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Ways of the World: A Brief Global History with Sources
Second Edition

Chapter 17
Revolutions of Industrialization, 1750–1914
1. What does this copper engraving show?
This engraving shows an early industrial town in Wales. Wood shacks stand amid rubble or debris along a calm river or canal. At the heart of the city are cranes or conveyor belts, larger buildings, and smokestacks. Farther up the hill above the city stands another plant with smokestacks. This is a nineteenth-century copper foundry.

2. What stands out the most? What seems least significant?
Most dominant in this picture are the countless smokestacks, the dark smoke they are spewing into the sky, and the tightly packed city. Hardly noticeable, on the other hand, are the few human figures on a path above the river bank. These might be the workers who live in the town.

3. How did the artist feel about industrialization? What seemed to concern him in particular?
The artist must have been aghast at the way industrial development changed the landscape of Wales. His painting strongly emphasizes the thick soot darkening the skies and the piles of debris threatening to bury the small figures in the front. The artist not only laments the pollution of industrial development but also the way these changes pushed human beings aside, making them seemingly insignificant.
I. Explaining the Industrial Revolution

A. Why Europe?

1. Technology, science, and economics elsewhere: When looking at the pre-industrial world, many would not see an inherent advantage for Europe. China arguably had the world’s most impressive technology, and India and the Islamic world had many noteworthy accomplishments. Scientific and intellectual advances had impressed European travelers to the various Asian empires. These societies were also enjoying strong commercial activity and long-distance trade networks that were noteworthy for both their volume and age. Thus, Europe was not predestined for power.

2. Competition within Europe: The inability to unite Europe in the millennium after the collapse of the Roman Empire was a long-term asset for European growth. With numerous smaller states locked in centuries of competition, a culture of constantly looking for an edge over one’s rivals characterized European politics. This would lead to state support for innovation. In contrast, the Ottoman, Mughal, Safavid, and Chinese empires were much larger and (aside from the Ottoman-Safavid feud over Shi’a and Sunni interpenetrations of Islam) not locked in a cycle of long-term competitive struggle.

3. State-merchant alliances: As these competitive states were fairly young and grew out of the economic collapse of the post-Roman world, they were constantly trying to find new and secure sources of state revenue. Thus, the state frequently developed alliances with merchant groups who promised taxable income streams in return for state support, monopolies, and military aid.
I. Explaining the Industrial Revolution

A. Why Europe?

4. Competition with Asian imports
   
5. The American windfall: silver, sugar, slaves, and more

4. Competition with Asian imports: Once Europeans rounded the southern tip of Africa and established a direct trade connection with India and China, merchants began to import the less-expensive and superior-quality textiles, porcelains, and other manufactured products of the industrious Chinese and Indian economies. As European consumers wanted these cheaper but better-quality goods, the imports threatened domestic production. Europeans, in order to compete, began to experiment with labor- and cost-saving devices, creating a culture of innovation.

5. The American windfall: silver, sugar, slaves, and more: Europeans were fortunate to be close to the newly discovered Americas, where the Great Dying gave them access to silver and a variety of food supplies and timber, as well as new land to develop slave-run sugar plantations. This windfall of bullion, calories, and profits from America provided an essential boost in Europe's economic competition with the Asian economies.
I. Explaining the Industrial Revolution

B. Why Britain?
1. Colonies, commercial society, and political security
2. Practical, not theoretical, science
3. Lucky geography

Although the industrial revolution centered on Britain, it was not planned and it unfolded in a rather spontaneous manner. Many would not have predicted the rainy northern island kingdom to become a world power, but Britain did enjoy a few advantages, most of which only became clear over time. Obviously, possessing a variety of American colonies provided access to the American windfall of food, profits, and calories, but Spain also had a large colonial empire and was very late to industrialize. Importantly, Britain had a commercial society where landowners had pushed small tenant farmers out in favor of enclosed fields for livestock, urban merchants thrived, and aristocrats engaged in money-making entrepreneurial enterprises (unlike the French and Spanish nobility who loathed merchant culture). On top of this, the British were religiously tolerant, welcoming many refugees from the continent, and enjoyed a stable political system and rule of the law as established by legal precedents. In such a political environment, owners of capital were willing to take risks.

