Chapter 24

Industry Comes of Age

1865–1900

The wealthy class is becoming more wealthy; but the poorer class is becoming more dependent. The gulf between the employed and the employer is growing wider; social contrasts are becoming sharper; as liveried carriages appear; so do barefooted children.

HENRY GEORGE, 1879

As the nineteenth century drew to a close, observers were asking, "Why are the best men not in politics?" One answer was that they were being lured away from public life by the lusty attractions of the booming private economy. As America's Industrial Revolution slipped into high gear, talented men ached for profits, not the presidency. They dreamed of controlling corporations, not the Congress. What the nation lost in civic leadership, it gained in an astounding surge of economic growth. As late as 1870, agriculture remained the nation's biggest business. By 1900 it accounted for less than half of the national economy. Until the end of the Civil War, the United States imported more merchandise than it exported. By 1900 it annually delivered more than $600 million worth of manufactured goods to the world's marketplace. Americans did not achieve this economic transformation all by themselves. Foreign investment, labor, trade, and technology made it possible. Although in many ways still a political dwarf, the United States was about to stand up before the world as an industrial colossus—and the lives of millions of working Americans would be transformed in the process.

The Iron Colt Becomes an Iron Horse

The government-business entanglements that increasingly shaped politics after the Civil War also undergirded the industrial development of the nation. The unparalleled outburst of railroad construction was a crucial case. When Lincoln was shot in 1865, there were only 35,000 miles of steam railways in the United States, mostly east of the Mississippi. By 1900 the figure had spurted up to 192,556 miles, or more than that for all of Europe combined, and much of the new trackage ran west of the Mississippi (see Figure 24.1).

Transcontinental railroad building was so costly and risky as to require government subsidies, as it had in many other industrializing nations. Everywhere, the construction of railway systems promised greater national unity and economic growth. The extension of rails into thinly populated regions was unprofitable until the areas could be built up, and private promoters were unwilling to suffer heavy initial losses. Congress, impressed by arguments pleading military and postal needs, began to advance liberal loans to two favored cross-continent companies in 1862 and added enormous donations of acreage paralleling the tracks. All told, Washington rewarded the railroads with 155,504,994 acres, and the western states contributed 49 million more—a total area larger than Texas (see Map 24.1).

Grasping railroads tied up even more land than this for a number of years. Land grants to railroads were made in broad belts along the proposed route. Within these belts the railroads were allowed to choose *alternate* mile-square sections in checkerboard fashion. But until they determined the precise location of their tracks and decided which sections were the choicest selections, the railroads withheld *all* the land from other users. President Grover Cleveland put an end to this foot-dragging practice in 1887 and threw open to

