

Topic 7.1

The Industrial Revolution

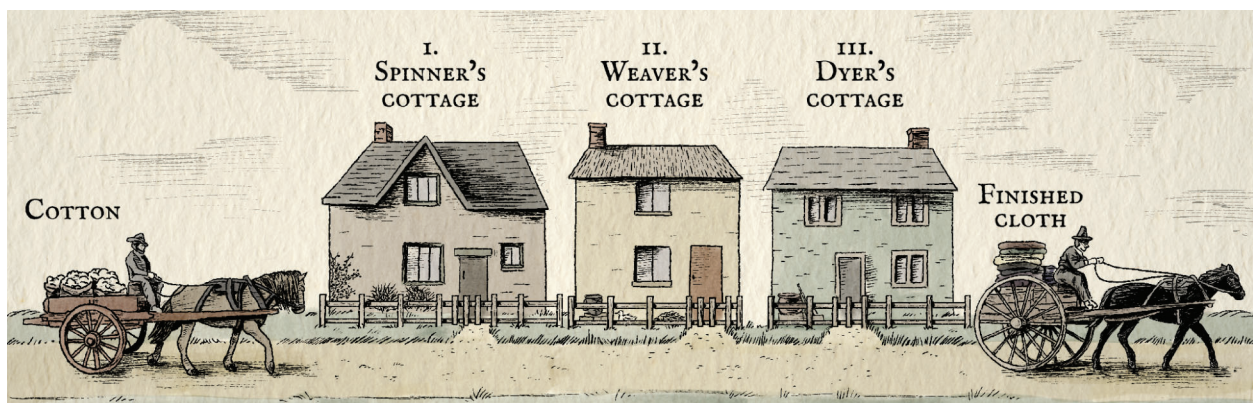
You will learn to:

- Explain how industrialization began as a result of new technologies and how it was facilitated by the availability of natural resources.
- Explain how goods produced by industrialization led to a population increase, allowing workers to seek industrial jobs in large manufacturing cities.
- Explain how the rise of imperialism and colonialism were impacted by industry's need for raw materials and new markets.

Origins of industrialization

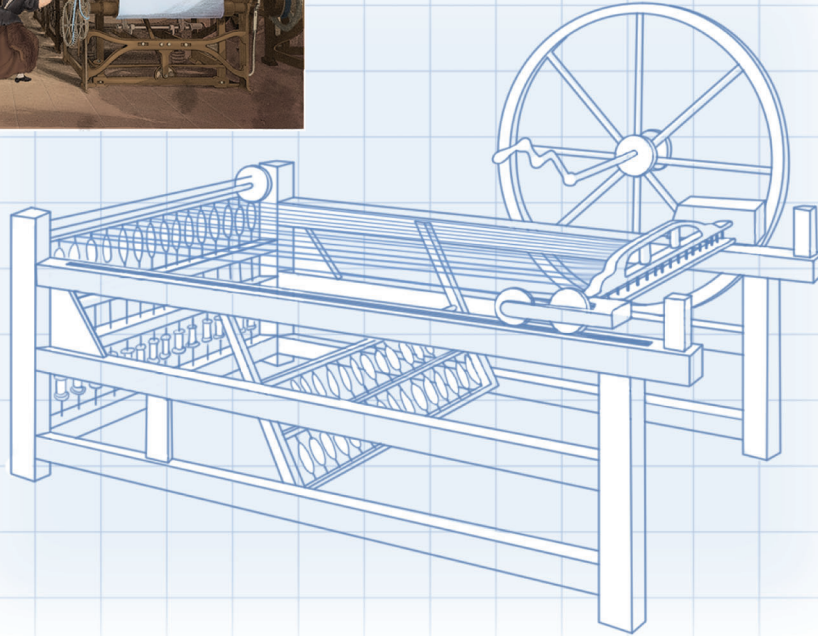
The Industrial Revolution began in England in the late 18th century and quickly spread throughout western Europe and, later, the US. Technological innovations led to the creation of new machines for production, increasing the speed of manufacturing.

The textile (cloth) industry was the first to be industrialized. Prior to the 1700s, many goods were produced through the cottage industry, which was the only method for cloth production in Europe. Cloth manufacturing began with a merchant bringing raw cotton to an individual's home (cottage) to be spun into thread. The thread was then taken to a weaver's house, where it was turned into fabric. Then, the cloth was dyed at a third house.