2. Practical, not theoretical, science: Unlike their continental colleagues, British scholars engaged in practical observation of the world as opposed to theoretical debates. This meant that their scientific institutions were much more in tune with the needs of engineers.

3. Lucky geography: While suffering from famously gloomy and wet weather, the British did enjoy a favorable geography. Water, in the form of rain, rivers, canals, and seaports, provided a natural transportation infrastructure. Furthermore, plentiful supplies of coal and iron were near each other. Britain’s island location freed it from the political instability and the military campaigns of the French Revolution and Napoleonic era.
### II. The First Industrial Society

#### A. The British Aristocracy

1. Landowners remained wealthy: As only a few thousands families owned half the cultivated land in Britain, this class remained wealthy and exerted power in Parliament. With rapid urbanization, the demand for food remained strong.

2. Overall decline in class power: The British aristocracy declined as a powerful class, however, when new sources of urban wealth from entrepreneurs, industrialists, and bankers began to challenge the old wealth of land. By the end of the nineteenth century, landowners were no longer the main base of power in the country.

3. Turn to the empire: Faced with declining prospects at home, many aristocrats turned to the empire as a career path.
Austria-Hungary: 0
France: 31
Germany: 0
Italy: 0
Russia: 0
Great Britain: 157

*German states that formed a unified Germany in 1871, including Prussia but not Austria.

Railroad Lines (in kilometers)

1830 1850

Snapshot: Measuring the Industrial Revolution
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II. The First Industrial Society

B. The Middle Classes

1. An amorphous group: The term “middle class” includes a wide variety of people. At the upper end were industrialists, bankers, and entrepreneurs who amassed large fortunes and entered the social world of the declining aristocracy. They sought the various markers of social privilege, such as knighthoods and other royal honors, that the landed elite had once monopolized.

2. Liberalism: The common ideology of the middle class was classical liberalism: a belief in small government, education, and the law as guaranteed by constitutions.

3. Samuel Smiles, *Self-Help*: This was one of the most famous examples of British middle-class liberal ideology. The book stressed hard work and self-reliance, arguing that poverty was due to a lack of trying and thrift.

4. Women: paragons of “respectability”: According to the middle-class British ideal, “respectable” women should not work and should concern themselves with the domestic sphere and such new consumer activities as “shopping.” While these women left the labor force in the early nineteenth century, by the end of the century, an increasing number of young middle class women sought work in offices as secretaries. Generally, they expected to work a few years before marrying. In the home, the key sign of middle-class respectability was having at least one servant.

5. The lower middle class: The end of the century also saw a rise in the lower end of the middle class as the number of clerks, salespeople, and teachers grew. These clerical professions did not pay all that well, but they were desk jobs and
thus distinguished the workers from the laboring classes.
II. The First Industrial Society

C. The Laboring Classes

1. 70 percent of Britain: Working in the cities, towns, and villages in factories, mines, and farms, the working classes made up the majority of British society. They suffered the most and gained the least from the process of industrialization.

2. Rapid urbanization: Their lives were dramatically impacted by the process of rapid urbanization. By 1851, in a moment that marked a turning point in world history, the majority of Britons lived in cities. At then end of the century, London had 6 million inhabitants, making it the world’s largest city. Unfortunately, rapid urbanization resulted in poorly planned (if planned at all) cities. Living conditions were cramped and dirty with epidemic diseases taking a terrible toll on the urban poor.

3. New working conditions: In addition to new housing situations, the British working class experienced new and often difficult working conditions. Long hours were nothing new to British workers, but the enclosed factories, which were often dark and cold, were a dramatic contrast to farms and small artisanal workshops of the previous century. Furthermore, the near constant surveillance by management seeking to extract the most labor possible per hour angered many who desired more independence, freedom, and respect.

4. Women and girls in the factory?: In the early nineteenth century, many factory managers preferred women and young girls as laborers because they were viewed as not likely to challenge orders. However, as the industrial workforce grew, male workers pushed women out of the factories or into the least prestigious unskilled jobs. Working-class women generally found work in factories or as domestic servants until marriage, when they left the workforce to raise children.
II. The First Industrial Society

D. Social Protest

1. Trade unions, 1824: Viewed as a serious threat in the first decades of the century, unions did not achieve legal status until 1824 and were still viewed with suspicion, if not outright hostility, by factory and mine owners who feared their nationwide organizing and use of strikes to achieve goals.

