CHAPTER 22

THE EARLY INDUSTRIAL REVOLUTION, 1760-1851

BEFORE YOU BEGIN

It is difficult to exaggerate the importance of the Industrial Revolution. One overall interpretation of history says that the most important event in human history is the Agricultural Revolution (Neolithic Revolution) of approximately 10,000 years ago, which caused the fundamental change from nomadic hunter-gatherer societies to settled agricultural communities. Throughout the next millennia, humans varied in their specific cultures, but the vast majority of humans lived in societies with the government, religion, economy, and social order closely based on agriculture. Beginning in this chapter and permeating the next several chapters, you’ll see several ramifications, listed below, of how the Industrial Revolution fundamentally challenges the basic structure:

- Labor systems change as agricultural peasants leave the farms and move to cities to find jobs in the new factories.
- The population grows at an unprecedented rate, with the greatest percentage of the population concentrating in ever growing cities.
- Governments based on landed aristocracy attempt to confront the reality of modern urban culture.
- Religious and philosophical systems attempt to explain the significance of individual people within the growing complexity of human society.
- The world balance of trade tilted drastically in favor of countries with industrialized economies.
- Industrialized militaries possess new weapons that shift the world balance of power in their favor.
- Humans are less dependent on agriculture and dependent on production of specialized goods or services.

As you read, resist the temptation to think that studying the Industrial Revolution requires memorization of vast amounts of technological inventions. Yes, those inventions and inventors are excellent examples of how modern life emerged, but if you simply concentrate on the details, you’ll miss the more significant overall panorama that makes this chapter so dramatic.

Note that not every region on earth industrialized. Industrialization is not inevitable; in fact this chapter addresses the fascinating question of why the Industrial Revolution did not occur in a previous era or in every place. Finally be sure to note the varying reactions to the Industrial Revolution, as different societies or segments of society favored or objected to the numerous consequences.
LEARNING OBJECTIVES

After reading Chapter 22 and completing this study chapter, you should be able to:

- Explain why the Industrial Revolution began in Great Britain, and how it transformed the face of Europe, America, and then the world.
- Discuss the impact that the Industrial Revolution had on the environments and societies that experienced it.
- Explain how the Industrial Revolution and accompanying change influenced politics and economics both at home and abroad.
- Explain what happened in countries in Africa and Asia where the process of industrialization began later than in the West.

IDENTIFICATIONS

Define each term and explain why it is significant, including any important dates.

**Industrial Revolution**

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**Agricultural Revolution**

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**mass production**

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**Josiah Wedgewood**

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**division of labor**

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**mechanization**

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Richard Arkwright

mule

Crystal Palace

steam engine

James Watt

railroads

electric telegraph

interchangeable parts

laissez-faire

mercantilism

Thomas Malthus and David Ricardo
MULTIPLE-CHOICE QUESTIONS

Read the entire question, including all the possible answers. Then choose the one answer that best fits the question.

1. Why did the Industrial Revolution start in Britain?
   a. Britain had more innovative people than did France or China.
   b. The British put innovations into practice more quickly than other people.
   c. The British were known for their high quality products.
   d. Britain had unlimited resources.
   e. Britain had the largest empire.

2. Which of the following was not one of the five revolutionary innovations that were part of industrialization?
   a. Mass production through the division of labor.
   b. New machines and mechanization.
   c. The invention of the time clock.
   d. A great increase in the supply of iron.
   e. The steam engine and resulting changes.

3. An industrial revolution did not occur in China during the Song Dynasty (960-1279 CE) because the Song Dynasty
   a. did not practice mass production through the division of labor
   b. did not possess or manufacture enough iron
   c. did not possess a strong enough government to coordinate industrial activity
   d. did not possess a steam engine to enable other industries like transportation to develop.
   e. suffered from all the above inadequacies.
4. Which technological invention allowed the British to undersell high-quality handmade Indian cloth?
   a. The mule
   b. The jenny
   c. The cotton mill
   d. The steam engine
   e. The pyrometer

5. In what two ways did Watt’s steam engine differ from previous devices?
   a. It was inexpensive and there was plenty of coal.
   b. It could be used anywhere and there was plenty of coal.
   c. It was inexpensive and could be used anywhere.
   d. It could not be broken by workers and was inexpensive.
   e. It used water to create power, and it was the first to do so.