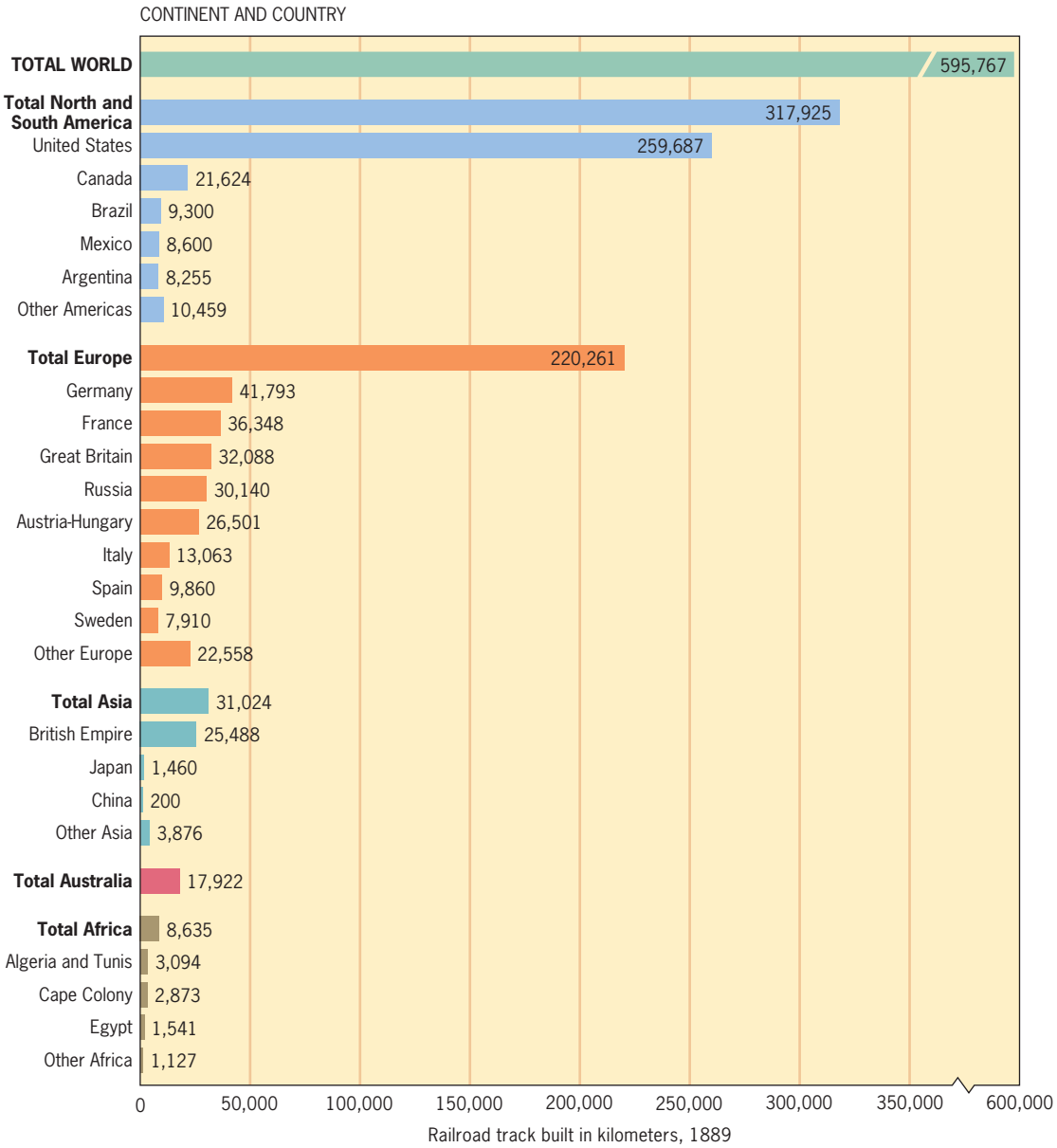


FIGURE 24.1 Railroads Worldwide, 1889*

*Another calculation of railway track per 10,000 inhabitants in 1904 revealed that the United States was still far out in front, with 26.4 miles of track compared to 15.2 miles for the second-place country, Sweden. Much farther behind were the major western European nations of France (7.3), Germany (6.1), and Great Britain and Ireland (5.4).

(Sources: Henry Poor, *Poor's Manual of the Railroads of the United States for 1891* (1891); Slason Thompson, *Railway Statistics of the United States of America for the Year Ending June 30, 1906, Compared with the Official Reports of 1905 and Recent Statistics of Foreign Railways* (1907).)

settlement the still-unclaimed public portions of the land-grant areas.

Noisy criticism, especially in later years, was leveled at the "giveaway" of so valuable a birthright to greedy corporations. But the government did receive beneficial returns, including long-term preferential rates for postal service and military traffic. Granting land was also a "cheap" way to subsidize a much-desired transportation system, because it avoided new taxes for direct cash grants. The railroads could turn the land into gold by using it as collateral for loans from private bankers or, later, by selling it. This they often did, at an average price of $3 an acre. Critics were also prone to overlook the fact that the land did not have even

that relatively modest value until the railroads had ribboned it with steel.

Frontier villages touched by the magic wand of the iron rail became flourishing cities; those that were bypassed often withered away and became "ghost towns." Little wonder that communities fought one another for the privilege of playing host to the railroads. Ambitious towns customarily held out monetary and other attractions to the builders, who sometimes blackmailed them into contributing more generously.

