

## "S-t-e-a-m-b-o-a-t a-c-o-m-i-n-g."

STEAMBOATS AND RAILROADS WERE CRUCIAL elements in a transportation revolution that enabled industrialists to expand markets by shipping goods cheaply and efficiently. At the same time, these marvels of technology aroused a sense of power and excitement that was an important aspect of the triumph of industrialization. The American novelist Mark Twain captured this sense of excitement in this selection from *Life on the Mississippi*.

### Mark Twain, *Life on the Mississippi*

After all these years I can picture that old time to myself now, just as it was then: the white town [Hannibal, Missouri] drowsing in the sunshine of a summer's morning; the streets empty, or pretty nearly so; one or two clerks sitting in front of the Water street stores, with their splint-bottomed chairs tilted back against the walls, chins on breasts, hats slouched over their faces, asleep; . . . two or three lonely little freight piles scattered about the "levee"; a pile of "skids" on the slope of the stone-paved wharf, and the fragrant town drunkard asleep in the shadow of them; . . . the great Mississippi, the majestic, the magnificent Mississippi, rolling its mile-wide along, shining in the sun; the dense forest away on the other side; the "point" above the town, and the "point" below, bounding the river glimpse and turning it into a sort of sea, and withal a very still and brilliant and lonely one. Presently a film of dark smoke appears above on those remote "points"; instantly a negro drayman, famous for his quick eye and prodigious voice, lifts up to cry, "S-t-e-a-m-b-o-a-t a-c-o-m-i-n-g!" and the scene changes! The town drunkard stirs, the clerks wake up, a furious clatter of drays follows, every house and store pours out a human contribution, and all in a twinkling the dead town is alive and moving. Drays, carts, men, boys, all go hurrying from many quarters to a common center, the wharf. Assembled there, the people fasten their

Source: From *Life on the Mississippi* by Mark Twain. New York, Harper and Brothers, 1911.

this advertisement in a newspaper in Utica, New York: "Wanted: A few sober and industrious families of at least five children each, over the age of eight years, are wanted at the Cotton Factory in Whitestown. Widows with large families would do well to attend this notice." When a decline in rural births threatened to dry up this labor pool in the 1870s and 1840s, European immigrants, especially poor and unskilled Irish, English, Scots, and Welsh, appeared in large numbers to replace American women and children in the factories.

Women, children, and immigrants had one thing in common as employees: they were largely unskilled laborers. Unskilled labor pushed American industrialization into a capital-intensive pattern. Factory owners invested heavily in machines that could produce in quantity at the hands of untrained workers. In Britain, the pace of mechanization was

eyes upon the coming boat as upon a wonder they are seeing for the first time. And the boat is rather a handsome sight, too. She is long and sharp and trim and pretty; she has two tall, fancy-topped chimneys, with a gilded device of some kind swung between them; a fanciful pilot-house, all glass and "ginger bread," perched on top of the "texas" deck behind them; the paddle-boxes are gorgeous with a picture or with gilded rays above the boat's name; the boiler deck, the hurricane deck, and the texas deck are fenced and ornamented with clean white railings; there is a flag gallantly flying from the jack-staff; the furnace doors are open and the fires glaring bravely; the upper decks are black with passengers; the captain stands by the big bell, calm, imposing, the envy of all; great volumes of the blackest smoke are rolling and tumbling out of the chimneys—a husbanded grandeur created with a bit of pitch pine just before arriving at a town; the crew are grouped on the forecabin; the broad stage is run far out over the port bow, and an envied deck-hand stands picturesquely on the end of it with a coil of rope in his hand; the pent steam is screaming through the gauge-cocks; the captain lifts his hand, a bell rings, the wheels stop; then they turn back, churning the water to foam, and the steam is at rest. Then such a scramble as there is to get aboard, and to get ashore, and to take in freight and discharge freight, all at one and the same time; and such a yelling and cursing as the mates facilitate it all with! Ten minutes later the steamer is under way again, with no flag on the jack-staff and no black smoke issuing from the chimneys. After ten more minutes the town is dead again, and the town drunkard asleep by the skids once more.

**Q** In what ways does Twain's description illustrate the impact of the transportation revolution on daily life in the United States?

never as rapid because Britain's supply of skilled artisans made it more profitable to pursue a labor-intensive economy.

By 1860, the United States was well on its way to being an industrial nation. In the Northeast, the most industrialized section of the country, per capita income was 40 percent higher than the national average. Diets, it has been argued, were better and more varied; machine-made clothing was more abundant. Industrialization did not necessarily lessen economic disparities, however. Despite a growing belief in a myth of social mobility based on equality of economic opportunity, the reality was that the richest 10 percent of the population in the cities held 70 to 80 percent of the wealth, compared to 50 percent in 1800. Nevertheless, American historians generally argue that while the rich got richer, the poor, thanks to an increase in their purchasing power, did not get poorer.

## Limiting the Spread of Industrialization in the Nonindustrialized World

Before 1870, the industrialization that had developed in western and central Europe and the United States did not extend in any significant way to the rest of the world. Even in eastern Europe, industrialization lagged far behind. Russia, for example, remained largely rural and agricultural, and its autocratic rulers kept the peasants in serfdom. There was not much of a middle class, and the tsarist regime, fearful of change, preferred to import industrial goods in return for the export of raw materials, such as grain and timber. Russia would not have its Industrial Revolution until the end of the nineteenth century.

**THE EXAMPLE OF INDIA** In other parts of the world where they had established control, newly industrialized European states pursued a deliberate policy of preventing the growth of mechanized industry. A good example is India. In the eighteenth century, India had been one of the world's greatest exporters of cotton cloth produced by hand labor; it produced 85 million pounds of yarn per year, versus 3 million for England. In the first half of the nineteenth century, much of India fell under the control of the British East India Company (see Chapter 24). With British control came inexpensive British factory-produced textiles, and soon thousands of Indian spinners and hand-loom weavers were unemployed. British policy encouraged Indians to export their raw materials while buying British-made goods. Although some limited forms of industrial factories for making textiles and jute (used in making rope) were opened in India in the 1850s, a lack of local capital and the advantages given to British imports limited the growth of new manufacturing operations. The example of India was repeated elsewhere as the rapidly industrializing nations of Europe worked to deliberately thwart the spread of the Industrial Revolution to their colonial dominions.

## The Social Impact of the Industrial Revolution

**Q FOCUS QUESTIONS:** What effects did the Industrial Revolution have on urban life, social classes, family life, and standards of living? What were working conditions like in the early decades of the Industrial Revolution, and what efforts were made to improve them?

Eventually, the Industrial Revolution radically altered the social life of Europe and the world. Although much of Europe remained bound by its traditional ways, already in the first half of the nineteenth century, the social impact of the Industrial Revolution was being felt, and future avenues of growth were becoming apparent. Vast changes in the number of people and where they lived were already dramatically evident.

## Population Growth

Population increases had already begun in the eighteenth century, but they accelerated dramatically in the nineteenth. They were also easier to discern because record keeping became more accurate. In the nineteenth century, governments began to take periodic censuses and systematically collect precise data on births, deaths, and marriages. Britain, for example, took its first census in 1801 and began the systematic registration of births, deaths, and marriages in 1836. In 1750, the total European population stood at an estimated 140 million; by 1800, it had increased to 187 million and by 1850 to 266 million, almost twice its 1750 level.