6. Which of the following diseases was brought about by industrialization?
   a. Tuberculosis
   b. Smallpox
   c. Dysentery
   d. Pneumonia
   e. Rickets

7. Which of the following statements about Europe’s industrialization is true?
   a. In some ways, industrialization relieved pressure on the environment.
   b. Industrialization always made the environment worse.
   c. Britain increased its dependence on wood, hay, and wool.
   d. The British used coke exclusively for all industry, especially for smelting iron and baking bread.
   e. Iron was too valuable to be used for anything except steam engines.

8. Which of the following is not true about women in the Industrial Revolution?
   a. Women generally worked in textiles, just as they had traditionally.
   b. Women were paid from one-third to one-half of the wages paid to men.
   c. Other than motherhood, factory work became the main occupation of women.
   d. Women did work that required less strength than work done by men.
   e. Women often were domestic workers.

9. How much of Ireland’s population died in the potato famine of 1847-1848?
   a. 5 percent
   b. 10 percent
   c. 25 percent
   d. 40 percent
   e. 50 percent
10. How much of Ireland’s population emigrated to England and America due to the potato famine of 1847-1848?
   a. 5 percent
   b. 10 percent
   c. 25 percent
   d. 40 percent
   e. 50 percent

11. Ordinary workers began to benefit from the Industrial Revolution
   a. immediately.
   b. by the early 1800s.
   c. by the 1850s.
   d. eventually by the 1900s.
   e. they never benefited from the Industrial Revolution.

12. Who were the real beneficiaries of the Industrial Revolution?
   a. The middle class
   b. The factory workers
   c. Women
   d. Monarchs
   e. The poor

13. Which of the following was not part of the “cult of domesticity”?
   a. Middle class women became solely responsible for the home.
   b. Middle class women managed the servants.
   c. Middle class women educated the children.
   d. Middle class women ran the family’s social life.
   e. Middle class women ran the family business.

14. What did Malthus and Ricardo recommend to solve the plight of the worker?
   a. Low-cost government loans for home ownership
   b. The adoption of the minimum wage
   c. The adoption of the ten-hour workday.
   d. Universal health care
   e. Sexual abstinence for the workers to prevent pregnancy
15. According to the philosophy of *laissez-faire*, what should a government do about the growing inequality between the rich and poor caused by the Industrial Revolution?
   a. Encourage private charities to look after the poor.
   b. Give limited aid to the poor to ensure their basic survival, but not enough to make them equal to the middle class.
   c. Tax the wealthy few to decrease economic inequality between the rich and poor as much as possible.
   d. Do nothing at all. Government’s only economic responsibility is to protect private property.
   e. Encourage the growth of middle-class capitalists because they are the ones actually creating wealth in an industrial economy.

16. Which of the following was *not* a result of the Industrial Revolution by 1850 C.E.?
   a. Industrialized merchants could manufacture their products at lower costs, driving nonindustrialized competitors out of business.
   b. Industrialized countries could coerce nonindustrialized countries with economic and/or military force.
   c. Women and children worked outside the home in far greater proportions than earlier.
   d. Social problems like unemployment, alcoholism, and abandonment of children increased.
   e. Intellectual creativity suffocated under the growing weight of technological innovation.

**COMPARISON CHARTS**

Using information gathered from the text; fill in the blank areas of each chart with the relevant data pertaining to regions and categories listed. (Not all blank areas will necessarily be equally complete.)
DIVERSITY AND DOMINANCE

After reading “Diversity and Dominance: Adam Smith and the Division of Labor” in your text, please answer the following additional questions.

1. Do you think that pin makers would find Smith’s treatise inspiring? Or do you think that he is writing more for factory owners?

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2. Did most of the technology of the Industrial Revolution benefit workers?

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MAP EXERCISES

On Outline Map 22.1, label in the following:

- London
- Sheffield
- Birmingham
- Liverpool
- Manchester
- Leeds
- Bristol

Trace the railroad routes in the United Kingdom and Europe.
FOCUS QUESTIONS

1. How was the Industrial Revolution related to the Scientific Revolution and Enlightenment (see Chapters 16 and 21)?

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2. How did the Industrial Revolution affect demography (population, life expectancy, etc.)?

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3. What caused the Industrial Revolution to begin where and how it did?

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