CHAPTER 18

*An Industrial Giant*

**ANTICIPATION/REACTION**

*Directions:* Before you begin reading this chapter, in the column entitled “Anticipation” place a check mark beside any of the following seven statements with which you now agree. When you have completed your study of this chapter, come back to this section and in the column entitled “Reaction” place a check mark beside any of the statements with which you then agree. Note any variation in the placement of check marks from Anticipation to Reaction and explain why you changed your mind.

<table>
<thead>
<tr>
<th>Anticipation</th>
<th>Reaction</th>
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<tbody>
<tr>
<td>1. _____ Between 1870 and 1900, led by businessmen, Americans glorified material wealth.</td>
<td>_____ 1.</td>
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<tr>
<td>2. _____ In the late nineteenth century, the United States’ national economy was characterized by the decentralization of wealth and ever-expanding opportunities for all.</td>
<td>_____ 2.</td>
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<td>3. _____ The first “big business” in the United States was the steel industry, made possible by the invention of the Bessemer process and the organizational skills of Andrew Carnegie.</td>
<td>_____ 3.</td>
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<td>4. _____ Thomas Edison invented, patented, and profited from the typewriter, telephone, and incandescent light bulb.</td>
<td>_____ 4.</td>
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<td>5. _____ Late-nineteenth-century reformers in the United States blamed the uneven distribution of wealth in the nation on the federal tax system and the growing power of federal regulatory commissions.</td>
<td>_____ 5.</td>
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<td>6. _____ Early national labor unions found it hard to curry public support because they planned and participated in violent labor-management confrontations like the Haymarket riot.</td>
<td>_____ 6.</td>
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<td>7. _____ The American Federation of Labor (AFL) enjoyed solid and growing support at the end of the nineteenth century because it denounced the strike as a tool for winning concessions from management.</td>
<td>_____ 7.</td>
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LEARNING OBJECTIVES

After reading Chapter 18 you should be able to:

1. Evaluate the importance of railroads to the development of the national economy in the late nineteenth century.
2. Describe the impact of Andrew Carnegie in the establishment of the steel industry, and compare it to the impact of John D. Rockefeller in the petroleum industry; focus on why “concentration” was the tendency in these and other enterprises in the late nineteenth century.
3. Assess the traditional support for free enterprise among late-nineteenth-century Americans, along with their interest in government regulation of business.
4. Compare and contrast the ideas of Henry George, Edward Bellamy, and Henry Demarest Lloyd, and compare and contrast their ideas to those of late-nineteenth-century Marxian socialists.
5. Elaborate the conditions that gave rise to labor unions and labor violence in the late nineteenth century.

CHAPTER OVERVIEW

Essentials of Industrial Growth

Between the end of the Civil War and the beginning of the twentieth century, the United States was transformed into a world industrial power at a pace not previously seen in history. Great Britain and Germany, the most prosperous European nations, lagged behind the United States. The gross national product increased by 44 percent between 1874 and 1883. The consequences for the nation’s political institutions were profound.

The discovery of new natural resources, a vigorous and expanding population, foreign investment capital, and a growing national market shielded by protective tariffs all contributed to the flourishing of manufacturing enterprise. In the name of progress, business glorified material wealth. Such attitudes produced a generation of robber barons who, in their search for wealth, engaged in such corrupt practices as stock manipulation, bribery, cutthroat competition, and monopoly. Many immigrants viewed America as a land of opportunity, though some became mired in grinding poverty and struggled for survival in dreary, unhealthy living conditions.

New machinery increased productivity in industry and agriculture, but it also displaced increasingly dependent workers and farmers. Expanded industry affected nearly everyone, making available such consumer goods as packaged cereals, canned foods, ready-made clothing, and cigarettes. The perfection of the typewriter revolutionized the performance of office work. George B. Eastman pioneered the development of mass-produced film and the simple but efficient Kodak camera.