2. Robert Owen (1771–1858): An early experimenter in a form of socialism, this wealthy textile manufacturer created a model industrial community in New Lanark, Scotland. He promoted decent and spacious housing, higher wages, and education for all children.

3. Karl Marx’s (1818–1883) “scientific socialism”: This German spent most of his adult life in Britain where he developed his radical critiques of capitalism, history, and revolutionary change. He called upon the revolutionary tradition of the French Revolution and merged it with a “scientific” analysis of history to argue that capitalism was inherently unstable and would collapse in the flames of a worldwide workers’ revolution. He failed to foresee the rise of a large middle class of white-collar workers and the spread of nationalism. Both forces weakened the revolutionary potential of Britain and other industrializing societies. His followers would
form a variety of political parties with the Communists being some of the most radical.
1. What social classes does this poster from 1911 depict? Discuss the roots of this visualization of social structure.

The top of this social pyramid shows a big sack with dollar signs printed on it; below it are two men in suits—bankers or industrialists—and a king. Below them stand clergy from different Christian denominations. Farther below are soldiers ready for combat. One step down are a group of nicely dressed people drinking and eating generously at a large white banquet table. At the very bottom are a large number of men, women, and children in working clothes who are supporting the entire structure. This pyramid structure first emerged as an illustration of European class society on the eve of the French Revolution. Here, the magazine for the Industrial Workers of the World adopted the metaphor and applied it to capitalism rather than the feudal order.

2. According to this illustration, how does capitalism work?

Capitalism supported the rulers—the bankers, industrialists, and remaining nobility. It also relied on the clergy to distract people from issues of class conflict, on the military to forcefully suppress class conflict, on a broadening middle class benefiting from worker exploitation, and finally on workers at the bottom to continue producing the goods and services.

3. How secure does the position of the upper classes seem to be here?

The rulers of this pyramid seem confident; so do the clergy, the military, and the middle class. Workers at the bottom, however, are coming out from under the pyramid, shouting and gesturing upwards, waving red flags; they seem ready to abandon their position. If this were to happen, of course, the whole pyramid would...
topple and bring down those at the top.
II. The First Industrial Society

D. Social Protest

4. Labor Party and 1910–1913 strikes: Many feared this British variant of socialism when it formed a party in the 1890s. Despite the wave of strikes from 1910 to 1913, the Labor Party rejected class struggle in the name of social democracy, running candidates for Parliament and working for reform.

5. British reform (and nationalism), not revolution: British working-class politics were decidedly more moderate than the radical movements on the continent. Reformism and nationalism pulled the rug out from underneath radical revolutionaries.

6. Competition and decline: At the dawn of the twentieth century, Britain found itself in a period of relative economic decline. Thanks to its early industrialization, the country now had a rust belt of aging machinery that fared poorly with more advanced factories in Germany and the United States.
II. The First Industrial Society

E. Europeans in Motion

1. Migration to cities and other continents: Industrialization induced several massive waves of migration. Just over half of the European population migrated to cities in the nineteenth century. Even more impressive was the departure of some 20 percent of the population, 50 to 55 million people, for overseas destinations between 1815 and 1939.

2. Settler colonies: Europeans settled in Australia and New Zealand, overwhelming the local population and creating distant versions of Britain. In Algeria, South Africa, Rhodesia, Kenya, and elsewhere, smaller populations set up settler colonies and instituted sharp racial divisions.

3. “White” Europeans in Latin America: In south and central Europe immigrants from Spain, Portugal, and Italy benefited from being “white” and achieved superior social status to the Indian, mixed, and African populations.
II. The First Industrial Society

E. Europeans in Motion

4. Opportunities and diversity in the United States: The United States of America offered a unique draw to European immigrants as there was the possibility of finding both land and industrial jobs. Thirty million Europeans arrived between 1820 and 1930. While a national myth stressed the notion of a melting pot, the reality was that Protestants from Britain and Germany looked down upon later arriving Catholics and Jews from southern and eastern Europe.

