

HARDSHIPS OF EARLY INDUSTRIAL LIFE

The New Industrial City

urbanization - movement of people to cities

- changes in farming, soaring pop. growth, demand for workers led masses of people to migrate from farms to cities
- Manchester, England - center of the textile industry
 - pop. in 1750s - 17,000 pop. in 1780 - 40,000 pop. in 1801 - 70,000
- upper and middle class lived in pleasant neighborhoods, while the poor lived in dirty, overcrowded tenement buildings

The Factory System

Rigid Discipline - work shifts - 12-16 hrs., no safety devices on machines - workers lost fingers, limbs and sometimes their lives

- no health benefits - sick or injured workers were fired

Women Workers - employers preferred women to men: 1. thought women would adapt more easily to machines, 2. they were easier to manage, 3. were paid less than men

- long work days had negative impact on family life

Child Labor - parents in favor of child labor - helped increase family income

- children worked long hours for little pay in factories and mines
- children accused of working too slowly were beaten by their overseers

The Working Class

Protests - Luddites - weavers, skilled artisans who burned factories and destroyed machines that cost them their jobs

- Luddites were hanged or shipped off to Australia (prison colonies)
- labor unions and strikes were outlawed

Spread of Methodism - John Wesley - founded the Methodist Church

- Methodist preachers went into city slums, tried to restore self-confidence and hope among the working poor
- they told workers to focus on social reform, not revolution

The New Middle Class

- businessmen, merchants, inventors benefited most from the Industrial Revolution
 - they lived in nice homes, dressed well, ate large meals, hire servants
 - valued hard work as a way to "get ahead"
 - thought poor people brought on their own misery - laziness and ignorance would keep them in poverty

NEW WAYS OF THINKING

Laissez-Faire Economics - physiocrats (Enlightened thinkers who studied economic reform) proposed a "hands off" approach - govt. should not interfere in the free operation of the economy - became a popular idea among middle-class business leaders in the early 1800s

Adam Smith - Scottish economist who became the most well-known proponent of laissez-faire economics - wrote *The Wealth of Nations* - believed that a free market (the unregulated exchange of goods and services) would eventually help everyone, not just the rich - he said that in a free market, increase in production of goods -> lowered prices -> goods would be affordable to everyone

- a growing economy would encourage capitalists to reinvest profits in new ventures

Thomas Malthus - English political economist who believed that pop. growth would outpace the food supply - said the only checks on pop. growth were war, disease, and famine - the poor would suffer as long as the pop. continued to increase, so he urged families to have fewer children - his prediction would prove to be false (food supply would keep up with pop.)

David Ricardo - English economist who proposed the "iron law of wages": when wages were high, families had more children -> greater supply of labor -> lower wages, higher unemployment - he didn't think the working class would be able to escape poverty

- Malthus and Ricardo opposed any govt. help for the poor - the "way out" was through thrift, hard work, and limiting family size

The Utilitarians - by 1800, Jeremy Bentham was preaching utilitarianism, the idea that the goal of society should be "the greatest happiness for the greatest number" of its citizens (he said all laws and actions should be judged by their "utility")

John Stuart Mill - Bentham's chief follower - favored govt. intervention to improve the lives of the working class - called for giving suffrage to working class and women, worked for reforms in areas such as child labor and public health

- most middle-class people rejected Mill's ideas of utilitarianism, but his views slowly gained acceptance by the late 1800s

Emergence of Socialism - under socialism, the people as a whole, rather than private individuals, would own and operate the means of production (farms, factories, railways, other large businesses that produced/distributed goods)

- socialists wanted to develop a world in which society would operate for the benefit of all members, rather than just for the wealthy

The Utopians - early socialists who envisioned self-sufficient communities in which all work was shared and all property owned in common

Robert Owen - Welsh mill owner who became a successful industrialist - set up his factory in New Lanark, Scotland, as a model village: he built homes for workers, opened a school for children, treated his employees well - showed that an employer could offer decent living/working conditions and still run a profitable business

The "Scientific Socialism" of Karl Marx - German philosopher and socialist who said the Utopians were unrealistic idealists - along with fellow socialist Friedrich Engels, he published *The Communist Manifesto* - 1848 - his book said that economics was the driving force in history, and that the entire course of history was "the history of class struggles"

- communism - form of socialism that sees class struggle between employers and employees as unavoidable
- Marxism - the bourgeoisie or middle class (the "haves") owned the means of production, thus controlled society and all its wealth
- proletariat - the working class (the "have-nots") would rise up against the "haves" and take over the means of production -> proletariat would set up a classless, communist society
 - Marx believed capitalism was evil - said it created prosperity for only a few & poverty for many - called for an international struggle to bring its downfall (proclaimed, "Working men of all countries, unite!")