This population explosion cannot be explained by a higher birthrate, for birthrates were declining after 1790. Between 1790 and 1850, Germany's birthrate dropped from 40 per 1,000 to 36.1; Great Britain's, from 35.4 to 32.6; and France's, from 32.5 to 26.7. The key to the expansion of population was the decline in death rates evident throughout Europe. Historians now attribute this decline to two major causes. There was a drop in the number of deaths from famines, epidemics, and war. Major epidemic diseases, such as plague and smallpox, declined noticeably, although small-scale epidemics broke out now and then. The ordinary death rate also declined as a general increase in the food supply, already evident in the agricultural revolution of Britain in the late eighteenth century, spread to more areas. More food enabled a greater number of people to be better fed and therefore more resistant to disease. Famine largely disappeared from western Europe, although there were dramatic exceptions in isolated areas, Ireland being the most significant.

Although industrialization itself did not cause population growth, industrialized areas did experience a change in the composition of the population. By 1850, the proportion of the population actively involved in manufacturing, mining, or building had risen to 48 percent in Britain, 37 percent in Belgium, and 27 percent in France. But the actual pockets of industrialization in 1850 were small and decentralized; one author characterized them as "islands in an agricultural sea."

This minimal industrialization in light of the growing population meant severe congestion in the countryside, where ever-larger numbers of people divided the same amount of land into ever-smaller plots, and also gave rise to an ever-increasing mass of landless peasants. Overpopulation, especially noticeable in parts of France, northern Spain, southern Germany, Sweden, and Ireland, magnified the already existing problem of rural poverty. In Ireland, it produced the century's greatest catastrophe.

**THE GREAT HUNGER** Ireland was one of the most oppressed areas in western Europe. The predominantly Catholic peasant population rented land from mostly absentee British Protestant landlords whose primary concern was collecting their rents. Irish peasants lived in mud hovels in desperate poverty. The cultivation of the potato, a nutritious and relatively easy food to grow that produced three times as much food per acre as grain, gave Irish peasants a basic staple that enabled



## The Great Irish Potato Famine

THE GREAT IRISH FAMINE CAUSED BY THE potato blight was one of the nineteenth century's worst natural catastrophes, resulting in the decimation of the Irish population. Nicholas Cummins, a magistrate from County Cork, visited Skibbereen, one of the areas most affected by the famine, and sent a letter to the duke of Wellington reporting what he had seen. A copy of the letter was published in the London newspaper *The Times*, on Christmas Eve in 1846, and became one of the most famous descriptions of the Irish crisis.

### Nicholas Cummins, "The Famine in Skibbereen"

My Lord Duke,

Without apology or preface, I presume so far to trespass on your Grace as to state to you, and by the use of your illustrious name, to present to the British public the following statement of what I have myself seen within the last three days. Having for many years been intimately connected with the western portion of the County of Cork, and possessing some small property there, I thought it right personally to investigate the truth of several lamentable accounts which had reached me, of the appalling state of misery to which that part of the country was reduced. I accordingly went to . . . Skibbereen, and . . . I shall state simply what I there saw. . . . Being aware that I should have to witness scenes of frightful hunger, I provided myself with as much bread as five men could carry, and on reaching the spot I was surprised to find the wretched hamlet apparently deserted. I entered some of the hovels to ascertain the cause, and the scenes which

presented themselves were such as no tongue or pen can convey the slightest idea of. In the first, six famished and ghastly skeletons, to all appearances dead, were huddled in a corner on some filthy straw, their sole covering what seemed a ragged horsecloth, their wretched legs hanging about, naked above the knees. I approached with horror, and found by a low moaning they were alive—they were in fever, four children, a woman and what had once been a man. It is impossible to go through the detail. Suffice it to say, that in a few minutes I was surrounded by at least 200 such phantoms, such frightful spectres as no words can describe, either from famine or from fever. . . .

In another case, decency would forbid what follows, but it must be told. My clothes were nearly torn off in my endeavor to escape from the throng of pestilence around, when my neckcloth was seized from behind by a grip which compelled me to turn, I found myself grasped by a woman with an infant just born in her arms and the remains of a filthy sack across her loins—the sole covering of herself and baby. The same morning the police opened a house on the adjoining lands, which was observed shut for many days, and two frozen corpses were found, lying upon the mud floor, half devoured by rats.

**Q** What was the impact of the Great Irish Famine on the Irish people and on the broader Atlantic world? Why do you think the British government failed to provide relief for the Irish during the famine?

Source: From "The Famine in Skibbereen" from *The Great Hunger* by Cecil Woodham-Smith. New York: Harper Collins 1962.

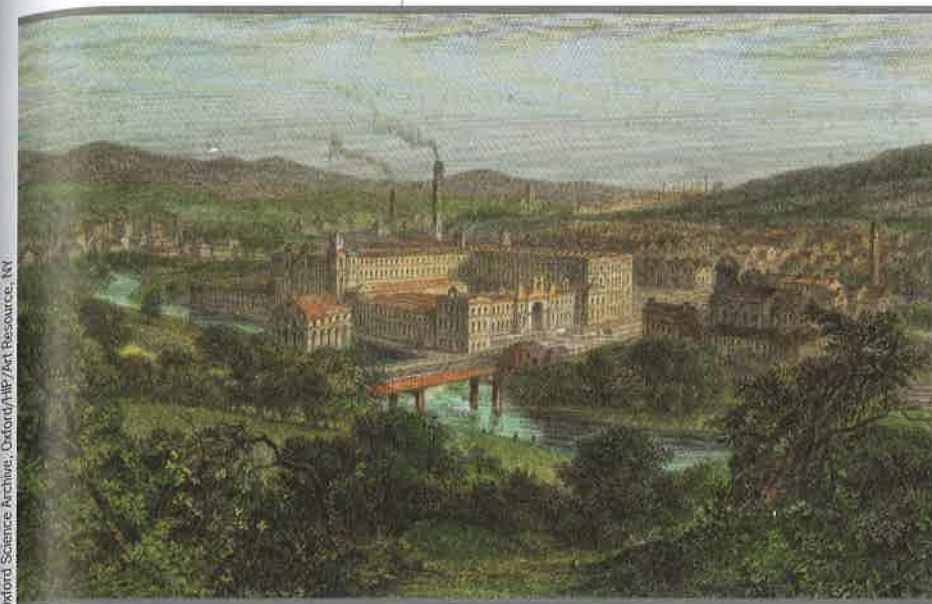
them to survive and even expand in numbers. As only an acre or two of potatoes was sufficient to feed a family, Irish men and women married earlier than elsewhere and started having children earlier as well. This led to significant growth in the population. Between 1781 and 1845, the Irish population doubled from 4 million to 8 million. Probably half of this population depended on the potato for survival. In the summer of 1845, the potato crop in Ireland was struck by blight due to a fungus that turned the potatoes black. Between 1845 and 1851, the Great Famine decimated the Irish population (see the box above). More than a million died of starvation and disease, and almost 2 million emigrated to the United States and Britain. Of all the European nations, only Ireland had a declining population in the nineteenth century. But other countries, too, faced problems of dire poverty and declining standards of living as their populations exploded.

**EMIGRATION** The flight of so many Irish to America reminds us that the traditional safety valve for overpopulation has always been emigration. Between 1821 and 1850, the number of emigrants from Europe averaged about 110,000 a year.

Most of these emigrants came from places like Ireland and southern Germany, where peasant life had been reduced to marginal existence. Times of agrarian crisis resulted in great waves of emigration. Bad harvests in Europe in 1846–1847 (such as the catastrophe in Ireland) produced massive numbers of emigrants. In addition to the estimated 1.6 million from Ireland, for example, 935,000 people left Germany between 1847 and 1854. More often than emigrating, however, the rural masses sought a solution to their poverty by moving to towns and cities within their own countries to find work. It should not astonish us, then, that the first half of the nineteenth century was a period of rapid urbanization.

