land for a private benefit, Britain could make a huge improvement in increasing both the agricultural and economic productivity. The agricultural productivity of Britain grew significantly in the period of the enclosure movement, and had also made Britain, a center of the world economy. Although there still was an increase in population, the introduction of the enclosure movement, followed by the industrial revolution allowed the population growth to be sustained, and the Malthusian Catastrophe didn't occur.

Despite the fact that the enclosure movement played lots of important roles in increasing the agricultural production, and improving the British economy, there're also some negative interpretations toward the movement. Historians often go against the need of introducing the Enclosure Movement for two main reasons; one, it kicked many traditional farmers off from the community owned land they had used, putting them out of work in the cities (Snooks). Second, as the result of the population growth in cities, poor people lived in very small houses in cramped streets, while homes shared toilet facilities, and open sewers (Tuttle). Furthermore, disease was spread through a contaminated water supply. Third, peasants, and lower class people, who lost their land to work on, moved to towns, where all families had to work (Tuttle). Therefore, even children had to work in factories under poor working conditions.

Although there are some negative aspects toward the Enclosure Movement, the fact that Britain had achieved a great progress in agricultural productivity and economy could prevent Britain from the Malthusian Catastrophe. By revolutionizing the landscape, Britain enjoyed the increasing amount of agricultural production that could support the increasing number of population. Moreover, the facts that farmers and low class people moved to the towns made British economy increase. The Industrial Revolution brought many material benefits that still remain established in the modern world. Undergoing the industrial and agricultural revolution, Britain could be the central power both as a rural, and an urban country, which in fact, allowed Britain to prevent the Malthusian Catastrophe.

Conclusion

The Industrial Revolution was a great shift in the eighteenth century in Britain. When Thomas Malthus, a well known economist, came out with the theory, about the agriculture and economics being outstripped by increasing number of population, many people in Britain were worried about the growth rate of population. The introduction of the Malthusian Catastrophe meant the introduction of a tremendous disasters, which include diseases, misery, vice and poverty. The fierce was heightened when the capacity theory, which was concerned with the idea of resources becoming limited, reducing the population's rate of growth, was introduced, resulting in a large populace trying to find a way that could stop the catastrophe. However, the Industrial Revolution opened a new road, not only for Britain, but also for the world, with a concept of introducing new machines, techniques, and a movement to the agricultural based country. Although the Industrial Revolution is often harshly criticized for the negative outputs they brought, such as pollution, poor working conditions, and taking up of rights, it was the Industrial Revolution that could have prevented Britain from the Malthusian Catastrophe. Britain, by going through the Industrial Revolution, changed from a rural and agricultural society, to an urban and industrial society. As agricultural revolution was introduced, the efficiency in farming was ameliorated. Also, it became one of the most powerful countries in the world with its massive increase in agricultural productivity, and economy. Although some historians argue that the whole Industrial Revolution was not justifiable, the Industrial Revolution resulted in efficiently produced goods, agricultural revolution, and the enclosure movement, which eventually prevented Britain from the Malthusian Catastrophe.