Railroads: The First Big Business

Railroads were probably the most significant element in American economic development in the last quarter of the nineteenth century. With high fixed costs, railroads needed to carry as much
traffic as possible in order to net a profit, so they constructed feeder lines to draw business to the main “trunk” lines. Among the first railroads was Cornelius Vanderbilt’s New York Central, which ultimately operated between New York City and the principal midwestern cities. Thomas Scott’s Pennsylvania Railroad also linked Philadelphia and Pittsburgh to several midwestern cities. The Baltimore and Ohio railroad also gained access to Chicago, which became the nation’s railroad hub. In the Southwest, Jay Gould consolidated the Kansas Pacific, Union Pacific, and Missouri Pacific. In the Northwest, Henry Villard and James J. Hill built their respective Northern Pacific and Great Northern. Northern capitalists controlled most trunk lines in the South.

Railroads charged what the market would bear, more for manufactured goods and less for bulky products like wheat or coal. The railroads stimulated the economy, particularly in rural areas with undeveloped resources. Technological advances in railroading such as the air brake, steel track, and Pullman sleeping car also accelerated economic development. To speed the settlement of new regions, the land-grant railroads sold land cheaply and on easy terms. They offered reduced rates to travelers interested in buying farms.

Iron, Oil, and Electricity

The giant steel industry that emerged after the Civil War was a result of the Bessemer process, perfected independently by Henry Bessemer of Great Britain and William Kelly of Kentucky. Steel could be mass-produced in locations near the Mesabi iron-ore fields of Lake Superior and the coal deposits surrounding Pittsburgh. Petroleum production, pioneered in the drilling of a well in Pennsylvania by Edwin L. Drake, provided lubricants and kerosene decades before gasoline was needed to power the internal combustion engine.

The telephone and electric light were two other technical advances meant to serve a high-speed, urban civilization that put great stress on communication. Alexander Graham Bell’s telephone successfully competed against Western Union’s telegraph. By 1900, American Telephone and Telegraph dominated the phone business. At Menlo Park, New Jersey, Thomas Edison built the prototype of the modern research laboratory from which came patents on the phonograph, motion picture projector, storage battery, mimeograph, and incandescent light bulb. In 1882, Edison opened a power station in New York and successfully demonstrated that electricity could be a substitute for steam power in factories, and the electric power industry expanded rapidly.

Competition and Monopoly: The Railroads

Economies of large-scale operations, the cost of new machine technology, and the downward trend in prices after 1873 (deflation) created intense competition in the railroad industry. This led to ownership of the railroads concentrating in fewer hands. According to classical economists, competition advanced the public interest by keeping prices low, but, in practice, it also cut deeply into railroad profits, causing the lines to try to increase the volume of goods they hauled.

Amid such competition pressures, the railroads offered rebates, passes, and even drawbacks (rebates on the business of the shippers’ competitors) to large shippers. Small shippers, therefore, suffered rate discrimination and found that they sometimes paid two to three times the
price per mile for sending goods as their larger rivals. Cutthroat competition made it difficult to run a railroad both honestly and profitably. Railroads constantly reorganized to improve efficiency or just to survive, and these reorganizations combined the large railway systems under the control of such financiers as J. P. Morgan.

**Competition and Monopoly: Steel**

The iron and steel industry was also intensely competitive. In the steel industry, fast developing technology put a premium on efficiency to avoid obsolescence, and transportation improvements brought even widely separated producers into competition.

Andrew Carnegie, the kingpin of the steel industry, expanded his production capabilities in bad times, when it cost considerably less to do so. Carnegie could hence buy out competitors during business panics. He also grasped the importance of technology by employing top-flight specialists and chemists to keep setting new records in steel production. Carnegie was a merciless competitor, but he believed that great wealth entailed social responsibilities; so, after he mastered the steel industry, he retired to devote himself to philanthropy. In 1901, J. P. Morgan bought out the Carnegie Steel Company and created United States Steel, the world’s first billion-dollar corporation.

**Competition and Monopoly: Oil**

The pattern of fierce competition leading to combination and monopoly is best illustrated by the history of the petroleum industry. The Standard Oil Company, founded by John D. Rockefeller, emerged as the giant in the industry. Rockefeller exploited technical advances and persuaded or coerced competitors to sell out. By 1879, he controlled over 90 percent of the nation’s oil-refining capacity, along with a network of pipelines and petroleum reserves. A meticulous organizer, Rockefeller had a profound grasp of the economies of large-scale production.