### The Growth of Cities

Although the Western world would not become a predominantly urban society until the twentieth century, cities and towns had already grown dramatically in the first half of the nineteenth century, a phenomenon related to industrialization. Cities had traditionally been centers for princely courts, government and military offices, churches, and commerce. By



**A New Industrial Town.** Cities and towns grew dramatically in Britain in the first half of the nineteenth century, largely as a result of industrialization. Pictured here is Saltaire, a model textile factory and town founded near Bradford by Titus Salt in 1851. To facilitate the transportation of goods, the town was built on the Leeds and Liverpool canals.

1850, especially in Great Britain and Belgium, cities were rapidly becoming places for manufacturing and industry. With the steam engine, entrepreneurs could locate their manufacturing plants in urban centers where they had ready access to transportation facilities and unemployed people from the country looking for work.

In 1800, Great Britain had one major city, London, with a population of one million, and six cities between 50,000 and 100,000. Fifty years later, London's population had swelled to 2,363,000, and there were nine cities over 100,000 and eighteen cities with populations between 50,000 and 100,000. All together, these twenty-eight cities accounted for 5.7 million residents, or one-fifth of the total British population. When the populations of cities under 50,000 are added to this total, we realize that more than 50 percent of the British population lived in towns and cities by 1850. Britain was forced to become a food importer rather than an exporter as the number of people involved in agriculture declined to 20 percent of the population.

Urban populations also grew on the Continent, but less dramatically. Paris had 547,000 inhabitants in 1800, but only two other French cities had populations of 100,000: Lyons and Marseilles. In 1851, Paris had grown to a million, but Lyons and Marseilles were still under 200,000. German and Austrian lands had only three cities with more than 100,000 inhabitants (Vienna had 247,000) in 1800; fifty years later, there were only five, but Vienna had grown to 440,000. As these figures show, urbanization did not proceed as rapidly here as in Britain; of course, neither had industrialization. Even in Belgium, the most heavily industrialized country on the Continent, almost 50 percent of the male workforce was still engaged in agriculture at midcentury.

**URBAN LIVING CONDITIONS IN THE EARLY INDUSTRIAL REVOLUTION** The dramatic growth of cities in the first half of the nineteenth century produced miserable living conditions for many of the inhabitants. Of course, this had been true for centuries for many people in European cities, but the

rapid urbanization associated with the Industrial Revolution intensified the problems and made these wretched conditions all the more apparent. Wealthy, middle-class inhabitants, as usual, insulated themselves as best they could, often living in suburbs or the outer ring of the city, where they could have individual houses and gardens. In the inner ring of the city stood the small row houses, some with gardens, of the artisans and the lower middle class. Finally, located in the center of most industrial towns were the row houses of the industrial workers (see *Images of Everyday Life* on p. 612). This report on working-class housing in the British city of Birmingham in 1843 gives an idea of the conditions they faced:

The courts [of working-class row houses] are extremely numerous; . . . a very large portion of the poorer classes of the inhabitants reside in them. . . . The courts vary in the number of the houses which they contain, from four to twenty, and most of these houses are three stories high, and built, as it is termed, back to back. There is a wash-house, an ash-pit, and a privy at the end, or on one side of the court, and not unfrequently one or more pigsties and heaps of manure. Generally speaking, the privies in the old courts are in a most filthy condition. Many which we have inspected were in a state which renders it impossible for us to conceive how they could be used; they were without doors and overflowing with filth.<sup>5</sup>

Rooms were not large and were frequently overcrowded, as this government report of 1838 revealed: "I entered several of the tenements. In one of them, on the ground floor, I found six persons occupying a very small room, two in bed, ill with fever. In the room above this were two more persons in one bed ill with fever."<sup>6</sup> Another report said, "There were 63 families where there were at least five persons to one bed; and there were some in which even six were packed in one bed, lying at the top and bottom—children and adults."<sup>7</sup>


Sanitary conditions in these towns were appalling. Due to the lack of municipal direction, city streets were often used as

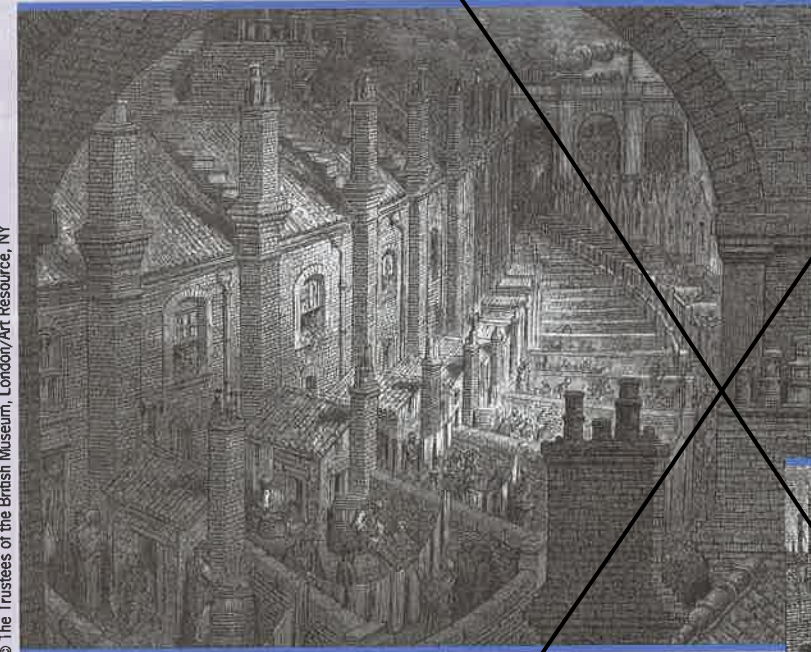


## Living Conditions of London's Poor

ALTHOUGH SOME ENVIRONMENTAL HAZARDS existed before industrialization, others intensified in early industrial Britain, with a dramatic impact on living conditions. Burning coal filled the air with ash and soot, metal smelting gave off pungent fumes, and industrial plants belched clouds of smoke from the fires stoked in the steam engines. Water pollution was another problem as slaughterhouses dumped their refuse into the streams and human waste found its way there as well due to a

lack of proper sewerage. Consequently, working-class tenants in London found themselves living in crowded rooms surrounded by filth and putrid smells. Many of the houses for the poor were built back to back, leaving little room for sanitation. Despite efforts to improve conditions, the plight of London's workers remained dire. In 1869, an English writer, Blanchard Jerrold, commissioned the French illustrator Gustave Doré (goo-STAHV DOOR-ay) to create illustrations for a

guide to London called *London: A Pilgrimage*. The book was published in 1872 with Doré's illustrations accompanying Jerrold's textual descriptions of the living conditions of London's poor. Doré's most haunting images are of tenement housing and its inhabitants in areas such as Whitechapel. In the first illustration, Doré shows a London slum district overshadowed by rail viaducts. The image directly below depicts an open air market on Dudley Street, where men, women, and children are attempting to sell their wares. In the third image, bottom left, children in ragged clothes play in the street. 



