

Lesson 2

The Industrial Revolution: What Difference Did it Make?

Introduction

A revolution in production, transport, and communications began in Britain in the late eighteenth century. In its background were a primacy in world trade, Enlightenment ideas of ongoing progress and rationality, improvements in food production, a rapid rise in population, and an increasing demand for cotton textiles and iron. It was a global event from the start, since it relied on interactions with foreign countries for industrial raw materials, markets for manufactured goods, and places to invest. The society-transforming Industrial Revolution spread only gradually, first to Western Europe and the US, and by 1914 to much of the rest of the world.

The revolution came about by harnessing new sources of energy to machinery. It began with the use of coal, steam, and iron, with textiles, railways, and steamships as the most significant early areas of change. By the second half of the nineteenth century, the leading edges of the Industrial Revolution became steel, petroleum, electricity, chemicals, cars, and airplanes.

The results were dizzily-increasing speed and mobility, with a corresponding reduction in both the time and the number of people it took to do a growing number of jobs of different kinds. The occupational changes spelled long-term hardship for some workers and new opportunities for others. Overall, by World War I, living conditions had improved for most but not all of the population in industrialized countries, which had grown significantly in wealth and power relative to non-industrialized ones.

Industrial work itself differed radically from agricultural work. By concentrating work in factories, it moved production out of the home, changed family life, and contributed to the rise of cities and the formation of a self-conscious working class. Parts and people became interchangeable, and workers became depersonalized as “hands.” Work went according to clock and machine time, was repetitive, boring, closely supervised, and gave workers no control over timing, conditions, or nature of the work.

The rapid and massive growth of cities and the boom-bust cycles of expanding economies brought about human and environmental problems. These gradually resulted in governments undertaking new responsibilities. Some of these were regulating industrial workers and work, putting public health measures in place, organizing police forces, and urban planning. Later came compulsory public education and social welfare measures.

Women, the working classes, and peoples in countries that produced raw commodities were exploited, but they also sometimes gained new opportunities. In time, they began organizing and working towards more equal rights and independence. Colonialism and nationalism both influenced, and were influenced by, the Industrial Revolution.

Lesson 2

Student Handout 2.4—People Who Lived It Speak

An American visitor's description of the industrial town of Manchester, England in 1835:

Thirty or forty factories rise on the tops of the hills I have just described. Their six stories tower up; their huge enclosures give notice from afar of the centralization of industry. The wretched dwellings of the poor are scattered haphazard around them. ... The fetid, muddy waters [of the stream are] stained with a thousand colors by the factories they pass. ... These vast structures keep air and light out of the human habitations which they dominate. ...

A skilled worker in France writing in a workingmen's journal, 1842:

Who has not heard ... of the women ... in the spinning and weaving factories of eastern and northern France, working fourteen to sixteen hours (except one hour for both meals); always standing, without a single minute for [rest]. ... Nor should we neglect to mention the danger that exists merely from working in these large factories, surrounded by wheels, gears, enormous leather belts that always threaten to seize you and pound you to pieces. ...

[Women] are obliged to abandon their households and the care of their children to indifferent neighbors. ... If the salary of the male worker were generally sufficient for the keep of his family—as it should be—his wife [could stay at home and look after the household and children.] ... We are convinced that this cannot be achieved without [trade unions].

A Scottish merchant's daughter and abolitionist writing in her book, *A Plea for Woman*, 1843:

Woman's sphere is a phrase which has been generally used to mean the various household duties usually done by her; but this is using the phrase in a very limited sense. ... Taking the phrase in its proper sense, we believe that the best and noblest of women will always find their greatest delight in the cultivation of the domestic virtues. ... Yet we are quite unable to see either the right or the reason which limits her to those occupations and pleasures. ...

If all woman's duties are to be considered as so strictly domestic ... what are we to think of the ... thousands upon thousands of unprotected females, who actually prefer leaving their only proper sphere, and working for their own subsistence—to starvation?

It may be said that this is ... a pity, but cannot be entirely avoided. ... [However,] is it fair to perpetuate those absurd prejudices which make it next to a certain loss of caste for any woman to attempt earning an honest and independent livelihood for herself?