After achieving his monopoly, Rockefeller organized the Standard Oil trust in order to evade Ohio laws that forbade his company from operating in other states. Therefore, his board of nine trustees could manage Rockefeller holdings across state lines. The Rockefeller trust was intended to centralize and streamline the operation of his far-flung petroleum holdings in the interest of efficiency, stability, and profit.

**Competition and Monopoly: Retailing and Utilities**

The pattern of competition leading to dominance by a few huge companies was repeated in many businesses. Telephone and electric lighting companies established monopolies to offset costly duplication of equipment and loss of service efficiency. Thomas Edison realized little profit from his invention of the electric light; he complained that his patents were mainly “invitations to lawsuits.” In 1892, Edison merged with his main competitor to form the General Electric Company. Thereafter, GE and Westinghouse dominated electric utilities.

In retailing, the period saw the growth of urban department stores, particularly the firms of John Wanamaker in Philadelphia, Alexander Stewart in New York, and Marshall Field in Chicago.
These merchants advertised heavily and offered lower prices than traditional stores, efficient service, and money-back guarantees. Similarly, three giant firms dominated the life insurance business.

**Americans’ Ambivalence to Big Business**

Many late-nineteenth-century Americans embraced laissez-faire—the notion that government should not interfere in economic matters. Charles Darwin’s theses on nature’s ways spurred the belief in inevitable progress guided by the natural selection of individual organisms best adapted to survive in a particular environment. This “survival of the fittest” ideology, or social Darwinism, fit well with Americans’ view of their own experience and seemed to offer scientific evidence that free competition (natural selection) advanced the common good. Rhetoric aside, many Americans saw no contradiction between their devotion to free enterprise and accepting some types of government regulation of business. Most entrepreneurs did not hesitate to accept government aid, whether railroad subsidies or protective tariffs, banking laws or public land grants.

But the growth of huge industrial and financial organizations, while they lowered prices, created the fear that monopolists were destroying economic opportunity and threatening democratic institutions. People worried about the political influence of wealthy tycoons and the security of republican institutions in the face of the growing disparity between rich and poor in America. Talk persisted of the likelihood of a future autocracy of wealth or revolutionary socialism.

Former President Hayes in 1890 denounced the “evils of the money piling tendency,” which he claimed rewarded the wealthy too generously. Business leaders defended the concentration of wealth, although Andrew Carnegie in his “Gospel of Wealth” said that the rich should use their money philanthropically to “produce the most beneficial results for the community.” Many clergymen denounced unrestrained competition, which they considered un-Christian. The new American Economic Association denounced laissez-faire and declared government aid “an indispensable condition of human progress.”

**Reformers: George, Bellamy, Lloyd**

The popularity of some radical social theorists reflected the public’s anxiety. Henry George, in *Progress and Poverty*, attacked the nation’s uneven distribution of wealth, arguing that only a single tax on land could prevent the disparity between rich and poor from growing larger. Though George lost his race for mayor of New York City, single-tax clubs sprang up nationwide. Edward Bellamy’s utopian novel, *Looking Backward, 2000-1887*, described a future socialistic America in which all economic activity was carefully planned and all citizens shared equally. Bellamy maintained that such a state would arrive without violence or revolution. A third assault on monopoly was Henry Demarest Lloyd’s *Wealth Against Commonwealth*, which denounced Standard Oil and the concepts of Social Darwinism and laissez-faire.

None of these writers questioned the underlying values of the middle-class majority, and all of them insisted that reform could be accomplished without serious inconvenience to any individual or class. Most of their readers never considered trying to apply the reformer’s ideas.
Reformers: The Marxists

Marxian ideas, which claim that the state should own all the means of production, reached America in the 1870s. Laurence Gronlund, in *The Cooperative Commonwealth*, viewed competition as “established anarchy,” middlemen as “parasites,” and speculators as “vampires,” yet he was a proponent of peaceful, orderly reform. More radically, Daniel De Leon, a follower of George, Bellamy, the Knights of Labor, and Marx, claimed that workers could not improve their lot until they joined his revolutionary Socialist Labor party.

The Government Reacts to Big Business: Railroad Regulation

Political action related to the growth of big business came first at the state level of government. The National Grange of the Patrons of Husbandry, founded in 1867 by Oliver Kelley, promoted regulation of the railroads. Granger-dominated state legislatures enacted legislation to outlaw freight rate discrimination, but railroads claimed that this deprived them of their property without due process of law.

