

Summary The Beginnings of Industrialization

KEY IDEA *The Industrial Revolution started in Great Britain and soon spread elsewhere.*

In the early 1700s, large landowners in Britain bought much of the land that had been owned by poorer farmers. They introduced new ways of farming. One technique was to use a seed drill. This machine planted seeds in well-spaced rows. Before this, seeds were scattered by hand over the ground. As a result, more seeds sprouted. Another technique was to rotate crops annually. Those who raised livestock used new methods to increase the size of their animals. As a result of these improvements, farm output increased. More food was available, and people enjoyed healthier diets. The population of Britain grew. The agricultural revolution helped produce the Industrial Revolution.

The Industrial Revolution refers to the greatly increased output of machine-made goods that began in Great Britain in the mid-1700s. For several reasons, Britain was the first country to have an economy based on industry. It had 1) coal and water to power machines, 2) iron ore to make machines and tools, 3) rivers to move people and goods, and 4) good harbors for shipping goods to other lands. Britain also had a system of banks that could fund new businesses. Finally, the British government was stable, which gave the country a positive attitude.

The Industrial Revolution began in the textile industry. Several new inventions helped businesses produce cloth and clothing more quickly. Business owners built huge buildings—factories—that housed large machines powered by water. The invention of the steam engine in 1705 brought in a new source of power. The steam engine used fire to heat water and produce steam, which was used to drive the engine. Eventually steam-driven machines were used to run factories.

At the same time, improvements were being made in transportation. An American invented the first steam-driven boat. This allowed people to send goods more quickly over rivers and canals. The British also built better roads that included layers of stone and rock to prevent wagons from being stuck in the mud. Starting in the 1820s, steam fueled a new burst of industrial growth. At that time, a British engineer set up the world's first railroad line. It used a steam driven locomotive. Soon, railroads were being built all over Britain. The railroad boom helped business owners move their goods to market more quickly. The boom in railroad building created thousands of new jobs in several different industries. The railroad had a deep effect on British society. For instance, people who lived in the country moved to cities.

Industrialization Case Study: Manchester

***KEY IDEA** The factory system changed the way people lived and worked, bringing both benefits and problems.*

The change to an industrial economy brought many benefits to British people. They used coal to heat their homes, ate better food, and wore better clothing. Many people also suffered, however. Industrialization caused many changes. One change was a rise in the proportion of people who lived in cities. For centuries, most people in Europe had lived in the country. Now more and more lived in cities. The number of cities with more than 100,000 people doubled between 1800 and 1850. Because they grew quickly, cities were not ideal places to live. People could not find good housing, schools, or police protection. The cities were filthy with garbage, and sickness swept through slum areas. The average life span of a person living in a city was 17 years—compared to 38 years in the countryside.

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Working conditions were harsh as well. The average worker spent 14 hours a day on the job, 6 days a week. Factories were dark, and the powerful machines were dangerous. Many workers were killed or seriously injured in accidents. Some rioted against the poor living and working conditions. Some people improved their lives in the new economy. The middle class—made up of skilled workers, professionals, business people, and wealthy farmers—did well. They enjoyed comfortable lives in pleasant homes. This class began to grow in size, and some people in it grew wealthier than the nobles who had dominated society for many centuries. Still, nobles looked down on the people who gained their wealth from business. They, in turn, looked down on the poor workers. Overall, the Industrial Revolution had many good effects. It increased the amount of goods and services a nation could produce and added to its wealth. It created jobs for workers and over time helped them live better lives. It produced better diets, better housing, and cheaper, better clothing. Many of these benefits were far in the future, however. The English city of Manchester showed how industrialization changed society. Rapid growth made the city crowded and filthy. The factory owners risked their money and worked long hours to make their businesses grow. In return, they enjoyed huge profits and built huge houses. The workers also worked long hours, but had few benefits. Many workers were children, some only six years old. Not until 1819 did the British government put limits on using children as workers. With so much industry in one place, Manchester suffered in another way. Coal smoke and cloth dyes polluted the air and water. Yet, Manchester also created many jobs, a variety of consumer goods, and great wealth.

Industrialization Spreads :KEY IDEA *The industrialization that began in Great Britain spread to other parts of the world.*

Other countries followed the example of Britain and began to change their economies to an industrial base. The United States was one of the first. Like Britain, it had water power, sources of coal and iron, and a ready supply of workers. The United States also benefited from conflict with Britain. During the War of 1812, Britain stopped shipping goods to the United States. As a result, American industries had a chance to supply the goods that Americans wanted.

The switch to an industrial economy began in the United States in the textile industry. In 1789, based on memory and a partial design, a British worker brought the secret of Britain's textile machines to North America. He built a machine to spin thread. In 1813, a group of Massachusetts investors built a complex of factories that made cloth. Just a few years later they built an even larger complex in the town of Lowell. Thousands of workers, mostly young girls, came to these towns to work in the factories.