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John Masey/The Art Archive at Art Resource, NY

sewers and open drains: "In the center of this street is a gutter, into which potato parings, the refuse of animal and vegetable matters of all kinds, the dirty water from the washing of clothes and of the houses, are all poured, and there they stagnate and putrefy."<sup>8</sup> Unable to deal with human excrement, cities in the new industrial era smelled horrible and were extraordinarily unhealthy. The burning of coal blackened towns and cities with soot, as Charles Dickens described in one of his novels: "A long suburb of red brick houses—some with patches of garden ground, where coal-dust and factory smoke darkened the shrinking leaves, and coarse rank flowers; and where the struggling vegetation sickened and sank under the hot breath of kiln and furnace."<sup>9</sup> Towns and cities were fundamentally death traps. As deaths outnumbered births in most large cities in the first half of the nineteenth century, only a constant influx of people from the countryside kept them alive and growing.

Adding to the deterioration of urban life was the adulteration of food. Consumers were defrauded in a variety of ways: alum was added to make bread look white and hence more expensive; beer and milk were watered down; and red lead, despite its poisonous qualities, was substituted for pepper. The government refused to intervene; a parliamentary committee stated that "more benefit is likely to result from the effects of a free competition . . . than can be expected to result from any regulations." It was not until 1875 that an effective food and drug act was passed in Britain.

Our knowledge of the pathetic conditions in the early industrial cities is largely derived from an abundance of social investigations. Such investigations began in France in the 1820s. In Britain, the Poor Law Commission produced detailed reports. The investigators were often struck by the physically and morally debilitating effects of urban industrial life on the poor. They observed, for example, that young working-class men were considerably shorter and scrawnier than the sons of middle-class families and much more subject to disease. They were especially alarmed by what they considered the moral consequences of such living conditions: prostitution, crime, and sexual immorality, all of which they saw as effects of living in such squalor.

**URBAN REFORMERS** To many of the well-to-do, this situation presented a clear danger to society. Were not these masses of workers, sunk in crime, disease, and immorality, a potential threat to their own well-being? Might not the masses be organized and used by unscrupulous demagogues to overthrow the established order? One of the most eloquent British reformers of the 1830s and 1840s, James Kay-Shuttleworth, described them as "volcanic elements, by whose explosive violence the structure of society may be destroyed." Another observer spoke more contemptuously in 1850:

They live precisely like brutes, to gratify . . . the appetites of their uncultivated bodies, and then die, to go they have never thought, cared, or wondered whither. . . . Brought up in the darkness of barbarism, they have no idea that it is possible for them to attain any higher condition; they are not even sentient enough to desire to change their situation. . . . They eat, drink, breed, work and die; and . . . the richer and more intelligent classes are obliged to guard them with police.<sup>10</sup>

Some observers were less arrogant, however, and wondered if the workers should be held responsible for their fate.

One of the best of a new breed of urban reformers was Edwin Chadwick (1800–1890). With a background in law, Chadwick became obsessed with eliminating the poverty and squalor of the metropolitan areas. He became a civil servant and was soon appointed to a number of government investigatory commissions. As secretary of the Poor Law Commission, he initiated a passionate search for detailed facts about the living conditions of the working classes. After three years of investigation, Chadwick summarized the results in his *Report on the Condition of the Labouring Population of Great Britain*, published in 1842. In it, he concluded that "the various forms of epidemic, endemic, and other disease" were directly caused by the "atmospheric impurities produced by decomposing animal and vegetable substances, by damp and filth, and close overcrowded dwellings [prevailing] amongst the population in every part of the kingdom." Such conditions, he argued, could be eliminated. As to the means: "The primary and most important measures, and at the same time the most practicable, and within the recognized province of public administration, are drainage, the removal of all refuse of habitations, streets, and roads, and the improvement of the supplies of water."<sup>11</sup> In other words, Chadwick was advocating a system of modern sanitary reforms consisting of efficient sewers and a supply of piped water. Six years after his report and largely due to his efforts, Britain's first Public Health Act created the National Board of Health, empowered to form local boards that would establish modern sanitary systems.

Many middle-class citizens were quite willing to support the public health reforms of men like Chadwick because of their fear of **cholera**. Outbreaks of this deadly disease had ravaged Europe in the early 1830s and late 1840s and were especially rampant in the overcrowded cities. As city authorities and wealthier residents became convinced that filthy conditions helped spread the disease, they began to support the call for new public health measures.

## New Social Classes: The Industrial Middle Class

The rise of industrial capitalism produced a new middle-class group. The bourgeoisie or middle class was not new; it had existed since the emergence of cities in the Middle Ages. Originally, the bourgeois was the burgher or town dweller, active as a merchant, official, artisan, lawyer, or scholar, who enjoyed a special set of rights from the charter of the town. As wealthy townspeople bought land, the original meaning of the word *bourgeois* became lost, and the term came to include people involved in commerce, industry, and banking as well as professionals, such as lawyers, teachers, physicians, and government officials at various levels. At the lower end of the economic scale were master craftspeople and shopkeepers.

**THE NEW INDUSTRIAL ENTREPRENEURS** Lest we make the industrial middle class too much of an abstraction, we need to



## Attitudes of the Industrial Middle Class in Britain and Japan

IN THE NINETEENTH CENTURY, A NEW INDUSTRIAL middle class in Great Britain took the lead in creating the Industrial Revolution. Japan did not begin to industrialize until after 1870. There, too, an industrial middle class emerged, although there were important differences in the attitudes of business leaders in Britain and Japan. Some of these differences can be seen in these documents. The first is an excerpt from the book *Self-Help*, first published in 1859, by Samuel Smiles, who espoused the belief that people succeed through "individual industry, energy, and uprightness." The other two selections are by Shibuzawa Eiichi (shih-boo-ZAH-wah EH-ee-chee), a Japanese industrialist who supervised textile factories. Although he began his business career in 1873, he did not write his autobiography, the source of his first excerpt, until 1927.

### Samuel Smiles, *Self-Help*

"Heaven helps those who help themselves" is a well-worn maxim, embodying in a small compass the results of vast human experience. The spirit of self-help is the root of all genuine growth in the individual; and, exhibited in the lives of many, it constitutes the true source of national vigor and strength. Help from without is often enfeebling in its effects, but help from within invariably invigorates. Whatever is done for men or classes, to a certain extent takes away the stimulus and necessity of doing for themselves; and where men are subjected to overguidance and overgovernment, the inevitable tendency is to render them comparatively helpless. . . .

National progress is the sum of individual industry, energy, and uprightness, as national decay is of individual idleness, selfishness, and vice. What we are accustomed to decry as great social evils, will, for the most part, be found to be only the outgrowth of our own perverted life; and though we may endeavor to cut them down and extirpate them by means of law, they will only spring up again with fresh luxuriance in some other form, unless the individual conditions of human life and character are radically improved. If this view be correct, then it follows that the highest patriotism and philanthropy consist, not so much in altering laws and modifying institutions as in helping and stimulating men to elevate and improve themselves by their own free and independent action as individuals. . . .

Many popular books have been written for the purpose of communicating to the public the grand secret of making

money. But there is no secret whatever about it, as the proverbs of every nation abundantly testify. . . . "A penny saved is a penny gained."—"Diligence is the mother of good luck."—"No pains, no gains."—"No sweat, no sweet."—"Sloth, the Key of poverty."—"Work, and thou shalt have."—"He who will not work, neither shall he eat."—"The world his, who has patience and industry."

### Shibuzawa Eiichi, *Autobiography*

I . . . felt that it was necessary to raise the social standing of those who engaged in commerce and industry. By way of setting an example, I began studying and practicing the teachings of the *Analects* of Confucius. It contains teachings first enunciated more than twenty-four hundred years ago. Yet it supplies the ultimate in practical ethics for all of us to follow in our daily living. It has many golden rules for businessmen. For example, there is a saying: "Wealth and respect are what men desire, but unless a right way is followed, they cannot be obtained; poverty and lowly position are what men despise, but unless a right way is found, one cannot leave that status once reaching it." It shows very clearly how a businessman must act in this world.