In *Munn v. Illinois*, the Supreme Court ruled that any business that served a public interest, such as a railroad, was subject to government regulation; therefore, the state Granger laws were constitutional. But railroad regulation by the states, inefficient from the start, was further hampered in 1886 when the Supreme Court seemed to reverse the *Munn* decision when it declared in the *Wabash* case that an Illinois law that forbade long- and short-haul inequities was unconstitutional—only the federal government, said the court, could regulate interstate shipments.

In 1887, the Interstate Commerce Act, designed to outlaw the excesses of competition, declared that railroad rates should be reasonable and just. Moreover, rebates and other competitive practices were declared unlawful. However, the Interstate Commerce Commission could not fix rates; it could only take the railroads to court when it considered rates unreasonably high. While the ICC, the first federal regulatory commission, challenged laissez-faire, it did not undertake a radical assault on private property as its critics feared. Later legislation made the ICC more effective, and it subsequently became a model for federal regulatory agencies in the twentieth century.

The Government Reacts to Big Business: The Sherman Antitrust Act

As with railroad regulation, antitrust laws originated in state legislatures, but they too were generally ineffective. The federal Sherman Antitrust Act (1890), designed to restore competition, declared illegal any combination “in the form of a trust or otherwise” that was “in restraint of trade or commerce among the several states, or with foreign nations.” The loosely worded act allowed questionable business combinations to continue.

Critics said that the law was designed more to quiet public clamor for action against the trusts than in breaking up any of the new business combinations. The Supreme Court emasculated the law in *United States v. E. C. Knight Company*, which held that the American Sugar Refining Company had not violated the law by taking over its competitors. Although the trust controlled
98 percent of all U.S. sugar refining, the court held it was not restraining trade and thus did not violate the Sherman Act. This decision precipitated a wave of business mergers.

The Labor Union Movement

Unionization was the workers’ response to big corporations—unions were combinations designed to eliminate competition for jobs and to provide efficient organization for labor. Early labor leaders tended to be visionaries out of touch with the practical needs of the workers. They promoted worker cooperatives and opposed the wage system and strikes. The Knights of Labor, headed by Uriah Stephens and Terence Powderly, urged that workers “own and operate” mines, factories and railroads. The Knights rejected the traditional grouping of workers by crafts and admitted blacks, women, immigrants, skilled and unskilled workers, and endorsed the eight-hour day.

The Knights attracted a huge membership in the 1880s, but the public was alienated by its inability to control local acts of violence and intimidation. Membership was already declining when, in 1886, anarchists called a protest meeting at Haymarket Square after a striker was killed at a plant in Chicago. When police intervened, someone threw a bomb into their ranks, killing seven officers.

The American Federation of Labor

The Knights of Labor suffered in public perception due to the Haymarket tragedy even though the union was not responsible for the riot. The new American Federation of Labor (AFL), founded as a craft union by Samuel Gompers, understood that most workers would remain wage earners, and emphasized a sense of common purpose, pride, and companionship. The AFL avoided direct involvement in politics, focused on “bread and butter” issues of wages, hours, and working conditions, and relied heavily on strikes, which were used to win concessions from employers and to attract recruits. Gompers’ approach to labor problems produced solid gains, with membership reaching more than a million by 1901.

Labor Militancy Rebuffed

Most employers, frightened by the uncertainties of their times, behaved like tyrants when dealing with their workers. Employers frequently discharged workers who tried to organize unions and failed to provide rudimentary protections against injury on the job. Many employers considered workers who joined unions to be “disloyal,” but they still treated labor as a commodity to be purchased as cheaply as possible.

Labor disputes sometimes turned violent. In 1877, President Hayes dispatched troops to halt a general rail strike in the Southwest. In 1892, violent strikes broke out among Idaho silver miners and at Carnegie’s Homestead, Pennsylvania, steel plant. At Homestead, strikers seeking higher wages attacked private guards hired to protect strikebreakers and seven guards were killed. The attack brought sympathy to the company and turned the public against the strikers.
The most important strike occurred in 1894, when Pullman Palace Car workers walked out in protest against wage cuts. Eugene Debs of the American Railway Union organized the workers. President Cleveland dispatched troops to ensure movement of the mails. When Debs defied a federal injunction to end the walkout, he was jailed for contempt, and the strike was broken.