Failures of Marxism - he predicted that the misery of the proletariat would touch off a world revolution - by 1900, efforts of reformers and govts. led to improved conditions for the working class -> Marxism lost some of its appeal in industrially developed countries - also predicted that workers of the world would unite across national borders to wage class warfare - in reality, nationalism won out over working-class loyalties, people felt stronger ties to their own countries than to an international communist movement

Revolutions - late 1800s - Russian socialists embraced Marxism, Russian Revolution of 1917 set up a communist-inspired govt. - some independence leaders in the 20th century turned to Marxism

THE INDUSTRIAL REVOLUTION SPREADS

New Industrial Powers

The New Pacesetters - 1807 - British mechanic William Cockerill opened factories in Belgium to make spinning and weaving machines - Belgium became first European nation outside Britain to industrialize - Germany, France, and the U.S. began to compete with Britain (they all have more abundant supplies of coal, iron and other resources than did Britain)

- Germany - united as one nation in 1871 - by the early 20th century, became Europe's leading industrial power
- U.S. - by 1900, led the world in production

Uneven Development - other nations industrialized more slowly (those lacking resources and capital) - despite lacking basic resources, Japan industrialized rapidly after 1868

Impact - demand for goods created jobs, as did the building of cities, RRs, and factories

- globally, fierce competition between industrial nations began

Technology and Industry

Steel - Henry Bessemer - 1856 - British engineer who invented steel (made through a process of purifying iron ore) - steel was lighter, harder, more durable than iron - soon a new process allowed steel to be produced more cheaply - became the major material in tools, bridges, RRs

Chemicals - new products: aspirin, perfumes, soaps, fertilizers,

- Alfred Nobel - 1866 - Swedish chemist who invented dynamite (explosive much safer than others used at the time) - widely used in construction and warfare
- his will funded the Nobel prizes

Electricity - in the late 1800s, replaced steam as the dominant source of industrial power

- 1800 - Alessandro Volta - first battery
- Micael Faraday - dynamo (machine that generates electricity)
- Thomas Edison - 1870s - first electric light bulb - used to light cities

New Methods of Production - interchangeable parts - identical components that could be used in place of one another - simplified both assembly and repair

- assembly line - workers add parts to a product that moves along a belt from one work station to the next - made production faster and cheaper -> lowered prices of goods

Technology Speeds Transportation and Communication

The Automobile Age Begins - Nikolaus Otto - German engineer who invented the gas-powered internal combustion engine

- 1886 - Karl Benz - patent for first 3-wheeled auto - 1887 - Gottlieb Daimler - first 4-wheeled auto - Henry Ford - American who mass-produced cars, making the U.S. a leader in the auto industry

Conquest of the Air - 1903 - Orville and Wilbur Wright flew the first airplane at Kitty Hawk, NC - commercial passenger travel began in the 1920s

Rapid Communication - Samuel Morse - American who invented the telegraph - sent coded messages over electric wires - by the 1860s, undersea cable relayed messages from Europe to North America

- 1876 - Alexander Graham Bell invented the telephone
- 1890s - Guglielmo Marconi invented the radio

New Directions for Business

Rise of Big Business - formation of corporations - businesses that are owned by many investors who buy shares of stock

Move Toward Monopolies - powerful business leaders created monopolies and trusts, huge corporate structures that controlled entire industries or areas of the economy

- German Alfred Krupp bought up coal and iron mines as well as ore-shipping lanes that fed the steel business
- John D. Rockefeller - American who built Standard Oil Company into an empire (he controlled oil wells, refineries, and pipelines to dominate the petroleum industry)
- some groups of large corporations joined to form a cartel, association that fixed prices, set production quotas, controlled markets

Move Toward Regulation - reformers called for laws to prevent monopolies and regulate large corporations (they believed that efforts to destroy competition were damaged the free-enterprise system)