### Shibuzawa Eiichi on Progress

One must beware of the tendency of some to argue that it is through individualism or egoism that the State and society can progress most rapidly. They claim that under individualism, each individual competes with the others, and progress results from this competition. But this is to see merely the advantages and ignore the disadvantages, and I cannot support such a theory. Society exists, and a State has been founded. Although people desire to rise to positions of wealth and honor, the social order and the tranquillity of the State will be disrupted if this is done egoistically. Men should not do battle in competition with their fellow men.

Therefore, I believe that in order to get along together in society and serve the State, we must by all means abandon this idea of independence and self-reliance and reject egoism completely.

**Q** What are the major similarities and differences between the attitudes toward business of Samuel Smiles and Shibuzawa Eiichi? How do you explain the differences, and what are their implications?

Sources: Samuel Smiles, *Self-Help*. From Samuel Smiles, *Self-Help*, 1859. Shibuzawa Eiichi, *Autobiography* and Shibuzawa Eiichi on Progress. From Shibuzawa Eiichi, *THE AUTOBIOGRAPHY OF SHIBUSAWA EIICHI: FROM PEASANT TO ENTREPRENEUR*, 1927, University of Tokyo Press, 1994.

look at who the new industrial entrepreneurs actually were. These were the people who constructed the factories, purchased the machines, and figured out where the markets were (see the box on p. 614). Their qualities included resourcefulness, single-mindedness, resolution, initiative, vision, ambition, and often, of course, greed. As Jedediah Strutt, the cotton manufacturer, said, the "getting of money . . . is the main business of the life of men."

But this was not an easy task. The early industrial entrepreneurs had to superintend an enormous array of functions that are handled today by teams of managers; they raised capital, determined markets, set company objectives, organized the factory and its labor, and trained supervisors who could act for them. The opportunities for making money were great, but the risks were also tremendous. The cotton trade, for example, which was so important to the early Industrial Revolution, was intensely competitive. Only through constant expansion could one feel secure, so early entrepreneurs reinvested most of their initial profits. Fear of bankruptcy was constant, especially among small firms. Furthermore, most early industrial enterprises were small. Even by the 1840s, only 10 percent of British industrial firms employed more than five thousand workers; 43 percent had fewer than one hundred. As entrepreneurs went bankrupt, new people could enter the race for profits, especially since the initial outlay required was not gigantic. In 1816, only one mill in five in the important industrial city of Manchester was in the hands of its original owner.

The new industrial entrepreneurs were from incredibly diverse social origins. Many of the most successful came from a mercantile background. Three London merchants, for example, founded a successful ironworks in Wales that owned eight steam engines and employed five thousand men. In Britain, land and domestic industry were often interdependent. Joshua Fielden, for example, acquired sufficient capital to establish a factory by running a family sheep farm while working looms in the farmhouse. Intelligent, clever, and ambitious apprentices who had learned their trades well could also strike it rich. William Radcliffe's family engaged in agriculture and spinning and weaving at home; he learned quickly how to succeed:

Availing myself of the improvements that came out while I was in my teens . . . with my little savings and a practical knowledge of every process from the cotton bag to the piece of cloth . . . I was ready to commence business for myself and by the year 1789 I was well established and employed many hands both in spinning and weaving as a master manufacturer.<sup>12</sup>

By 1801, Radcliffe was operating a factory employing a thousand workers.

Members of dissenting religious minorities were often prominent among the early industrial leaders of Britain. The Darbys and Lloyds, who were iron manufacturers; the Barclays and Lloyds, who were bankers; and the Trumans and Perkins, who were brewers, were all Quakers. These were expensive trades and depended on the financial support that coreligionists in religious minorities provided for each other.

Most historians believe that a major reason members of these religious minorities were so prominent in business was that they lacked other opportunities. Legally excluded from many public offices, they directed their ambitions into the new industrial capitalism.

It is interesting to note that in Britain in particular, aristocrats also became entrepreneurs. The Lambtons in Northumberland, the Curwens in Cumberland, the Norfolks in Yorkshire, and the Dudleys in Staffordshire all invested in mining enterprises. This close relationship between land and industry helped Britain assume the leadership role in the early Industrial Revolution.

**SIGNIFICANCE OF THE INDUSTRIAL ENTREPRENEURS** By 1850, in Britain at least, the kind of traditional entrepreneurship that had created the Industrial Revolution was declining and was being replaced by a new business aristocracy. This new generation of entrepreneurs stemmed from the professional and industrial middle classes, especially as sons inherited the successful businesses established by their fathers. It must not be forgotten, however, that even after 1850, a large number of small businesses existed in Britain, and some were still being founded by people from humble backgrounds. Indeed, the age of large-scale corporate capitalism did not begin until the 1890s (see Chapter 23).

Increasingly, the new industrial entrepreneurs—the bankers and owners of factories and mines—came to amass much wealth and play an important role alongside the traditional landed elites of their societies. The Industrial Revolution began at a time when the preindustrial agrarian world was still largely dominated by landed elites. As the new bourgeois bought great estates and acquired social respectability, they also sought political power, and in the course of the nineteenth century, their wealthiest members would merge with those old elites.

## New Social Classes: Workers in the Industrial Age

At the same time that the members of the industrial middle class were seeking to reduce the barriers between themselves and the landed elite, they were also trying to separate themselves from the laboring classes below. The working class was actually a mixture of groups in the first half of the nineteenth century. Factory workers would eventually form an industrial proletariat, but in the first half of the century, they did not constitute a majority of the working class in any major city, even in Britain. According to the 1851 census, there were 1.8 million agricultural laborers and 1 million domestic servants in Britain but only 811,000 workers in the cotton and woolen industries. And one-third of these were still working in small workshops or at home.

In the cities, artisans or craftspeople remained the largest group of urban workers during the first half of the nineteenth century. They worked in numerous small industries, such as shoemaking, glovemaking, bookbinding, printing, and bricklaying. Some craftspeople, especially those employed in such



## Child Labor: Discipline in the Textile Mills

CHILD LABOR WAS NOT NEW, BUT IN THE early Industrial Revolution, it was exploited more systematically. These selections are taken from the Report of Sadler's Committee, an investigatory committee established by the government in 1832 to inquire into the condition of child factory workers.

### Keeping the Children Awake

It is a very frequent thing at Mr. Marshall's [at Shrewsbury] where the least children were employed (for there were plenty working at six years of age), for Mr. Horseman to start the mill earlier in the morning than he formerly did; and provided a child should be drowsy, the overlooker walks round the room with a stick in his hand, and he touches that child on the shoulder, and says, "Come here." In a corner of the room there is an iron cistern; it is filled with water; he takes this boy, and takes him up by the legs, and dips him over head in the cistern, and sends him to work for the remainder of the day. . . .

What means were taken to keep the children to their work?—Sometimes they would tap them over the head, or nip them over the nose, or give them a pinch of snuff, or throw water in their faces, or pull them off where they were, and job them about to keep them waking.

### The Sadistic Overlooker

Samuel Downe, age 29, factory worker living near Leeds; at the age of about ten began work at Mr. Marshall's mills at Shrewsbury, where the customary hours when work was brisk were generally 5 A.M. to 8 P.M., sometimes from 5:30 A.M. to 8 or 9.