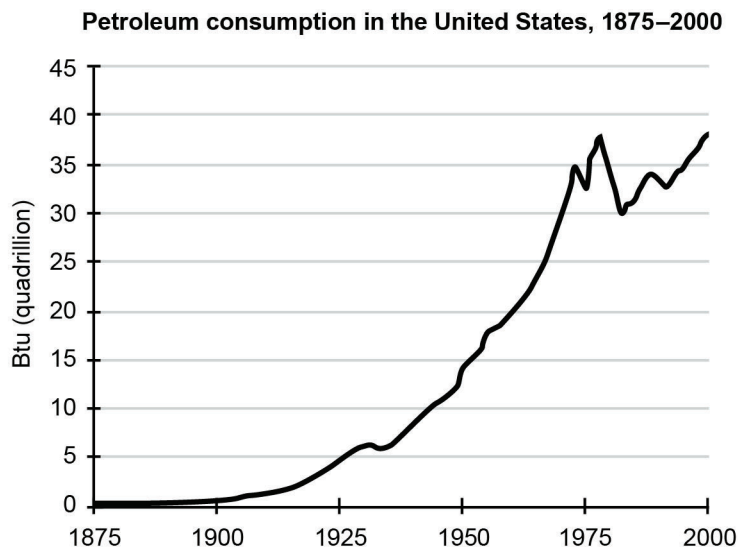
Cottage industry in pre-industrialized Europe

Because this process involved multiple steps performed by people in different locations, fabric manufacturing was expensive and time-consuming. The technological advances of the Industrial Revolution made textile production cheaper because factories could make large amounts of clothing in one place at the same time. The new machinery also accelerated the creation of cloth and other finished goods made from natural resources.



In the 1760s, the spinning jenny became the first industrial machine, ushering in the Industrial Revolution. The machine spun cotton eight times faster than previous spindles, revolutionizing the textile industry.

Initially, new machinery was powered by water, forcing factories to be situated by rivers. Within decades, machinery advanced, and new sources of energy, such as coal and petroleum (oil), were used to power machinery. Advancing technology further increased the need for petroleum, and consumption skyrocketed in the 20th century in the US and other industrialized countries.



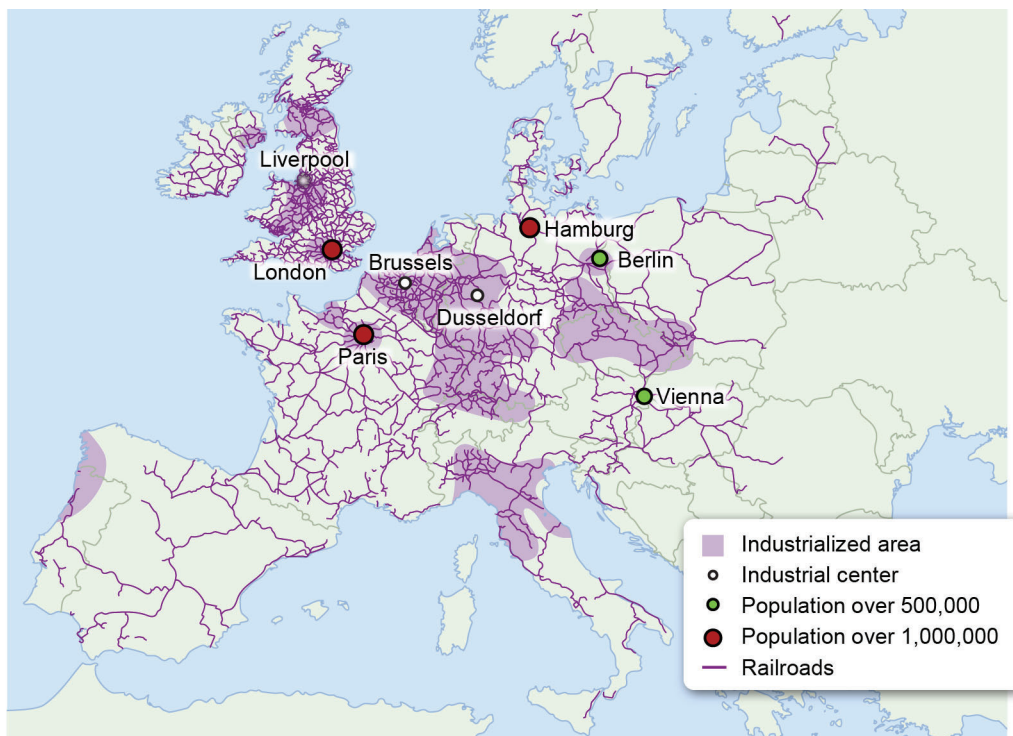
Impacts of industrialization on population growth and social structure

As we learned in Topic 5.4, the Second Agricultural Revolution, which began in England in the early 1700s, caused a population boom due to increased food production. This increase meant that when the Industrial Revolution began, there were more workers available to work in the new factories in growing urban centers.