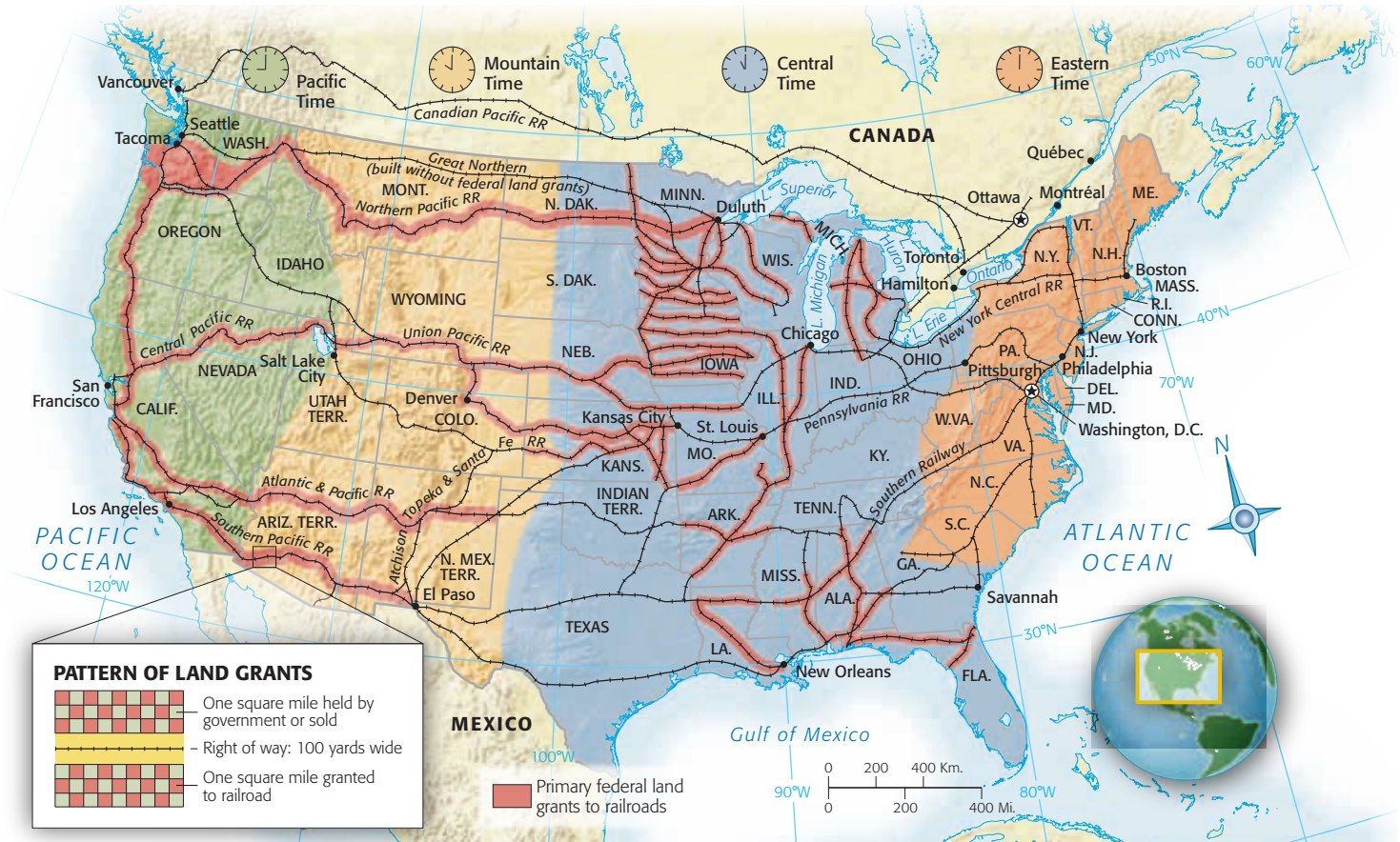
Spanning the Continent with Rails

Deadlock in the 1850s over the proposed transcontinental railroad was broken when the South seceded, leaving the field to the North. In 1862, the year after the guns first spoke at Fort Sumter, Congress made provision for starting the long-awaited line. One weighty argument for action was the urgency of bolstering the Union, already disrupted, by binding the Pacific Coast—especially gold-rich California—more securely to the rest of the Republic.

The Union Pacific Railroad—note the word *Union*—was thus commissioned by Congress to thrust westward from Omaha, Nebraska. For each mile of track constructed, the company was granted 20 square miles of land, alternating in 640-acre sections on either side of the track. For each mile the builders were also to receive a generous federal loan, ranging from $16,000 on the flat prairie land to $48,000 for mountainous country. The laying of rails began in earnest after the Civil War ended in 1865, and with juicy loans and land grants available, the "groundhog" promoters made all possible haste. Insiders of the Crédit Mobilier construction company reaped fabulous profits. They slyly pocketed $73 million for some $50 million worth of breakneck construction, spending small change to bribe congressmen to look the other way.

Sweaty construction gangs, containing many Irish "Paddies" (Patricks) who had fought in the Union armies, worked at a frantic pace. On one record-breaking

MAP 24.1 Federal Land Grants to Railroads The heavy red lines indicate areas within which the railroads might be given specific parcels of land. As shown in the inset, land was reserved in belts of various widths on either side of a railroad's right of way. Until the railroad selected the individual mile-square sections it chose to possess, *all* such sections within the belt were withdrawn from eligibility for settlement. The "time zones" were introduced in 1883 (see p. 518), and their boundaries have since been adjusted. © Cengage Learning



day, a sledge-and-shovel army of some five thousand men laid ten miles of track. A favorite song went like this:

Then drill, my Paddies, drill;
Drill, my heroes, drill;
Drill all day,
No sugar in your tay [tea]
Workin' on the U.P. Railway.

When hostile Indians attacked in futile efforts to protect what once rightfully had been their land, the laborers would drop their picks and seize their rifles. Scores of people—railroad workers and Indians—lost their lives as the rails stretched ever westward. At rail's end, workers tried their best to find relaxation and conviviality in their tented towns, known as "hells on wheels," often teeming with as many as ten thousand men and a sprinkling of painted prostitutes and performers.

Rail laying at the California end was undertaken by the Central Pacific Railroad. This line pushed boldly eastward from boomtown Sacramento, over and through the towering, snow-clogged Sierra Nevada. Four far-seeing men—the so-called Big Four—were the chief financial backers of the enterprise. The quartet included the heavyset, enterprising ex-governor Leland Stanford of California, who had useful political connections, and the burly, energetic Collis P. Huntington, an adept lobbyist. The Big Four cleverly operated through two construction companies, and although they walked away with tens of millions in profits, they kept their hands relatively clean by not becoming involved in the bribing of congressmen.

The Central Pacific, which was granted the same princely subsidies as the Union Pacific, had the same incentive to haste. Some ten thousand Chinese laborers, sweating from dawn to dusk under their basket hats, proved to be cheap, efficient, and expendable (hundreds lost their lives in premature explosions and other mishaps). The towering Sierra Nevada presented a formidable barrier, and the nerves of the Big Four were strained when their workers could chip only a few inches a day tunneling through solid rock, while the Union Pacific was sledgehammering westward across the open plains.

A "wedding of the rails" was finally consummated near Ogden, Utah, in 1869, as two locomotives—"facing on a single track, half a world behind each back"—gently kissed cowcatchers. The colorful ceremony included the breaking of champagne bottles and the driving of a last ceremonial (golden) spike, with ex-governor Stanford clumsily wielding a silver maul. In all, the Union Pacific built 1,086 miles, the Central Pacific 689 miles.

Completion of the transcontinental line—a magnificent engineering feat for that day—was one of America's most impressive peacetime undertakings. It welded the West Coast more firmly to the Union and facilitated a flourishing trade with Asia. It penetrated the arid barrier of the deserts, paving the way for the phenomenal growth of the Great West. Americans

Granger Collection

Snow Sheds on the Central Pacific Railroad in the Sierra Nevada Mountains, by Joseph H. Becker, ca. 1869 Formidable obstacles of climate and terrain confronted the builders of the Central Pacific Railroad in the mountainous heights of California. Note the Chinese laborers in the foreground.