Source: From *Human Documents of the Industrial Revolution in Britain* by E. Royston Pike. London: Unwin & Hyman, 1966.

luxury trades as coach building and clock making, formed a kind of aristocracy of labor and earned higher wages than others. Artisans were not factory workers; they were traditionally organized in guilds, where they passed on their skills to apprentices. But guilds were increasingly losing their power, especially in industrialized countries. Fearful of losing out to the new factories that could produce goods more cheaply, artisans tended to support movements against industrialization. Industrialists welcomed the decline of skilled craftspeople, as one perceptive old tailor realized in telling his life story:

It is upwards of 30 years since I first went to work at the tailoring trade in London. . . . I continued working for the honorable trade and belonging to the Society [for tailors] for about 15 years. My weekly earnings then averaged £1 16s. a week while I was at work, and for several years I was seldom out of work. . . . No one could have been happier than I was. . . . But then, with my sight defective . . . I could get no employment at the honorable trade, and that was the ruin of me entirely; for working there, of course, I got "scratched" from the trade society, and so lost all hope of being provided for by them in

What means were taken to keep the children awake and vigilant, especially at the termination of such a day's labor as you have described?—There was generally a blow on a box, or a tap with a strap, or sometimes the hand.

Have you yourself been strapped?—Yes, most severely, till I could not bear to sit upon a chair without having pillows, and through that I left. I was strapped both on my own legs, and then I was put upon a man's back, and then strapped and buckled with two straps to an iron pillar, and flogged, and all by one overlooker; after that he took a piece of tow, and twisted it in the shape of a cord, and put it in my mouth, and tied it behind my head.

He gagged you?—Yes; and then he orders me to run round a part of the machinery where he was overlooker, and he stood at one end, and every time I came there he struck me with a stick, which I believe was an ash plant, and which he generally carried in his hand, and sometimes he hit me, and sometimes he did not; and one of the men in the room came and begged me off, and that he let me go, and not beat me any more, and consequently he did.

You have been beaten with extraordinary severity?—Yes, I was beaten so that I had not power to cry at all, or hardly speak at one time. What age were you at that time?—Between 10 and 11.

**Q** What kind of working conditions did children face in the textile mills during the early Industrial Revolution? Why were they beaten?

my helplessness. The workshop . . . was about seven feet square, and so low, that as you [sat] on the floor you could touch the ceiling with the tip of your finger. In this place seven of us worked. [The master] paid little more than half the regular wages, and employed such men as myself—only those who couldn't get anything better to do. . . . I don't think my wages there averaged above 12s. a week. . . . I am convinced I lost my eyesight by working in that cheap shop. . . . It is by the ruin of such men as me that these masters are enabled to undersell the better shops. . . . That's the way, sir, the cheap clothes is produced, by making blind beggars of the workmen, like myself, and throwing us on [the benevolence of] the parish [church] in our old age.<sup>13</sup>

Servants also formed another large group of urban workers, especially in major cities like London and Paris. Many were women from the countryside who became utterly dependent on their upper- and middle-class employers.

**WORKING CONDITIONS FOR THE INDUSTRIAL WORKING CLASS** Workers in the new industrial factories also faced

## Child Labor: The Mines

AFTER EXAMINING CONDITIONS IN BRITISH coal mines, a government official commented that "the hardest labor in the worst room in the worst conducted factory is less hard, less cruel and less demoralizing than the labor in the best of coal-mines." Yet it was not until 1842 that legislation was passed eliminating the labor of boys under ten from the mines. This selection is taken from a government report on the mines in Lancashire.

### The Black Holes of Worsley

Examination of Thomas Gibson and George Bryan, witnesses from the coal mines at Worsley:

Have you worked from a boy in a coal mine?—(Both) Yes. What had you to do then?—Thrutching the basket and drawing. It is done by little boys; one draws the basket and the other pushes it behind. Is that hard labor?—Yes, very hard labor.

For how many hours a day did you work?—Nearly nine hours regularly; sometimes twelve; I have worked about thirteen. We used to go in at six in the morning, and took a bit of bread and cheese in our pocket, and stopped two or three minutes; and some days nothing at all to eat.

How was it that sometimes you had nothing to eat?—We were over-burdened; I had only a mother, and she had nothing to give me. I was sometimes half starved. . . .

Do they work in the same way now exactly?—Yes, they do; they have nothing more than a bit of bread and cheese in their pocket, and sometimes can't eat it all, owing to the dust

Source: From *Human Documents of the Industrial Revolution in Britain* by E. Royston Pike. London: Unwin & Hyman, 1966.

wretched working conditions. We have already observed the psychological traumas workers experienced from their employers' efforts to break old preindustrial work patterns and create a well-disciplined labor force. But what were the physical conditions of the factories?

Unquestionably, in the early decades of the Industrial Revolution, "places of work," as early factories were called, were dreadful. Work hours ranged from twelve to sixteen hours a day, six days a week, with a half hour for lunch and for dinner. There was no security of employment and no minimum wage. The worst conditions were in the cotton mills, where temperatures were especially debilitating. One report noted that "in the cotton-spinning work, these creatures are kept, fourteen hours in each day, locked up, summer and winter, in a heat of from eighty to eighty-four degrees." Mills were also dirty, dusty, and unhealthy:

Not only is there not a breath of sweet air in these truly infernal scenes, but . . . there is the abominable and pernicious stink of the gas to assist in the murderous effects of the heat. In addition to the noxious effluvia of the gas, mixed with the steam, there are the dust, and what is called cotton-flyings or fuz, which the unfortunate creatures have to inhale; and . . .

and damp and badness of air; and sometimes it is as hot as an oven; sometimes I have seen it so hot as to melt a candle.

What are the usual wages of a boy of eight?—They used to get 3d or 4d a day. Now a man's wages is divided into eight eighths; and when a boy is eight years old he gets one of those eighths; at eleven, two eighths; at thirteen, three eighths; at fifteen, four eighths; at twenty, man's wages.

What are the wages of a man?—About 15s if he is in full employment, but often not more than 10s, and out of that he has to get his tools and candles. He consumes about four candles in nine hours' work, in some places six; 6d per pound, and twenty-four candles to the pound.

Were you ever beaten as a child?—Yes, many a score of times; both kicks and thumps.

Are many girls employed in the pits?—Yes, a vast of those. They do the same kind of work as the boys till they get about 14 years of age, when they get the wages of half a man, and never get more, and continue at the same work for many years.

Did they ever fight together?—Yes, many days together. Both boys and girls; sometimes they are very loving with one another.

**Q** What kind of working conditions did children face in the mines during the early Industrial Revolution? Why did entrepreneurs permit such conditions and such treatment of children?

the notorious fact is that well constituted men are rendered old and past labor at forty years of age, and that children are rendered decrepit and deformed, and thousands upon thousands of them slaughtered by consumptions [lung diseases], before they arrive at the age of sixteen.<sup>14</sup>

Thus ran a report on working conditions in the cotton industry in 1824.

Conditions in the coal mines were also harsh. The introduction of steam power meant only that steam-powered engines mechanically lifted coal to the top. Inside the mines, men still bore the burden of digging the coal out while horses, mules, women, and children hauled coal carts on rails to the lift. Dangers abounded in coal mines; cave-ins, explosions, and gas fumes (called "bad air") were a way of life. The cramped conditions—tunnels often did not exceed 3 or 4 feet in height—and constant dampness in the mines resulted in deformed bodies and ruined lungs.