Whither America, Whither Democracy?

Each year more of the nation’s wealth and power seemed to fall into fewer hands. As with the railroads, other industries appeared to be increasingly dominated by bankers. The banking firm of J. P. Morgan controlled railroad, steel, electric, agricultural machinery, rubber and shipping companies, two life insurance companies, and several other banks. This centralization of control increased production efficiency and living standards rose, but some questioned how ordinary people would be affected when a few tycoons with huge fortunes commanded extraordinary influence in Congress and the courts. What would be the ultimate effect of big business on American democracy?

PEOPLE, PLACES, AND THINGS

Define the following:

feeder lines _______________________________________________________________________

long-haul/short-haul inequity _______________________________________________________________________

rebates _______________________________________________________________________

trust _______________________________________________________________________

“survival of the fittest” _______________________________________________________________________

laissez-faire _______________________________________________________________________

social Darwinism _______________________________________________________________________


“Granger laws”

injunction

collective bargaining

Describe the following:

New York Central

Bessemer process

Standard Oil

General Electric

U.S. Steel

Progress and Poverty

Wealth Against Commonwealth

National Grange of the Patrons of Husbandry

Interstate Commerce Commission
Knights of Labor

Pullman strike

Identify the following:

Jay Gould

Alexander Graham Bell

J. Pierpont Morgan

Andrew Carnegie

John D. Rockefeller

William Graham Sumner

Edward Bellamy

Terence V. Powderly

Samuel Gompers
MAP EXERCISE

Refer to the map on the next page. Place the appropriate letter that represents the route followed by the respective railroad. Consult an historical atlas if necessary.

_____ 1. Atchison, Topeka, and Santa Fe  _____ 2. Baltimore and Ohio
_____ 3. Central Pacific  _____ 4. Chicago, Burlington and Quincy
_____ 5. Erie  _____ 6. Great Northern

SELF-TEST

Multiple-Choice Questions

1. American manufacturing flourished in the late nineteenth century because
   A. of the discovery and exploitation of new natural resources.
   B. the protective tariff policy shielded the growing national market from foreign competition.
   C. European immigrants provided cheap labor.
   D. all of the above.
2. Probably the most significant element in late-nineteenth-century economic development was
   A. oil refining.
   B. steel production.
   C. electric power.
   D. railroad operations.

3. The dominant system builder of Southwest railroads in the late nineteenth century was
   A. Cornelius Vanderbilt.
   C. Thomas Scott.
   D. Henry Villard.

4. What first turned steel from a rare metal into a mass-produced commodity was the
   A. Bessemer process.
   B. sluice box.
   C. rolling press.
   D. open-hearth method.

5. The first corporation to have a capitalization of over $1 billion was
   A. Standard Oil of Ohio.
   B. General Electric.
   C. American Sugar Refining Company.
   D. United States Steel.

6. Thomas Edison invented all the following EXCEPT the
   A. phonograph.
   B. electric light bulb.
   C. telephone.
   D. motion picture projector.

7. To improve their profit margin, railroads did all of the following EXCEPT
   A. give discounts to short-haul customers.
   B. give away land to attract new business.
   C. pay drawbacks to good customers.
   D. provide rebates to large volume shippers.

8. The railroads, oil companies, and steel corporations were driven to concentrate ownership in fewer and fewer hands because of
   A. greed for profits.
   B. intense competition.
   C. compulsion to control.
   D. fear of government regulation.

9. Andrew Carnegie’s success in the steel industry was largely due to his
   A. grasp of the importance of technological improvements.
   B. ability to choose good subordinates.
   C. ruthless competitiveness.
   D. all of the above.
10. The first oil well drilled in the United States was in
   A. Oklahoma.
   B. Ohio.
   C. Texas.
   D. Pennsylvania.

11. The primary goal of John D. Rockefeller’s trust was to
   A. reduce production.
   B. monopolize refining.
   C. make operations more efficient.
   D. relieve him of management responsibilities.

12. What most concerned Americans about business combinations was that they would
   A. destroy economic opportunity.
   B. raise prices.
   C. invite government regulation.
   D. not last.