Union Pacific Museum Collection

Promoting the Union Pacific Railroad, 1869

compared this electrifying achievement with the Declaration of Independence and the emancipation of the slaves; jubilant Philadelphians again rang the cracked bell of Independence Hall.

Binding the Country with Railroad Ties

With the westward trail now blazed, four other transcontinental lines were completed before the century's end. None of them secured monetary loans from the federal government, as did the Union Pacific and the Central Pacific. But all of them except the Great Northern received generous grants of land.

The Northern Pacific Railroad, stretching from Lake Superior to Puget Sound, reached its terminus in 1883. The Atchison, Topeka and Santa Fe, stretching through the southwestern deserts to California, was completed in 1884. The Southern Pacific ribboned from New Orleans to San Francisco and was consolidated in the same year.

In 1892 James Baird Weaver (1833–1912), nominee of the Populists, wrote regarding the railroad magnates,

> "In their delirium of greed the managers of our transportation systems disregard both private right and the public welfare. Today they will combine and bankrupt their weak rivals, and by the expenditure of a trifling sum possess themselves of properties which cost the outlay of millions. Tomorrow they will capitalize their booty for five times the cost, issue their bonds, and proceed to levy tariffs upon the people to pay dividends upon the fraud."

The last spike of the last of the five transcontinental railroads of the nineteenth century was hammered home in 1893. The Great Northern, which ran from Duluth to Seattle north of the Northern Pacific, was the creation of a far-visioned Canadian American, James J. Hill, a bearlike man who was probably the greatest railroad builder of all. His enterprise was so soundly organized that it rode through later financial storms with flying colors.

Yet the romance of the rails was not without its sordid side. Pioneer builders were often guilty of gross overoptimism. Avidly seeking land bounties and pushing into areas that lacked enough potential population to support a railroad, they sometimes laid down rails that led "from nowhere to nothing." When prosperity failed to smile upon their coming, they went into bankruptcy, carrying down with them the savings of trusting investors. Many of the large railroads in the post–Civil War decades passed through seemingly endless bankruptcies, mergers, or reorganizations.

Railroad Consolidation and Mechanization

The success of the western lines was facilitated by welding together and expanding the older eastern networks, notably the New York Central. The genius in this enterprise was "Commodore" Cornelius Vanderbilt—burly, boisterous, white-whiskered. Having made his millions in steamboating, he daringly turned, in his late sixties, to a new career in railroading. Though ill-educated, ungrammatical, coarse, and ruthless, he was clear-visioned. Offering superior railway service at lower rates, he amassed a fortune of $100 million. His name

Union Pacific Museum Collection

The Union Pacific and the Central Pacific Link at Promontory Point, Utah, May 10, 1869 Railroad financiers, dignitaries, spectators, and Chinese (Central Pacific) and Irish (Union Pacific) work gangs witnessed the historic joining that created the nation's first transcontinental railroad. After the two locomotives chugged within a few feet of each other, Central Pacific chief and former California governor Leland Stanford tapped a golden spike into a prepared hole on the last tie with a silver-plated maul. The golden spike was whisked away to be preserved for posterity at the Stanford University Museum, but the iron one that replaced it was hardly ordinary. It was wired to a Union Pacific telegraph line, while a copper plate on the maul was connected to a Central Pacific wire. When they touched, they closed a telegraphic circuit that sent the news to cities all over the country.

is perhaps best remembered through his contribution of $1 million to the founding of Vanderbilt University in Tennessee.

Two significant new improvements proved a boon to the railroads. One was the steel rail, which Vanderbilt helped popularize when he replaced the old iron tracks of the New York Central with the tougher metal. Steel was safer and more economical because it could bear a heavier load. A standard gauge of track width likewise came into wide use during the postwar years, thus eliminating the expense and inconvenience of numerous changes from one line to another.

Other refinements played a vital role in railroading. The Westinghouse air brake, generally adopted in the 1870s, was a marvelous contribution to efficiency and safety. The Pullman Palace Cars, advertised as "gorgeous traveling hotels," were introduced on a considerable scale in the 1860s. Alarmists condemned them as "wheeled torture chambers" and potential funeral pyres, for the wooden cars were equipped with swaying kerosene lamps. Appalling accidents continued to be almost daily tragedies, despite safety devices like the telegraph ("talking wires"), double-tracking, and (later) the block signal.

Revolution by Railways

The metallic fingers of the railroads intimately touched countless phases of American life. For the first time, a sprawling nation became united in a physical sense, bound with ribs of iron and steel. The railroads emerged as the nation's biggest business, employing more people than any other industry and gobbling up nearly 20 percent of investment dollars from foreign and domestic investors alike.

More than any other single factor, the railroad network spurred the amazing economic growth of

the post–Civil War years. By stitching North America together from ocean to ocean, the puffing locomotives opened up the West with its wealth of resources. Trains hauled raw materials to factories and sped them back as finished goods for sale across the continent, making the United States the largest integrated national market in the world. The forging of the rails themselves generated the largest single source of orders for the adolescent steel industry.

The screeching iron horse especially stimulated mining and agriculture in the West. It took farmers out to their land, carried the fruits of their toil to market, and brought them their manufactured necessities. Clusters of farm settlements paralleled the railroads, just as earlier they had followed the rivers.

Railways were a boon for cities and played a leading role in the great cityward movement of the last decades of the century. The iron monsters could carry food to enormous concentrations of people and at the same time ensure them a livelihood by providing both raw materials and markets.