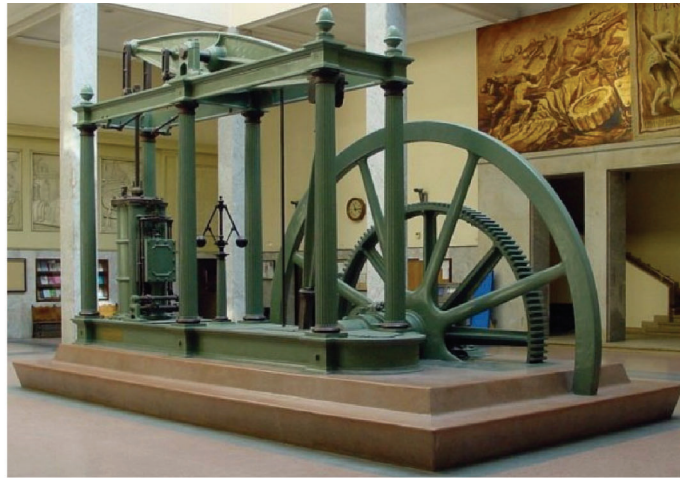
England's population growth, 1650–1900

Year	Population
1650	5,310,000
1700	5,200,000
1750	6,200,000
1800	8,288,000
1850	9,405,000
1900	30,072,000

With the increase in western European manufacturing, factory jobs increased, which led people out of rural areas into cities. This migration caused a rise in the population of urban areas throughout Europe, increasing their population densities. For example, the population of Inner London was roughly 200,000 people in 1600 but grew to almost a million by 1801.



Additionally, the Industrial Revolution caused societal changes. Unlike in previous eras, when wealth depended on landholdings and nobility, industrialization and capitalism allowed people to build wealth through income.



Source: Nicolás Pérez tinyurl.com/4puz4836

Watt double-acting steam engine, 1832

As the use of new technologies such as the steam engine became widespread, Europe's industrial economies encouraged manufacturing businesses. The growth of these businesses changed existing class structures through the development of a new middle class. Although not extremely wealthy, middle-class workers—including factory managers and shop owners—earned more money and enjoyed more freedoms than before.

The role of industrialization in colonialism and imperialism

European industrialization required natural resources such as fossil fuels, rubber, gold, silver, and ivory. Imperialism grew as industrialized powers, such as Britain, Germany, and Russia, looked to Africa to supply the needed resources and wealth. Africa also became a new market for Europeans to sell the finished goods made with African raw materials.



During the Scramble for Africa, Europeans colonized nearly the entire African continent. At the Berlin Conference, European leaders divided Africa into territories that they controlled and established trade rules.



Source: M.arunprasad tinyurl.com/49kmjzha

Rubber trees being tapped

One raw material highly desired by industrialists during this era was rubber. Natural rubber, or latex, is a milky white substance harvested from trees that is used to make items such as tires and waterproof clothing. The demand for rubber grew in the 19th century with the popularity of the bicycle and the increased use of industrial machinery.

This demand led some Europeans to build rubber plantations in previously established colonies. Other European powers, such as Belgium, colonized regions in the African Congo to acquire rubber.

7.1 Vocabulary

Plantation	A large estate, typically located in a tropical or subtropical environment, established for the cultivation and sale of cash crops. Plantations were common in colonies during the Age of Imperialism.
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7.1 Check for Understanding

1. **Which of the following was the first industry impacted by the Industrial Revolution?**
 - A. Oil drilling
 - B. Steel production
 - C. Textile manufacturing
2. **Before the beginning of the Industrial Revolution, textile manufacturing was part of the process of gentrification.**
 - A. True
 - B. False
3. **Which of the following was an outcome of increased manufacturing during the Industrial Revolution?**
 - A. An increase in Europeans immigrating from rural areas to Africa for agricultural work
 - B. An increase in rural-to-urban migration in search of manufacturing jobs
 - C. A decrease in the size of the urban middle class and urban poverty
4. **European nation's fight for raw materials during the Industrial Revolution is known as the Scramble for Africa**
 - A. True
 - B. False