5. Russians and Ukrainians to Siberia: After the emancipation of the serfs in 1861, some 10 million Russians and Ukrainians migrated to Siberia in search of land, freedom, and other opportunities. The tsarist state promoted them as a bulwark against the Chinese Empire.
III. Variations on a Theme: Industrialization in the United States and Russia

A. The United States: Industrialization without Socialism

1. Explosive growth: Thanks to access to resources and an infusion of European capital, the United States saw a rapid process of industrialization. Importantly, the Americans developed self-sustaining investments and soon did not need to rely on foreign investment. By 1914, the United States produced over one-third of the world’s industrial output.

2. Pro-business legislation: Government support was essential to this spectacular growth. Land grants, low taxes, and a tolerance of monopolies allowed massive industrial concerns to generate profits and products.

3. Mass production for a mass market: The Americans pioneered new techniques of mass production, including assembly lines, and methods of mass marketing, such as mail-order catalogs and urban department stores, to create a “culture of consumption.”


5. Difficult working and living conditions: As in Europe, the
industrial working class faced difficult lives with long hours in factories and housing in cramped tenements.
III. Variations on a Theme: Industrialization in the United States and Russia

A. The United States: Industrialization without Socialism

6. Strikes and class conflict but weak political organization: While there were strikes, which, as in 1877, could become violent with state militias and federal troops being called in, and there were tense relations between the classes, American labor failed to organize as a political party. Socialism had few followers in a culture that admired independence and disliked the idea of big government.

7. Conservative unions, racial politics, and high standards of living: Among the key factors for a weak labor movement in the United States were unions that focused on skilled laborers rather than the more radical unskilled workers; racial, ethnic, and religious tensions among the diverse American labor force, which hindered class solidarity; and a standard of living higher than anywhere else in the world. Together, along with a growing white-collar middle class, radical politics found few adherents.

8. Populists and Progressives but few Socialists: Although there were reform movements such as the small farmers of the Populists who rallied against banks, industrialists, and the financial system (as well as both major political parties, claiming
that they were in the pockets of East Coast money) and the Progressives sought to reform working, living, and sanitation conditions to make American life better, socialism in either its moderate or radical form won few supporters.
### III. Variations on a Theme: Industrialization in the United States and Russia

#### B. Russia: Industrialization and Revolution

1. A complete opposite of the United States of America: Russia was the complete opposite of the United States in many ways. It was politically repressive and dominated by the titled nobility who often spoke French better than Russian.

2. State-sponsored change: While in the United States change often came from below, Russia had a history of state-sponsored change and open hostility toward popular movements. Peter the Great’s reforms and the 1861 Emancipation of the serfs after the disastrous Crimean War serve as examples.

3. Rapid industrialization produces social conflicts: Starting in the 1890s, the Russian state used foreign capital to fund an industrialization policy based upon railways and heavy industry. While the gains were impressive, the social dislocation caused by the rise of a new middle class and a new but impoverished proletariat created serious social instability. Rapidly built factories and industrial slums created a culture in conflict and confusion.

4. Small but very radical proletariat: While only 5 percent of the population, the industrial working class lived in difficult conditions. In their often dire circumstances, they became increasingly
radicalized.
III. Variations on a Theme: Industrialization in the United States and Russia

B. Russia: Industrialization and Revolution

5. Russian Social-Democratic Labor Party
   Illegally founded in 1898, this party sought to use Marxism to create profound change in Russia. Some strands of the party were radical revolutionaries.

6. 1905: Revolution, repression, and reluctant reforms
   During a disastrous war with Japan, there was a spontaneous uprising in St. Petersburg. Workers went out on strike and formed councils known as Soviets. The tsar unwillingly responded with repression but also granted limited reforms such as the formation of a parliament known as the Duma. As these measures were only half-hearted and limited, they primarily served to raise and then dash expectations.

7. Growth of revolutionary parties
   The various revolutionary movements grew rapidly between 1905 and 1917 as dissatisfaction with the state of Russia spread throughout society.