Railroad companies also stimulated the mighty stream of immigration. Seeking settlers to whom their land grants might be sold at a profit, they advertised seductively in Europe and sometimes offered to transport the newcomers free to their farms.

The land also felt the impact of the railroad—especially the broad, ecologically fragile midsection of the continent that Thomas Jefferson had purchased from France in 1803. Settlers following the railroads plowed up the tallgrass prairies of Iowa, Illinois, Kansas, and Nebraska and planted well-drained, rectangular cornfields. On the shortgrass prairies of the high plains in the Dakotas and Montana, range-fed cattle rapidly displaced the buffalo, which were hunted to near-extinction. The white pine forests of Michigan, Wisconsin, and Minnesota disappeared into lumber that was rushed by rail to prairie farmers, who used it to build houses and fences.

Time itself was bent to the railroads' needs. Until the 1880s every town in the United States had its own "local" time, dictated by the sun's position. When it was noon in Chicago, it was 11:50 a.m. in St. Louis and 12:18 p.m. in Detroit. For railroad operators worried about keeping schedules and avoiding wrecks, this patchwork of local times was a nightmare. Thus on November 18, 1883, the major rail lines decreed that the continent would henceforth be divided into four "time zones." Most communities quickly adopted railroad "standard" time.

Finally, the railroad, more than any other single factor, was the maker of millionaires. A raw new aristocracy, consisting of "lords of the rail," replaced the old southern "lords of the lash." The multiwebbed lines became the playthings of Wall Street, and colossal wealth was amassed by stock speculators and railroad wreckers.

Wrongdoing in Railroading

Corruption lurks nearby when fabulous fortunes can materialize overnight. The fleecings administered by the railroad construction companies, such as the Crédit Mobilier, were but the first of the bunco games that the railroad promoters learned to play. Methods soon became more refined, as fast-fingered financiers executed multimillion-dollar maneuvers beneath the noses of a bedazzled public. Jay Gould was the most adept of these ringmasters of rapacity. For nearly thirty years, he boomed and busted the stocks of the Erie, the Kansas Pacific, the Union Pacific, and the Texas and Pacific in an incredible circus of speculative skullduggery.

One of the favorite devices of the moguls of manipulation was "stock watering." The term originally referred to the practice of making cattle thirsty by feeding them salt and then having them bloat themselves with water before they were weighed in for sale. Using a variation of this technique, railroad stock promoters grossly inflated their claims about a given line's assets and profitability and sold stocks and bonds far in excess of the railroad's actual value. "Promoters' profits" were often the tail that wagged the iron horse itself. Railroad managers were forced to charge extortionate rates and wage ruthless competitive battles in order to pay off the

Library of Congress

William H. Vanderbilt, Robber Baron This 1885 cartoon takes aim at Vanderbilt's notorious comment, "The public be damned!"

exaggerated financial obligations with which they were saddled.

The public interest was frequently trampled underfoot as the railroad titans waged their brutal wars. Crusty old Cornelius Vanderbilt, when told that the law stood in his way, reportedly exclaimed, "Law! What do I care about the law? Hain't I got the power?" On another occasion he supposedly threatened some associates: "I won't sue you, for the law is too slow. I'll ruin you." His son, William H. Vanderbilt, when asked in 1883 about the discontinuance of a fast mail train, reportedly snorted, "The public be damned!"

While abusing the public, the railroaders blandly bought and sold people in public life. They bribed judges and legislatures, employed arm-twisting lobbyists, and elected their own "creatures" to high office. They showered free passes on journalists and politicians in profusion. One railroad man noted in 1885 that in the West "no man who has money, or official position, or influence thinks he ought to pay anything for riding on a railroad."

Railroad kings were, for a time, virtual industrial monarchs. As manipulators of a huge natural monopoly, they exercised more direct control over the lives of more people than did the president of the United States—and their terms were not limited to four years. They increasingly shunned the crude bloodletting of cutthroat competition and began to cooperate with one another to rule the railroad dominion. Sorely pressed to show at least some returns on their bloated investments, they entered into defensive alliances to protect precious profits.

The earliest form of combination was the "pool"—an agreement to divide the business in a given area and share the profits. Other rail barons granted secret rebates or kickbacks to powerful shippers in return for steady and assured traffic. Often they slashed their rates on competing lines, but they more than made up the difference on noncompeting ones, where they might actually charge more for a short haul than for a long one. As a result, small farmers usually paid the highest rates, while large customers got the best deals.

Government Bridles the Iron Horse

It was neither healthy nor politically acceptable that so many people should be at the mercy of so few. Impoverished farmers, especially in the Midwest, began to wonder if the nation had not escaped from the slavery power only to fall into the hands of the money power, as represented by the railroad plutocracy.

But the American people, usually quick to respond to political injustice, were slow to combat economic injustice. Dedicated to free enterprise and to the principle that competition is the soul of trade, they cherished a traditionally keen pride in progress. They remembered that Jefferson's ideals were hostile to government interference with business. Above all, there shimmered the "American dream": the hope that in a catch-as-catch-can economic system, anyone might become a millionaire.

The depression of the 1870s goaded the farmers into protesting against being "railroaded" into bankruptcy. Under pressure from organized agrarian groups like the Grange (Patrons of Husbandry), many midwestern legislatures tried to regulate the railroad monopoly.