Both children and women were employed in large numbers in early factories and mines (see the boxes on pp. 616–617). Children had been an important part of the family economy in preindustrial times, working in the fields or carding and spinning wool at home with the growth of the cottage



industry. In the Industrial Revolution, however, child labor was exploited more than ever and in a considerably more systematic fashion. The owners of cotton factories appreciated certain features of child labor. Children had an especially delicate touch as spinners of cotton. Their smaller size made it easier for them to crawl under machines to gather loose cotton. Moreover, children were more easily broken to factory work. Above all, children represented a cheap supply of labor. In 1821, just about half of the British population was under twenty years of age. Hence, children made up a particularly abundant supply of labor, and they were paid only about one-sixth to one-third of what a man was paid. In the cotton factories in 1838, children under eighteen made up 29 percent of the total workforce; children as young as seven worked twelve to fifteen hours per day, six days a week, in cotton mills.

Especially terrible in the early Industrial Revolution was the use of so-called pauper apprentices. These were orphans or children abandoned by their parents who had wound up in the care of local parishes. To save on their upkeep, parish officials found it convenient to apprentice them to factory owners looking for a cheap source of labor. These children worked long hours under strict discipline and received inadequate food and recreation; many became deformed from being kept too long in contorted positions. Although economic liberals and some industrialists were against all state intervention in economic matters, Parliament eventually remedied some of the worst ills of child abuse in factories and mines (see “Efforts at Change: Reformers and Government” later in this chapter). The legislation of the 1830s and 1840s, however, primarily affected child labor in textile factories and mines. It did not touch the use of children in small workshops or the non-factory trades that were not protected. As these trades were in competition with the new factories, conditions there were often even worse. Pottery works, for example, were not investigated until the 1860s, when it was found that 17 percent of the workers were under eleven years of age. One investigator reported what he found:

The boys were kept in constant motion throughout the day, each carrying from thirty to fifty dozen of molds into the stoves, and remaining . . . long enough to take the dried earthenware away. The distance thus run by a boy in the course of a day . . . was estimated at seven miles. From the very nature of this exhausting occupation children were rendered pale, weak and unhealthy. In the depth of winter, with the thermometer in the open air sometimes below zero, boys, with little clothing but rags, might be seen running to and fro on errands or to their dinners with the perspiration on their foreheads, “after laboring for hours like little slaves.” The inevitable result of such transitions of temperature were consumption, asthma and acute inflammation.<sup>15</sup>

Little wonder that child labor legislation enacted in 1864 included pottery works.

By 1830, women and children made up two-thirds of the cotton industry’s labor. As the number of children employed declined after the Factory Act of 1833, however, their places

were taken by women, who came to dominate the labor forces of the early factories. Women made up 50 percent of the labor force in textile (cotton and woolen) factories before 1870. They were mostly unskilled labor and were paid half or less of what men received. Excessive working hours for women were outlawed in 1844, but only in textile factories and mines; not until 1867 were they outlawed in craft workshops.

The employment of children and women in large part represents a continuation of a preindustrial kinship pattern. The cottage industry had always involved the efforts of the entire family, and it seemed perfectly natural to continue this pattern. Men migrating from the countryside to industrial towns and cities took their wives and children with them into the factory or into the mines. Of 136 employees in Robert Peel’s factory at Bury in 1801, 95 were members of the same twenty-six families. The impetus for this family work often came from the family itself. The factory owner Jedediah Strutt was opposed to child labor under age ten but was forced by parents to take children as young as seven.

The employment of large numbers of women in factories did not significantly transform female working patterns, as was once assumed. Studies of urban households in France and Britain, for example, have revealed that throughout the nineteenth century, traditional types of female labor still predominated in the women’s work world. In 1851, fully 40 percent of the female workforce in Britain consisted of domestic servants. In France, the largest group of female workers, 40 percent, worked in agriculture. In addition, only 20 percent of female workers in Britain labored in factories, and only 10 percent did so in France. Regional and local studies have also found that most of the workers were single women. Few married women worked outside the home.

The factory acts that limited the work hours of children and women also began to break up the traditional kinship pattern of work and led to a new pattern based on a separation of work and home. Men came to be regarded as responsible for the primary work obligations as women assumed daily control of the family and performed low-paying jobs such as laundry work that could be done in the home. Domestic industry made it possible for women to continue their contributions to family survival.

Historians have also reminded us that if the treatment of children in the mines and factories seems particularly cruel and harsh, contemporary treatment of children in general was often brutal. Beatings, for example, had long been regarded, even by dedicated churchmen and churchwomen, as the best way to discipline children.

The problem of poverty among the working classes was also addressed in Britain by government action in the form of the Poor Law Act of 1834, which established workhouses where jobless poor people were forced to live. The intent of this policy, based on the assumption that the poor were responsible for their own pitiful conditions, was “to make the workhouses as like prisons as possible . . . to establish therein a discipline so severe and repulsive as to make them a terror to the poor.” Within a few years, despite sporadic opposition,



**Women and Children in the Mines.** Women and children were often employed in the factories and mines of the early nineteenth century. This illustration shows a woman and boy in a coal mine struggling to draw and push a barrel filled with coal. In 1842, the Coal Mines Act forbade the use of boys younger than ten and women in the mines.

more than 200,000 poor people were locked up in workhouses, where family members were separated, forced to live in dormitories, given work assignments, and fed dreadful food. Children were often recruited from parish workhouses as cheap labor in factories.

**DID INDUSTRIALIZATION BRING AN IMPROVED STANDARD OF LIVING?** One of the most heated debates on the Industrial Revolution concerns the standard of living. Most historians assume that in the long run, the Industrial Revolution improved living standards dramatically in the form of higher per capita incomes and greater consumer choices. But did the first generation of industrial workers experience a decline in their living standards and suffer unnecessarily? During the first half of the nineteenth century, industrialization altered the lives of Europeans, especially the British, as they left their farms, moved to cities, and found work in factories. Historians have debated whether industrialization improved the standard of living during this time. Some historians have argued that industrialization increased employment and lowered prices of consumer goods, thereby improving the way people lived. They also maintain that household income rose because multiple members of the family could now hold wage-paying jobs. Other historians argue that wage labor made life worse for most families during the first half of the nineteenth century. They maintain that employment in the early factories was highly volatile as employers quickly dismissed workers whenever demand declined. Wages were not uniform, and inadequate housing in cities forced families to live in cramped and unsanitary conditions. Families continued to spend most of their incomes on food and clothing.

Most historians agree that what certainly did occur in the first half of the nineteenth century was a widening gap between rich and poor. One estimate, based on income tax returns in Britain, is that the wealthiest 1 percent of the population increased its share of the national product from

25 percent in 1801 to 35 percent in 1848. The real gainers in the early Industrial Revolution were members of the middle class—and some skilled workers whose jobs were not eliminated by the new machines. But industrial workers themselves would have to wait until the second half of the nineteenth century to reap the benefits of industrialization.

## Efforts at Change: The Workers

Before long, workers looked to the formation of labor organizations to gain decent wages and working conditions. The British government, reacting against the radicalism of the French revolutionary working classes, had passed the Combination Acts in 1799 and 1800 outlawing associations of workers. The legislation failed to prevent the formation of **trade unions**, however. Similar to the craft societies of earlier times, these new associations were formed by skilled workers in a number of new industries, including the cotton spinners, ironworkers, coal miners, and shipwrights. These unions served two purposes. One was to preserve their own workers’ position by limiting entry into their trade; the other was to gain benefits from the employers. These early trade unions had limited goals. They favored a working-class struggle against employers, but only to win improvements for the members of their own trades.