8. 1917: Lenin and the Bolsheviks
   During another disastrous war, Russia once again plunged into revolution. By the end of the year, Lenin, leader of the racial Marxist Bolshevik Party, was in power and embarked on a grand revolutionary experiment.
IV. The Industrial Revolution and Latin America in the Nineteenth Century

A. After Independence in Latin America
   1. Turbulent international and domestic politics
   2. Caudillos
   3. Caste War of Yucatán (1847–1901)
IV. The Industrial Revolution and Latin America in the Nineteenth Century

B. Facing the World Economy

1. Steam ships and telegrams: While Latin America did not industrialize, changes to the global transportation and communications system brought Latin America into a closer economic relationship with the industrializing states.

2. Exports to the industrializing world: Latin America exported various metal such as silver from Mexico, tin from Bolivia, and copper from Chile to the north. Other nations produced food crops such as beef from Argentina, coffee from Brazil and Guatemala, and bananas from various Central American states. The Amazon Basin produced rubber, and Peru sent bird guano, used as fertilizer, to the industrial world.


4. Foreign capital investment: Capital investments from the north stimulated growth in railways and mines but also led to foreign control of key sectors of the economy, thus reducing regional sovereignty.
IV. The Industrial Revolution and Latin America in the Nineteenth Century

C. Becoming like Europe?

1. A Eurocentric elite: Latin American elites looked to Europe and desired to emulate Europe in their societies.
2. Urbanization: Economic growth led to rapid urbanization and the creation of new, modern cities such as Buenos Aires.
3. Solicitation of European immigrants: In order to make their population more “white,” Latin American governments encouraged immigration from Europe with a variety of promises to poor Italians and others.
4. Few saw economic benefits from exports: There was little trickle down from the export boom.
5. Growth of unions and strikes provoked repression: As unions grew and engaged in strikes, they were met with brutal repression.
1. Describe the scene in this illustration.
This picture shows women in a rocky campsite next to a derailed locomotive. Men seem to be gathering in the background. Several other women are busy preparing a fire for the camp and seem to keep watch in the distance. The women wear Mexican hats and native blankets and hold rifles.

2. What roles did women play in the Mexican Revolution, according to this magazine cover?
Women were the backbone of revolutionary fighters, providing food, nursing the wounded, washing clothes, and at times also serving in combat.

3. Why did the artist include the derailed locomotive?
The Mexican Revolution pitted poor landless peasants against an authoritarian regime that drove industrial development and railroad infrastructure with utter disregard for the population. The derailed locomotive stands for the derailed regime of Porfirio Díaz.

4. How does this representation conflict with common conceptions about women in Mexico?
We don’t typically imagine Mexican women as politically active and understand them first and foremost as victims of revolutions, not as active agents.
IV. The Industrial Revolution and Latin America in the Nineteenth Century

C. Becoming like Europe?

6. Rural poverty: The vast majority of the population remained poor and in the countryside.

7. Mexican Revolution (1910–1920): This major revolution saw the death of 1 million people, 10 percent of the population, in various violent conflicts among various political factions. While the most radical groups did not seize power, the 1917 constitution marked a radical progressive change for Mexico. Yet, the Mexican Revolution had limited impact outside of Mexico.

8. “Dependent Development” and “Banana Republics”: Latin America's economic growth was not independent but a dependent form of development that relied on exporting raw materials to Europe and the United States and importing manufactured goods and capital. This led to key sectors of the economy being controlled by foreign concerns, such as United Fruit in Central America. Some considered this a new form of colonialism.

9. American intervention: To protect its economic and political interests in the region, the United States intervened with its military in Cuba, Haiti, the Dominican Republic, Nicaragua, and Mexico. It also controlled the Panama Canal and Puerto Rico.
V. Reflections: History and Horse Races

A. Fascinations with “firsts”: Historians and students of history often obsess about the first achievements as they represent breakthroughs in human development.

B. Being first as being better? Yet this can lead to the assumption that being first implies that one is somehow better.

C. Unexpectedness of the Industrial Revolution: World historians stress the unexpected nature of British and European industrialization and thus note that it was not preordained by an alleged European superiority.

D. Perhaps the spread is more important: In the future, historians might not be concerned with who was first to industrialize, but how this form of production spread around the world, similar to the spread of agriculture.
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