The scattered state efforts screeched to a halt in 1886. The Supreme Court, in the famed ***Wabash, St. Louis & Pacific Railroad Company* v. *Illinois*** case, decreed that individual states had no power to regulate *inter*state commerce. If the mechanical monster were to be corralled, the federal government would have to do the job.

Stiff-necked President Cleveland did not look kindly on effective regulation. But Congress ignored his grumbling indifference and passed the epochal **Interstate Commerce Act** in 1887. It prohibited rebates and pools and required the railroads to publish their rates openly. It also forbade unfair discrimination against shippers and outlawed charging more for a short haul than for a long one over the same line. Most important, it set up the Interstate Commerce Commission (ICC) to administer and enforce the new legislation.

Despite acclaim, the Interstate Commerce Act emphatically did not represent a popular victory over corporate wealth. One of the leading corporation lawyers of the day, Richard Olney, shrewdly noted that the new commission "can be made of great use to the railroads. It satisfies the popular clamor for a government supervision of railroads, at the same time that such supervision is almost entirely nominal. . . . The part of wisdom is not to destroy the Commission, but to utilize it."

What the new legislation did do was to provide an orderly forum where competing business interests could resolve their conflicts in peaceable ways. The country could now avoid ruinous rate wars among the railroads and outraged, "confiscatory" attacks on the lines by pitchfork-prodded state legislatures. This was a modest accomplishment but by no means an unimportant one. The Interstate Commerce Act tended to stabilize, not revolutionize, the existing business system.

Yet the act still ranks as a red-letter law. It was the first large-scale attempt by Washington to regulate business in the interest of society at large. It heralded the arrival of a series of independent regulatory commissions in the next century, which would irrevocably commit the government to the daunting task of monitoring and guiding the private economy. It

foreshadowed the doom of freewheeling, buccaneering business practices and served full notice that there was a public interest in private enterprise that the government was bound to protect.

Miracles of Mechanization

Postwar industrial expansion, partly a result of the railroad network, rapidly began to assume mammoth proportions. When Lincoln was elected in 1860, the Republic ranked only fourth among the manufacturing nations of the world. By 1894 it had bounded into first place. Why the sudden upsurge?

Liquid capital, previously scarce, was now becoming abundant. The word *millionaire* had not been coined until the 1840s, and in 1861 only a handful of individuals were eligible for this class. But the Civil War, partly through profiteering, created immense fortunes, and these accumulations could now be combined with borrowings from foreign capitalists. Investors from abroad loaned more money to the United States in the postwar period than any country had previously received. Unlike in other countries, in America they mostly put the money into private hands, not public coffers. Investors primarily from Britain, but also from France, Germany, the Netherlands, and Switzerland, sometimes owned all or part of an American business. Other times they simply lent their money to the thousands of European companies set up to manage investment in U.S. industry. Either way, Europeans were usually content to let Americans run the business—until hard times hit and they demanded more say over company operations or government economic policies.

Innovations in transportation fueled growth, too, by bringing the nation's amazingly abundant natural resources—particularly coal, oil, and iron—to the factory door. A shipping system through the Great Lakes carried the rich iron deposits in the Mesabi Range of Minnesota to Chicago and Cleveland for refining. This priceless bonanza, where mountains of red-rusted ore could be scooped up by steam shovels, ultimately became a cornerstone of a vast steel empire. Copper, bauxite, and zinc made similar journeys from mine to manufacture.

Regarding the exploitation of immigrant labor, Ralph Waldo Emerson (1803–1882) wrote in 1860,

"The German and Irish millions, like the Negro, have a great deal of guano in their destiny. They are ferried over the Atlantic, and carted over America, to ditch and to drudge, to make corn cheap, and then to lie down prematurely to make a spot of green grass on the prairie."

Library of Congress

Thomas Alva Edison in His Lab, 1888 Edison was dubbed the "Wizard of Menlo Park," New Jersey, where he lived and established the first major industrial research laboratory. Edison was not only an ingenious inventor; he also figured out how to apply the principles of mass production to his inventions. Phonographs, telephones, telegraphs, incandescent electric lighting, fluoroscopes, kinetoscopes, and many more technological wonders spread throughout the world following their development in Edison's lab.

The sheer size of the American market encouraged innovators to invent mass-production methods. With cheap transportation crisscrossing the nation and an ever-larger population able and eager to consume, anyone who could make an appealing new product available for a good price in large quantities—and figure out how to market it—thrived. Industrialists continued to refine the pre–Civil War "American System" of using specialized machinery to make interchangeable parts, culminating in 1913 with Henry Ford's fully developed moving assembly line for his Model T (see pp. 231–232 and 711–712).

The captains of industry had a major incentive to invent machines: they made it possible to replace expensive skilled labor with unskilled workers, now cheap and plentiful as a result of massive immigration. Steel, the keystone industry, was built largely on the

sweat of low-priced immigrant labor from eastern and southern Europe, working in two 12-hour shifts, seven days a week.

Just as industry served as a hothouse of invention, brilliant ideas gave rise to whole new lines of business. Between 1860 and 1890, some 440,000 patents were issued. Business operations were facilitated by machines such as the cash register, the stock ticker, and the typewriter ("literary piano"), while the refrigerator car, the electric dynamo, and the electric railway speeded urbanization. One of the most ingenious inventions was the telephone, introduced by Alexander Graham Bell in 1876. America was suddenly turned into a nation of "telephoniacs," as a gigantic communications network was built on his invention. The social impact of the telephone further expanded when it lured "number please" women away from the stove to the switchboard. Telephone boys were at first employed as operators, but their profanity shocked patrons.