In the United States, industry grew first in the Northeast. In the last decades of the 1800s, a rapid burst of industrial growth took place that was more widespread. This boom was fueled by large supplies of coal, oil, and iron. Helping, too, was the appearance of a number of new inventions, including the electric light. As in Britain, railroad building was also a big part of this industrial growth. Businesses needed huge sums of money to take on big projects. To raise money, companies sold shares of ownership, called stock. All those who held stock were part owners of the company. This form of organizing a business is called a corporation.

Industrial growth spread to Europe as well. Belgium was the first to adopt British ways. It was rich in iron and coal and had good waterways. It had the resources needed. Germany was politically divided until the late 1800s. As a result, it could not develop a wide industrial economy. However, west-central Germany was rich in coal and did become a leading industrial site. Across Europe, small areas began to change to the new industries. Industrial growth did not occur in France until after 1830. It was helped by the government's construction of a large network of railroads. Some countries—such as Austria-Hungary and Spain—had problems that stopped them from building new industries.

The Industrial Revolution changed the world. Countries that had adopted an industrial economy enjoyed more wealth and power than those that had not. The countries of Europe soon began to take advantage of lands in Africa and Asia. They used these lands as sources of raw materials needed for their factories. They saw the people only as markets for the goods they made. They took control of these lands, a practice called imperialism.

The Industrial Revolution changed life in the countries that industrialized. Problems caused by industrialization led to movements for social reform.

Reforming the Industrial World

KEY IDEA *The Industrial Revolution led to economic, social, and political reforms.*

The new industrial economy led to new ways of thinking about society. Some economists thought that the government should leave business owners alone. Their view was called *laissez-faire*, from a French phrase meaning “let people do as they please.” Adam Smith argued that putting no limits on business or on trade would help a nation’s economy grow the most. He and other economists supported a system called capitalism. In a capitalist economy, people invest their money in businesses to make a profit. Over time, society as a whole would benefit, said Smith and the others. These people warned the government not to make laws trying to protect workers. Such laws would upset the workings of the economy, they said.

Other thinkers challenged these ideas. One group was called the Utilitarians. They thought that an idea or practice was good only as it proved useful. They thought it was unfair that workers should work so hard for such little pay and live in such poor conditions. They thought the government should do away with great differences in wealth among people. Some thinkers went farther and urged that businesses should be owned by society as a whole, not by individuals. Then a few people would not grow wealthy at the expense of many. Instead, all would enjoy the benefits of increased production. This view—called socialism—grew out of a belief in progress and a concern for justice and fairness.

A German thinker named Karl Marx wrote about a radical form of socialism called Marxism. He said that factory owners and workers were bound to oppose one another in the struggle for power. Over time, he said, the capitalist system would destroy itself. The great mass of workers would rebel against the wealthy few. Marx wrote *The Communist Manifesto* in which he described communism, a form of complete socialism in which all production is owned by the people. Private property would not exist. In the early 1900s, these ideas would inspire revolution.

While thinkers discussed these different ideas, workers took action to try to improve their lives. Many formed into unions that tried to bargain with business owners for better pay and better working conditions. When business owners resisted these efforts, the workers went on strike, or refused to work. The struggle to win the right to form unions was long and

hard for workers in Britain and the United States. Still, by the late 1800s, workers in both countries had made some progress.

The British Parliament and reformers in the United States also took steps to try to fix some of the worst features of industrialism. Britain passed laws that put limits on how much women and children could work. Groups in the United States pushed for similar laws.

Another major reform movement of the 1800s was the drive to abolish slavery. The British Parliament took the first step by ending the slave trade in 1807. It abolished slavery completely in 1833. Slavery was finally ended in the United States in 1865, after the Civil War. Spain ended slavery in Puerto Rico in 1873 and in Cuba in 1886. Brazil became the last country to ban slavery, which it did in 1888.

Women were active in these and other reform movements. As they fought for the end of slavery, many women launched an effort to win equal rights for women. The movement for equality began in the United States in 1848. In 1888, women from around the world formed a group dedicated to this cause.

Reformers took on other projects as well. Some pushed for—and won—improved education. Others hoped to improve conditions in prisons.

Review

1. Analyzing Causes and Recognizing Effects

Why did the Industrial Revolution begin in Britain?

Determining Main Ideas

2. What was the impact of the railroad?

3. What reforms were popular in the 1800s?

4. Analyzing Causes and Recognizing Effects

What effects did industrialization have on society?

5. **Developing Historical Perspective** How did industrialization spread in the United States?

Name The Industrial Revolution *continued*