**THE TRADE UNION MOVEMENT** Some trade unions were even willing to strike to attain their goals. Bitter strikes were carried out by miners in Northumberland and Durham in 1810, hand-loom weavers in Glasgow in 1813, and cotton spinners in Manchester in 1818. Such blatant illegal activity caused Parliament to repeal the Combination Acts in 1824, accepting the argument of some members that the acts themselves had so alienated workers that they had formed unions. Unions were now tolerated, but other legislation enabled authorities to keep close watch over their activities.





**A Trade Union Membership Card.** Skilled workers in a number of new industries formed trade unions in an attempt to gain higher wages, better working conditions, and special benefits. The scenes at the bottom of this membership card for the Associated Shipwrights Society illustrate some of the medical and social benefits it provided for its members.

In the 1820s and 1830s, the union movement began to focus on the creation of national unions. One of the leaders in this effort was a well-known cotton magnate and social reformer, Robert Owen (1771–1858). Owen came to believe in the creation of voluntary associations that would demonstrate to others the benefits of cooperative rather than competitive living (see Chapter 21). Although Owen's program was not directed specifically to trade unionists, his ideas had great appeal to some of their leaders. Under Owen's direction, plans emerged for the Grand National Consolidated Trades Union, which was formed in February 1834. As a national federation of trade unions, its primary purpose was to coordinate a general strike for the eight-hour working day. Rhetoric, however, soon outpaced reality, and by the summer of that year, the lack of real working-class support led to the federation's total collapse, and the union movement reverted to trade unions for individual crafts. The largest and most successful of these unions was the Amalgamated Society of

Engineers, formed in 1850. Its provision of generous unemployment benefits in return for a small weekly payment was precisely the kind of practical gains these trade unions sought. Larger goals would have to wait.

**LUDDITES** Trade unionism was not the only type of collective action by workers in the early decades of the Industrial Revolution. The Luddites were skilled craftspeople in the Midlands and northern England who in 1812 attacked the machines that they believed threatened their livelihoods. These attacks failed to stop the industrial mechanization of Britain and have been viewed as utterly naive. Some historians, however, have also seen them as an intense eruption of feeling against unrestrained industrial capitalism. The inability of 12,000 troops to find the culprits provides stunning evidence of the local support they received in their areas.

**CHARTISM** A much more meaningful expression of the attempts of British workers to improve their condition occurred in the movement known as Chartism—the “first important political movement of working men organized during the nineteenth century.” Its aim was to achieve political democracy. Chartism took its name from the People's Charter, a document drawn up in 1838 by the London Working Men's Association. The charter demanded universal male suffrage, payment for members of Parliament, the elimination of property qualifications for members of Parliament, and annual sessions of Parliament. Women, too, joined in the movement. Chartist groups in many large towns often had female sections. Although some women were quite active in the movement, they were fighting to win political rights for their husbands, not for themselves, as the Chartist platform did not include the right to vote for women.

Two national petitions incorporating the Chartist demands gained millions of signatures and were presented to Parliament in 1839 and 1842. Chartism attempted to encourage change through peaceful, constitutional means, although there was an underlying threat of force, as is evident in the Chartist slogan, “Peacefully if we can, forcibly if we must.” In 1842, Chartist activists organized a general strike on behalf of their goals, but it had little success.

Despite the pressures exerted by the Chartists, members of Parliament, who were not at all ready for political democracy, rejected both national petitions. As one member said, universal male suffrage would be “fatal to all the purposes for which government exists” and was “utterly incompatible with the very existence of civilization.” After 1848, Chartism as a movement had largely played itself out. It had never really posed a serious threat to the British establishment, but it had not been a total failure either. Its true significance stemmed from its ability to arouse and organize millions of working-class men and women, to give them a sense of working-class consciousness that they had not really possessed before. This political education of working people was important to the ultimate acceptance of all the points of the People's Charter in the future.

## Efforts at Change: Reformers and Government

Efforts to improve the worst conditions of the industrial factory system also came from outside the ranks of the working classes. From its beginning, the Industrial Revolution had drawn much criticism. Romantic poets like William Wordsworth (see Chapter 21) decried the destruction of the natural world:

*I grieve, when on the darker side  
Of this great change I look; and there behold  
Such outrage done to nature as compels  
The indignant power to justify herself.*

Reform-minded individuals, be they factory owners who felt twinges of conscience or social reformers in Parliament, campaigned against the evils of the industrial factory, especially condemning the abuse of children. One hoped for the day “that these little ones should once more see the rising and setting of the sun.”

**GOVERNMENT ACTION** As it became apparent that the increase in wealth generated by the Industrial Revolution was accompanied by ever-increasing numbers of poor people, more and more efforts were made to document and deal with the problems. As reports from civic-minded citizens and parliamentary commissions intensified and demonstrated the

extent of poverty, degradation, and suffering, the reform efforts began to succeed.

Their first success was a series of factory acts passed between 1802 and 1819 that limited labor for children between the ages of nine and sixteen to twelve hours a day; the employment of children under nine years old was forbidden. Moreover, the laws stipulated that children were to receive instruction in reading and arithmetic during working hours. But these acts applied only to cotton mills, not to factories or mines where some of the worst abuses were taking place. Just as important, no provision was made for enforcing the acts through a system of inspection.

In the reform-minded decades of the 1830s and 1840s, new legislation was passed. The Factory Act of 1833 strengthened earlier labor legislation. All textile factories were now included. Children between the ages of nine and thirteen could work only eight hours a day; those between thirteen and eighteen, twelve hours. Factory inspectors were appointed with the power to fine those who broke the law. Another piece of legislation in 1833 required that children between nine and thirteen have at least two hours of elementary education during the working day. In 1847, the Ten Hours Act reduced the workday for children between thirteen and eighteen to ten hours. Women were also now included in the ten-hour limit. In 1842, the Coal Mines Act eliminated the employment of boys under ten and women in mines. Eventually, men too would benefit from the move to restrict factory hours.

## CHAPTER SUMMARY

The Industrial Revolution was one of the major forces of change in the nineteenth century as it led Western civilization into the machine-dependent modern world. It began in Britain, which had an agricultural revolution that increased the quantity of foodstuffs, population growth that created a supply of labor, capital for investment, a good supply of coal and iron ore, and a transportation revolution that created a system of canals, roads, and bridges. As the world's leading colonial power, Britain also had access to overseas markets. The cotton industry led the way as new machines such as



the spinning jenny and power loom enabled the British to produce cheap cotton goods. Most important was the steam engine, which led to factories and a system of steam-powered railroads that moved people and goods efficiently. The Great Exhibition of 1851 in London showed the world the achievements of Britain's Industrial Revolution. Industrialization also spread to the Continent, and by 1860, the United States was also well along that road. In the non-Western world, industrial development was much slower, in large part because European colonial powers deliberately pursued a policy of

preventing the growth of mechanized industry, thus keeping the colonies as purchasers of industrial products.

The Industrial Revolution also transformed the social world of Europe. The creation of an industrial proletariat produced a whole new force for change. The work environment, especially in the new factories and mines, was dreadful, characterized by long hours, unsafe conditions, monotonous labor, and the use of child labor. Eventually, laws were passed to improve working conditions, especially for women and children. Labor unions were also formed to improve wages and conditions but met with limited success. Workers sometimes protested by destroying the factories and machines, as did the Luddites. The Chartist movement petitioned Parliament, calling for the right to vote and other reforms, but the members of Parliament refused the demands. The development of a wealthy industrial middle class presented a challenge to the long-term hegemony of landed wealth. Though that wealth had been threatened by the fortunes of commerce, it had never been overturned. But the new bourgeoisie became more demanding, as we shall see in the next chapter.