

Unit 19

Global Industrialization

Section 1

Unit Materials

Questions To Consider

Question 1.

How did the Industrial Revolution affect flows of labor and capital around the world?

Question 2.

How did industrialization affect the world's demographic patterns such as migration, population growth, and urbanization?

Question 3.

What are the some of the social and environmental consequences of industrialization?

Question 4.

How did the technological changes of the Industrial Revolution promote increasing global integration and also emphasize differences between peoples?

The Big Picture

How is this topic related to Increasing Integration?

During the Industrial Revolution, new methods of transportation, communication, science and technology developed. These methods integrated cities with the surrounding countryside, and they integrated diverse regions to form a global web of interdependence.

How is this topic related to Proliferating Difference?

Because the Industrial Revolution began in Europe, Westerners often thought of themselves as superior to other peoples of the world. Such thinking led Westerners to emphasize the racial and technological differences between themselves and others. In addition, industrialization allowed industrialized countries to exploit non-industrialized countries, which created significant global economic differences.

Unit Purpose

- The consequences of the Industrial Revolution were global. From the very beginning, the needs for natural resources and labor to fuel new industries and technologies connected diverse regions of the world in a global web of interdependence.

- The fact that the Industrial Revolution originated in Europe was once seen as proof of European superiority. Today, historians emphasize the exploitative nature of industrialization, and they argue that control over technologies allowed Europeans to magnify global economic inequalities.
- Industrialization led to the development of a number of global problems, including growing inequality, population increases, reliance on fossil fuels, the destruction of environments, and rapid social changes. These problems have their roots in the ways industrialization developed in the nineteenth century.

Unit Content Overview

This unit explores the broad human consequences of the Industrial Revolution. Between the seventeenth and twentieth centuries, the patterns of human life around the world were transformed by rapidly accelerating changes in agriculture, manufacturing, and power. New agricultural techniques provided more food for a rapidly growing world population. Remarkable machines accelerated the speed with which textiles and other goods were manufactured. The steam engine, the use of coal, and the arrivals of railroads, steamships, and telegraphs shrank the world dramatically, tightening and strengthening connections between once-distant places. All of these innovations drastically altered the relationships between workers and work, cities and countries, products and populaces. Moreover, they dramatically rearranged the world's peoples in new demographic patterns as cities grew up and out, human populations shrank in some places and grew in others, local economies unfolded into regional and then world economies, and people, ideas, machines, and capital migrated from place to place.

In the late nineteenth century, the Industrial Revolution was offered as proof that Europe was the most advanced civilization in world history. The new industries of eighteenth- and nineteenth-century Europe — accompanied by transformed social patterns, mastery of sweeping technological innovations, and increasing global dominance — were assumed to reflect the genius of European peoples, as well as the absence of such genius in other places. These assumptions tended to disguise the ways that industrialization relied on the exploitation of natural resources from the rest of the world — on terms that explicitly favored the West. In the British Empire, for example, such terms gave rise to protectionist policies that favored domestic manufacturers over colonial textile industries — policies that effectively destroyed those industries. In the Belgian Congo, such terms encouraged policies aimed at removing all valuable natural resources at an appalling human cost.

The Industrial Revolution's new industries transformed the world with astonishing speed. The day-to-day stuff of life was completely transformed all over the globe, as human relationships forged in isolated worlds of housework and farming gave way to an interconnected world of consumer and producer, worker and factory, city and country.

Unit References

Michael Adas, *Machines as the Measure of Men: Science, Technology, and Ideologies of Western Dominance* (Ithaca, NY: Cornell University Press, 1991).

Kay Broadbent and Tessa Morris-Suzuki, "Women's Work in the 'Public' and 'Private' Spheres of the Japanese Economy," *Asian Studies Review* 24, no. 2 (June 2000): 161–73.

William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York: W.W. Norton, 1991).

Anson Rabinbach, *The Human Motor: Energy, Fatigue, and the Origins of Modernity* (Berkeley: University of California Press, 1992).

Peter Stearns, "Interpreting the Industrial Revolution," in *Islamic and European Expansion: The Forging of a Global Order*, ed. Michael Adas (Philadelphia: Temple University Press, 1993).

Louise A. Tilly, "Industrialization and Gender Inequality," in *Islamic and European Expansion: The Forging of a Global Order*, ed. Michael Adas (Philadelphia: Temple University Press, 1993).

Oscar Zanetti and Alejandro Garcia, *Sugar and Railroads: A Cuban History* (Chapel Hill: University of North Carolina, 1998).

Global Historical Context

- Time Period: 1750–1900
- Industrialization has knit the world together — not just in having wrought profound technological change, but also in the consequences, both economic and social, of that change. Industrialization allowed for the mechanization of Euro-American societies and the mass production of commodities and finished goods. At the same time, industrialization facilitated the destruction of local environments all over the world with pollution and resource depletion. Industrialization also provided the means by which Europeans, Americans, and the Japanese dominated cultures and societies around the globe through both formal and informal imperialism. As a result, the “progress” of the nineteenth century should be viewed globally, with truly global consequences that still challenge the planet and its peoples.

AP Themes

- Examines interactions in economics and politics by exploring the ways that industrialization depended on global networks of finance, trade, resource extraction, and demand.
- Explores technology, demography, and environment by focusing on the ways that industrialization’s technological innovations affected both population growth and environment.
- Discusses systems of social and gender structure by exploring the nature of social changes wrought by industrialization. One common thread is that industrialization frequently resulted in changing gender roles and ideologies because so many women entered the work force.