A German industrialist writing about England in his book *On the Obstacles in the Civilization ... of the Lower Classes*, 1844:

Crises of oversupply [occur] at ever shorter intervals [and] wages fall below subsistence level. ... Workers have often tried ... to defy the capitalist, by agreeing not to work below a certain rate of pay.

Usually wasted effort! Capital finds it easier to turn elsewhere and can hold out longer, while the worker is forced to yield at any price in order to live. His limited training and habits do not permit him to transfer to a new trade with new conditions. Large cities are usually the home of such industries as make the State richer and the populace poorer. They cause a race to grow up which ... dissipates the earnings of yesterday in the tavern to-day with no thought of the future; [marries on impulse] or lives in sin, and ... rapidly sinks into misery. ... We demand of the State that it shall not only govern but shall intervene with help. ...

Sources: I. G. Simmons, *Changing the Face of the Earth* (New York: Basil Blackwell, 1989), 205; Susan Groag Bell and Karen M. Offen, eds., *Women, The Family, and Freedom*, Vol. I (Stanford: California UP, 1983), 205-7, 195, 198; Friedrich Klemm, *A History of Western Technology*, trans. Dorothea Waley Singer (Cambridge, Mass.: The MIT Press, 1964), 305.

Lesson 2***Student Handout 2.5—By-Products of the Industrial Revolution***

A British Member of Parliament writing to the Viceroy of India, 1849:

If we could draw a larger supply of cotton from India it would be a great national object. ... It is not a comfortable thing to be so dependent [for cotton] on the United States. ... If we had the Bombay railway carried into the cotton country, it would be a [big help, since bullock carts travel at only 16 kilometers a day and the cotton bales get ruined by rain and dust.]

Report of an English administrator to the Colonial Office, 1869:

Railways are opening the eyes of people who are within reach of them in a variety of ways. They teach them that time is worth money ... that speed attained is time, and therefore money, saved or made. They show them that others can produce better crops or finer works of art than themselves, and set them thinking why they should not have sugarcane or brocade equal to those of their neighbours. They introduce them to men of other ideas, and prove to them that much is to be learnt beyond the narrow limits of the little town or village which has hitherto been the world to them.

Summary of laws relating to public health passed in British Parliament by 1875:

Vaccination of babies was made compulsory. Local authorities were ordered to cover and keep sewers and drains repaired; to ensure that people had enough pure water available; to clean streets and collect garbage; to provide street lighting; to buy and demolish slum housing if owners did not keep it in good repair; and to appoint sanitary inspectors.

After the formation of the German Social Democratic Party in 1875, German Chancellor Bismarck introduced legislation whereby the state insured workers against sickness and accident, and provided old age and disability benefits. He stated:

Give the working-man the right to work as long as he is healthy ... assure him care when he is sick; assure him maintenance when he is old. ... I believe that [our democratic friends] will [pipe] in vain [trying to attract voters to their program] as soon as working-men see that the Government and legislative bodies are earnestly concerned for their welfare.

Report by a British Member of Parliament to the Colonial Office, 1887:

In the postal and telegraphic services the empire of our Queen possesses a cohesive force which was utterly lacking in [earlier empires]. Stronger than death-dealing war-ships, stronger than the might of devoted legions, stronger even than the unswerving justice of Queen Victoria's rule, are the scraps of paper that are borne in myriads over the seas, and the two or three slender wires that connect the scattered parts of her realm.

Statement of goals adopted at a Party Congress of the German Social Democratic Party, 1891:

With the extension of the world's commerce and of production for the world market, the position of the worker in every country grows ever more dependent on the position of workers in other countries. ... The Social Democratic Party of Germany ... combats, within existing society, not only the exploitation and oppression of wage earners, but every kind of exploitation and oppression, whether directed against a class, a party, a sex, or a race.

Sources: Daniel R. Headrick, *The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850-1914* (New York: Oxford UP, 1988), 60, 97-8; Michael Adas, *Machines as the Measure of Men* (Ithaca: Cornell UP, 1989), 226; William M. Frazer, *A History of English Public Health: 1834-1939* (London: Baillière, Tindall, and Cox, 1950), *passim*; William H. Dawson, *Bismarck and State Socialism: An Exposition of the Social and Economic Legislation of Germany Since 1870* (London: Swan Sonnenschein, 1890), 34-5; Bertrand Russell, *German Social Democracy* (New York: Simon and Schuster, 1965), 139.