13. The primary message in the “Gospel of Wealth” was
   A. “the wrong and evil of the money-piling tendency is changing laws, government, and morals, and giving all power to the rich.”
   B. “unrestrained competition is un-Christian; state aid and regulation is an indispensable condition of human progress.”
   C. “the rich must use their money in the manner which is best calculated to produce the most beneficial results to the community.”
   D. “within a few years, most of the wealth and talent of our country will be on one side, while arrayed on the other will be the great mass of the people.”

14. The advocate of a “single tax” on property to alleviate the maldistribution of wealth and provide public funds for schools and other social services was
   A. Laurence Gronlund in The Cooperative Commonwealth.
   C. Henry George in Progress and Poverty.
   D. Henry Demarest Lloyd in Wealth Against Commonwealth.

15. The Supreme Court’s ruling in Munn v. Illinois
   A. upheld the right of organized labor to bargain collectively.
   B. asserted that only Congress could regulate interstate commerce.
   C. permitted state legislatures to regulate railroad rates within a state.
   D. determined that the Sherman Antitrust law was unconstitutional.

16. All of the following are true of the Sherman Antitrust Act EXCEPT
   A. it was supposed to restore competition.
   B. it was emasculated in United States v. E. C. Knight Company.
   C. it forbade business combinations in the form of trusts that restrained trade.
   D. it led to a sharp decline in the formation of company mergers after 1890.
17. A strong message of the Knights of Labor was that
   A. workers must not resign themselves to remaining wage earners all their lives.
   B. strikes should be used vigorously to gain progress for their members.
   C. union membership should be restricted to skilled craft workers.
   D. unions were better off not supporting political objectives.

18. The Haymarket Riot
   A. resulted when someone threw a bomb into the ranks of the police at a mass meeting in Chicago.
   B. was caused by the Knights of Labor.
   C. led to the collapse of the American Railway Union.
   D. resulted in all of the above.

19. Which of these statements is FALSE?
   A. The 1877 Southwestern rail strike brought train traffic to a standstill, prompting President Hayes to send in federal troops.
   B. The assassination of steel executive Henry Clay Frick ended labor unrest at the Homestead plant near Pittsburgh.
   C. Eugene Debs was jailed for disobeying a federal injunction issued by the courts in the Pullman strike.
   D. The goal of most strikers in the Haymarket affair was the eight-hour day.

20. Which union was the most successful in the late nineteenth century?
   A. American Railway Union
   B. American Federation of Labor
   C. Knights of Labor
   D. National Labor Union

**Essay Questions**

1. Explain why railroads, steel, and petroleum companies tended to form monopolies in the late nineteenth century.

2. What was the common thread linking Henry George, Edward Bellamy, and Henry Demarest Lloyd? Summarize their principal theories.

3. Explain how business and management prevailed in the major labor altercations of the late nineteenth century.

4. Why did Congress pass the Interstate Commerce Act and the Sherman Antitrust Act? List the key provisions of each law and show how both acts were sometimes undermined by court decisions.

5. Why did most Americans reject the proposals of Laurence Gronlund and Daniel De Leon?
CRITICAL THINKING EXERCISE

Each of these statements sets forth an opinion regarding economic thought. Designate each statement by either an “L” for expressions of laissez-faire, “R” for regulated capitalism, or “S” for socialism.

____1. The state ought to own all the means of production.

____2. The trend toward monopoly can best be addressed through government agencies that watch out for the interests of smaller companies facing a continuing squeeze from big business.

____3. The best way to reduce railroad rates is to permit intense competition within the industry.

____4. The Interstate Commerce Commission has outlived any function it may have once had and should be abolished forthwith.

____5. “There is no good reason why labor cannot, through cooperation, own and operate mines, factories, and railroads.”

____6. “If I wanted a boiler iron, I would go out on the market and buy it where I could get it cheapest, and if I wanted to employ men, I would do the same.”

____7. Workers must preserve the benefits of the eight-hour day, mine safety laws, and collective bargaining rights.

____8. The rising standard of living in the late nineteenth century proves that the public benefited from the growth of industrial giants.

____9. The trend toward industrial consolidation will continue until one monster trust dominates the economy. Then all will realize the need for nationalization.

____10. Granger laws established “reasonable” maximum rates for railroads and warehouses.