The most versatile inventor of all was Thomas Alva Edison (1847–1931), who as a boy had been considered so dull-witted that he was taken out of school. His severe deafness enabled him to concentrate without distraction. Edison was a gifted tinkerer and a tireless worker, not a pure scientist. "Genius," he said, "is one percent inspiration and ninety-nine percent perspiration." Wondrous devices poured out of his "invention factory" in New Jersey—the phonograph, the mimeograph, the dictaphone, and the moving picture. He is probably best known for his perfection in 1879 of the electric lightbulb, which turned night into day and transformed ancient human habits as well. People had previously slept an average of nine hours a night; now they slept just a bit more than seven.

The Trust Titan Emerges

Despite pious protests to the contrary, competition was the bugbear of most business leaders of the day. Tycoons like Andrew Carnegie, the steel king; John D. Rockefeller, the oil baron; and J. Pierpont Morgan, the bankers' banker, exercised their genius in devising ways to circumvent competition. Carnegie integrated every phase of his steel-making operation. His miners scratched the ore from the earth in the Mesabi Range; Carnegie ships floated it across the Great Lakes; Carnegie railroads delivered it to the blast furnaces at Pittsburgh. When the molten metal finally poured from the glowing crucibles into the waiting ingot molds, no other hands but those in Carnegie's employ had touched the product. Carnegie thus pioneered the creative entrepreneurial tactic of **vertical integration**, combining into one organization all phases of manufacturing from mining to marketing. His goal was to improve efficiency by making supplies more reliable, controlling the quality of the product at all stages of production, and eliminating middlemen's fees.

Less justifiable on grounds of efficiency was the technique of **horizontal integration**, which simply meant allying with competitors to monopolize a given market. Rockefeller was a master of this stratagem. He perfected a device for controlling bothersome rivals—the **trust**. Stockholders in various smaller oil companies assigned their stock to the board of directors of his Standard Oil Company, formed in 1870. It then consolidated and concerted the operations of the previously competing enterprises. "Let us prey" was said to be Rockefeller's unwritten motto. Ruthlessly wielding vast power, Standard Oil soon cornered virtually the entire

Library of Congress

The Octopus, 1904 This cartoon visually captures a feeling of widespread resentment against Standard Oil as a powerful, sprawling "octopus" whose tentacles controlled all branches of government.

world petroleum market. Weaker competitors, left out of the trust agreement, were forced to the wall. Rockefeller's stunning success inspired many imitators, and the word *trust* came to be generally used to describe any large-scale business combination.

The imperial Morgan devised still other schemes for eliminating "wasteful" competition. The depression of the 1890s drove into his welcoming arms many bleeding businesspeople, wounded by cutthroat competition. His prescribed remedy was to consolidate rival enterprises and to ensure future harmony by placing officers of his own banking syndicate on their various boards of directors. These came to be known as **interlocking directorates**.

The Supremacy of Steel

"Steel is king!" might well have been the exultant war cry of the new industrialized generation. The mighty metal ultimately held together the new steel civilization, from skyscrapers to coal scuttles, while providing it with food, shelter, and transportation. Steel making, notably rails for railroads, typified the dominance of "heavy industry," which concentrated on making "capital goods," as distinct from the production of "consumer goods" such as clothes and shoes.

Now taken for granted, steel was a scarce commodity in the wood-and-brick America of Abraham Lincoln. Considerable iron went into railroad rails and bridges, but steel was expensive and was used largely for products like cutlery. The early iron horse snorted exclusively (and dangerously) over iron rails. When in the 1870s "Commodore" Vanderbilt of the New York Central began to use steel rails, he was forced to import them from Britain.

Yet within an amazing twenty years, the United States had outdistanced all foreign competitors and was pouring out more than one-third of the world's supply of steel. By 1900 America was producing as much as Britain and Germany combined.

What wrought the transformation? Chiefly the invention in the 1850s of a method of making cheap steel—the Bessemer process. It was named after a derided British inventor, although an American had stumbled on it a few years earlier. William Kelly, a Kentucky manufacturer of iron kettles, discovered that cold air blown on red-hot iron caused the metal to become white-hot by igniting the carbon and thus eliminating impurities. He tried to apply the new "air boiling" technique to his own product, but his customers decried "Kelly's fool steel," and his business declined. Gradually the Bessemer-Kelly process won acceptance, and these two "crazy men" ultimately made possible the present steel civilization.

Carnegie and Other Sultans of Steel

Kingpin among steelmasters was Andrew Carnegie, an undersized, charming Scotsman. As a towheaded lad of thirteen, he was brought to America by his impoverished parents in 1848 and got a job as a bobbin boy at $1.20 a week. Mounting the ladder of success so fast that he was said to have scorched the rungs, he forged ahead by working hard, doing the extra chore, cheerfully assuming responsibility, and smoothly cultivating influential people.

After accumulating some capital, Carnegie entered the steel business in the Pittsburgh area. A gifted organizer and administrator, he succeeded by picking high-class associates and by eliminating many middlemen. Although inclined to be tough-fisted in business, he was not a monopolist and disliked monopolistic trusts. His remarkable organization was a partnership that involved, at its maximum, about forty "Pittsburgh millionaires." By 1900 he was producing one-fourth of the nation's Bessemer steel, and the partners in these pre–income tax days were dividing profits of $40 million a year as their take-home pay, with the "Napoleon of the Smokestacks" himself receiving a cool $25 million.

