

Chapter 18 Outline - The Machine Age, 1877–1920

- I. Introduction

Industrialization increased significantly between 1877 and 1920 in the United States. This development had momentous effects on standards of living and on the nature of everyday life.

- II. Technology and the Triumph of Industrialism

- A. Birth of the Electrical Industry

Thomas Edison founded the Edison Electric Light Company, perfected the incandescent bulb, and devised a power generation and distribution system.

George Westinghouse's use of alternating current made transmission of electric power over long distances cheaper than Edison's direct current method.

- B. Henry Ford and the Automobile Industry

Henry Ford's use of assembly-line methods in the automobile industry made cars more readily available.

- C. Carnegie and Steel

Andrew Carnegie invested heavily in the best steel-producing technologies. He built his first steel plant near Pittsburgh but soon purchased other mills. He quickly became a primary supplier to the railroads, barbed wire makers, tubing manufacturers, and other end users.

- D. The Du Ponts and the Chemical Industry

Du Pont broadened its production to include a number of chemical products. The company also used innovative management, accounting,

and investment procedures.

- E. Technology and Southern Industry

Invention of a machine to roll cigarettes combined with the marketing techniques of James B. Duke made the American Tobacco Company a large nationwide business by 1900.

Electric looms contributed to the growth of southern textile industry and led to the emergence of mill towns in the South.

Northern and European capitalists financed the emergence of the lumber industry and the development of iron and steel manufacturing in the South.

- F. Consequences of Technology

New machines introduced in the late nineteenth century altered the economy and everyday life. Technological innovations also led to the emergence of large companies that could take advantage of economies of scale.

- G. Frederick W. Taylor and Efficiency

With industrialization, efficient production became crucial to profits. Frederick W. Taylor's methods of scientific management greatly influenced American thinking.

- III. Mechanization and the Changing Status of Labor

- A. Mass Production

Technological innovation and assembly-line production increased the productivity of workers. As mass production transformed workers into employees rather than producers, manufacturing was subdivided into small, repetitive, specialized operations.

Now regulated by the clock and production experts, employees

resisted their loss of independence in various ways.

- B. Restructuring of the Work Force

Employers cut labor costs by hiring more women, particularly for clerical and sales positions. Consequently, the number of women in domestic-service jobs decreased sharply while the number of women who were typists, bookkeepers, and sales clerks increased dramatically.

A larger number of children began working in nonagricultural jobs, performing light tasks at low wages.

- C. Industrial Accidents

Repetitive tasks dulled concentration, often resulting in serious injury, and industrial accidents increased steadily.

- D. Freedom of Contract

Many employers believed in the principle of “freedom of contract,” which allowed them to pay their workers as little as possible.

- E. Court Rulings on Labor Reform

The Supreme Court overturned most hour laws, but in *Muller v. Oregon*, it allowed limiting women to ten-hour days, citing their health as a matter of public interest.

- IV. Labor Protest and the Union Movement

- A. Railroad Strikes of 1877

The year 1877 witnessed a violent series of strikes aimed at the railroads. Hard times precipitated the incidents, and the strikers enjoyed the sympathy of other workers.

- B. Knights of Labor

The Knights of Labor accepted all workers and advocated a harmony of interests among its members. Because the union opposed strikes, it had little bargaining power.

- C. Haymarket Riot

In 1886, a demonstration at Haymarket Square in Chicago erupted into a riot that revived middle-class fears of unions.

- D. American Federation of Labor

The American Federation of Labor emerged as the major union. A craft union, the AFL pressed for shorter hours and the right to bargain collectively.

- E. Homestead and Pullman Strikes

In 1892, workers at the Homestead plant of the Carnegie Steel Company went on strike. After guards of the Pinkerton Detective Agency were attacked and routed by striking workers, Pennsylvania state troops intervened and ultimately crushed the strike.

In 1894, workers at the Pullman Palace Car Company went on strike. Grover Cleveland, to ensure mail deliveries, sent troops to put down the strike.

- F. Labor and Violence in the West

Especially violent strikes erupted in the mining industry. Private armies, state militias, and federal troops were necessary to stem the violence, but property damage and injuries were common. Occasionally, there were deaths as well.

- G. IWW

Like the Knights of Labor, the IWW welcomed all workers, but it also

advocated socialism and espoused the use of violence and sabotage.

- H. Women Unionists

Many unions denied the inclusion of women workers, leading female employees to organize their own unions.

- I. The Experience of Wage Work

Only a small percentage of American wage workers belonged to unions in the late nineteenth and early twentieth century. Unions excluded most immigrant and black workers.

In an attempt to cope with the pressures of the machine age, nonunionized workers increasingly turned to fraternal societies.

- V. Standards of Living

- A. Commonplace Luxuries

Products once considered luxuries became increasingly available to middle-class Americans during the late nineteenth century.

- B. Cost of Living

Wage increases meant little because the cost of living rose faster than wages. Many working-class Americans could not afford the goods and services that the age offered.

- C. Supplements to Family Income

By sending children and women into the labor force, or by renting rooms to boarders, many families earned enough to buy newly available goods.

- D. Higher Life Expectancy

Technological and medical advances extended life spans during this

period. Nevertheless, more people died of cancer, heart disease, murder, and automobile accidents.

Education was a major key to upward mobility, and public education was accessible to more people than ever before.

- E. Flush Toilets and Other Innovations

The flush toilet, which became a standard fixture in middle-class urban homes in the 1890s, caused a shift in habits and attitudes.

Mass-production of tin cans along with the advent of refrigerated railroad cars made available a wider variety of foods to different areas of the country.

- F. Dietary Reform

The introduction of ready-to-eat cereal and the discovery of the dietetic value of vitamins A and B led to a healthier American diet.

- G. Ready-Made Clothing

Sewing machines led to mass-produced clothes at low costs and uniform sizes, sparking an interest in fashions.

- H. Department and Chain Stores

Department stores fueled consumerism. Also, the Great Atlantic and Pacific Tea Company (A&P) became the first grocery supermarket.

- I. Advertising

As supply outpaced demand, advertising helped persuade large groups of people to buy a specific product. Advertisers, mostly through newspapers, were hired to create consumers who were loyal to a particular brand (“consumption communities”).

- VI. The Corporate Consolidation Movement

- A. Rise of Corporations

Corporations provided an effective means to raise capital and many saw them as a way to break boom-and-bust cycles. Courts defined corporations as individuals and protected them under the Fourteenth Amendment.

- B. Pools and Trusts

Consolidation swept the United States. Congress outlawed pools, one popular device, in 1887. Rockefeller used a “trust” to achieve horizontal integration of the petroleum industry.

- C. Holding Companies

The emergence of holding companies led to vertical integration within some industries.

- D. Financiers

Corporate growth brought the rise of experts in financial organization. These men sold stock and borrowed from banks, driving the trading of stocks to a feverish level.

- VII. The Gospel of Wealth and Its Critics

- A. Government Assistance to Business

Paradoxically, businessmen wanted government help in the form of subsidies, loans, and tariffs. They argued, however, against government assistance for labor.

- B. Dissenting Voices

Critics said that trusts and other devices interfered with the American tradition of independence and opportunity.

Some critics, such as Henry George and Edward Bellamy, offered economic ideas aimed at the creation of a utopian society.

- C. Antitrust Legislation

A few state governments moved to limit monopolies, and in 1890, Congress passed the Sherman Anti-Trust Act. The law was vague and had little immediate effect on trusts since the courts rendered pro-business decisions.