Related Units

- Unit 4. Agricultural and Urban Revolutions: What past peoples liked to eat and where they liked to live determined the origins of early communities. This unit examines the earliest farmers and herders in relation to the evolution of cities. We look at changing evidence and ideas about the “cradle of civilization” in light of the social, technological and cultural complexity of newly-discovered cities in Asia, Africa, and the Americas. It is related to Unit 19 because it demonstrates how technological changes led to increasing

complexity in an earlier time, as well as the positive and negative consequences that can go along with such complexity.

- Unit 20. Imperial Designs: Modern imperialism reorganized more than the maps of the world: It imposed ways of knowing and being within a global community. The profound consequences of imperialism are examined in the Wild West, the South African frontier, East Asia, and South America, where politics, culture, industrial capitalism, and the environment have been shaped and re-shaped. This unit is related to Unit 19 because many of the technological innovations of the Industrial Revolution were used by industrialized nations to gain power over non-industrialized areas of the world.
- Unit 24. Globalization and Economics: The forces of globalization have shaped the modern world, including how we define its consequences for global inequality. This unit travels from the transatlantic cables of the British Empire to the information superhighway; it visits the garment workers of Sri Lanka, the farmers of Canada, and the timber industry of the Amazon. This unit quests to understand the changes wrought by globalization — from the role of technology to the impacts of economic and political changes — and how individuals, local communities, and environments have been affected. It is related to Unit 19 because it explores the impact of global technological changes in the twentieth century, most of which originated in the nineteenth century era of industrialization.

Section 2

Video-Related Materials

Video Segment 1: Transforming Sugar Plantations in Cuba

In Latin America, industrialization — in the form of railroad construction and production for overseas markets — often resulted in exploitation both by powerful, imperial nations and by elites within each country who hoped to profit from the fruits of industrialism. This segment uses the expansion of sugar plantations in nineteenth-century Cuba to explore this phenomenon. In the years between 1850 and 1870, foreign investment — which brought in new sugar production techniques and a dramatic expansion of railroad construction — led to remarkable growth in the Cuban economy. Cuban planters, unable to recruit enough local labor, imported tens of thousands of Chinese contract laborers to work the new sugar plantations — thus increasing their own social power. Cuban planters also imported investors and technical experts from Europe and North America to manage the use of new techniques and machines, and to oversee railroad construction. However, the net effect of this practice was to increase Cuban dependency on powerful, industrial countries. Moreover, the very promotion of sugar plantations served to bind the Cuban economy ever more closely to a global economy that often extracted goods and services from less powerful countries for the benefit of the most powerful industrial nations.

Video Segment 2: Liebig's Beef Extract: Europe and Latin America Linked

One of the hallmarks of the Industrial Revolution was how that diverse regions of the world came to be connected through the movements of labor, technologies, capital, and ideas. In many cases, advances or changes in a particular idea or technology in one part of the world led to advances or changes in another. This video segment looks at the development of beef extract in the mid-nineteenth century as an example of this phenomenon. The idea for beef extract was developed in Germany in 1847 in a social context of concern for the deteriorating health of urban industrial workers. The promoters of beef extract — which was alleged to be rich in protein — argued that its consumption would improve the health of European workers. The problem was finding an inexpensive supply of beef. This problem was solved by a German in Uruguay, who learned the extraction process and set up a small local factory. In order to expand production to

make enough beef extract for a global commercial market, however, substantial financial backing had to be found. This support was eventually located in Belgium and then in Britain, where beef extract came to be extensively used by the Royal Navy. This example demonstrates the global and interconnected nature of ideas, technologies, and capital during the Industrial Revolution.

Video Segment 3: The Silk Industry of Japan: Gender and Industrialization

Industrialization resulted in social upheaval and change wherever it occurred. In many cases, the impacts of those changes were especially profound for women. This segment looks at the industrialization of Japan’s silk industry in the wake of the Meiji Restoration of 1868 as a way of exploring the relationship between gender and industrialism. Meiji policies encouraged rapid industrialization, and as a result many factories were built in the silk-producing regions of Japan. These factories attracted large numbers of very young women, who were required to work long hours in dismal conditions, and to live in unsanitary dormitories. Moreover, women were allocated the most menial, monotonous jobs in the factories, while the more specialized jobs were reserved for men. This unequal division of labor was reflected in unequal pay — so even though women came to dominate the workforce of the Japanese silk industry by the end of the nineteenth century, their wages remained much lower than men’s wages well into the twentieth century.

Perspectives on the Past: Globalizing the Industrial Revolution

Was it only the technologies produced by the Industrial Revolution that caused such drastic changes in this period? Historian Jerry Bentley argues that while industrial technologies originated in Europe, the conventional idea that the Industrial Revolution began as a solely European affair — to spread later to other areas of the world — is mistaken. Bentley contends that even from the very earliest days, the natural resources required by new industries made the Industrial Revolution a global affair.

Video Details

Who Is Interviewed

- Jerry H. Bentley
- Ken Ruoff
- Peter Winn

Primary Source Materials Featured in the Video

- Eliza McHatton Ripley, American immigrant to Cuba
- Carl Sandburg, poet
- Baron Justus Von Liebig, scientist

Program Contents

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