Into the picture now stepped the financial giant of the age, J. Pierpont Morgan. "Jupiter" Morgan had made a legendary reputation for himself and his Wall Street banking house by financing the reorganization of railroads, insurance companies, and banks. An impressive

Library of Congress

J. P. Morgan (1837–1913) As the most influential banker of his day, Morgan symbolized to many people the power and arrogance of "finance capitalism." The chronic skin disorder on his nose inspired the taunt "Johnny Morgan's nasal organ has a purple hue."

Andrew Carnegie (1835–1919) wrote in 1889,

"The man who dies leaving behind him millions of available wealth, which was his to administer during life, will pass away 'unwept, unhonored, and unsung,' no matter to what uses he leaves the dross which he cannot take with him. Of such as these the public verdict will then be: 'The man who dies thus rich dies disgraced.'"

figure of a man, with massive shoulders, shaggy brows, piercing eyes, and a bulbous, acne-cursed red nose, he had established an enviable reputation for integrity. He did not believe that "money power" was dangerous, except when in dangerous hands—and he did not regard his own hands as dangerous.

The force of circumstances brought Morgan and Carnegie into collision. By 1900 the canny little Scotsman, weary of turning steel into gold, was eager to sell his holdings. Morgan had meanwhile plunged heavily into the manufacture of steel pipe tubing. Carnegie, cleverly threatening to invade the same business, was ready to ruin his rival if he did not receive his price. The steelmaster's agents haggled with the imperious Morgan for eight agonizing hours, and the financier finally agreed to buy out Carnegie for over $400 million. Fearing that he would die "disgraced" with so much wealth, Carnegie dedicated the remaining years of his life to giving away money for public libraries, pensions for professors, and other such philanthropic purposes—in all disposing of about $350 million.

Morgan moved rapidly to expand his new industrial empire. He took the Carnegie holdings, added others, "watered" the stock liberally, and in 1901 launched the enlarged United States Steel Corporation. Capitalized at $1.4 billion, it was America's first billion-dollar corporation—a larger sum than the total estimated wealth of the nation in 1800. The Industrial Revolution, with its hot Bessemer breath, had come into its own.

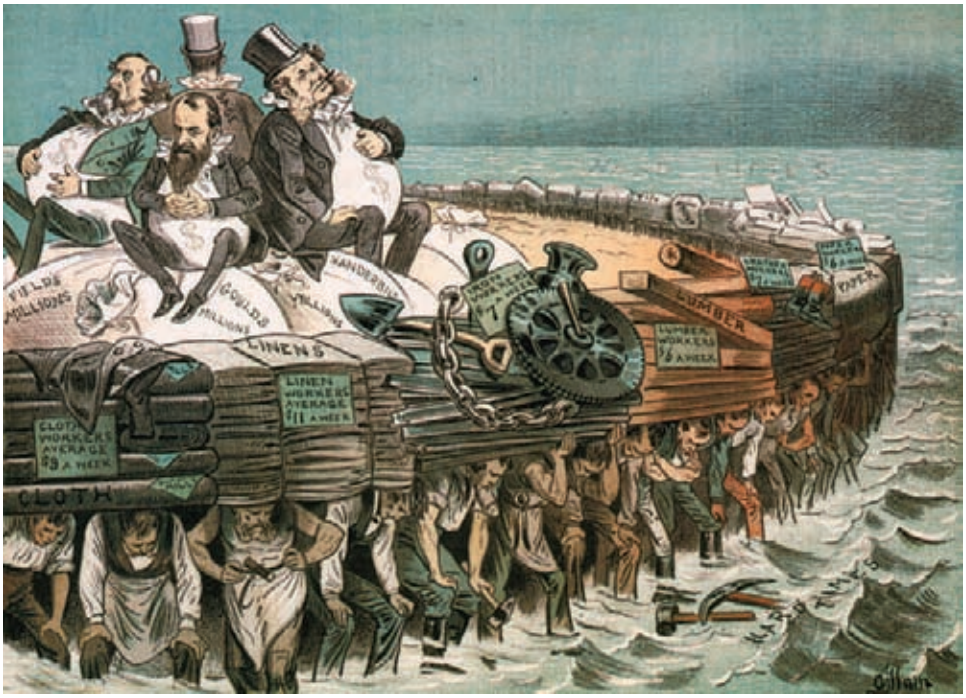
Rockefeller Grows an American Beauty Rose

The sudden emergence of the oil industry was one of the most striking developments of the years during and after the Civil War. Traces of oil found on streams had earlier been bottled for back-rub and other patent medicines, but not until 1859 did the first well in Pennsylvania—"Drake's Folly"—pour out its liquid "black gold." Almost overnight an industry was born that was to take more wealth from the earth than all of the gold extracted by the forty-niners and their western successors. Kerosene, derived from petroleum, was the first major product of the infant oil industry. Burned from a cotton wick in a glass chimney lamp, kerosene produced a much brighter flame than whale oil. The oil business boomed; by the 1870s kerosene was America's fourth most valuable export. Whaling, in contrast, the lifeblood of ocean-roaming New Englanders since before the days of *Moby Dick*, swiftly became a sick industry.

But what technology gives, technology takes away. By 1885, 250,000 of Thomas Edison's electric lightbulbs were in use; fifteen years later, perhaps 15 million. The new electric industry rendered kerosene obsolete just

Library of Congress

Washington as Seen by the Trusts, 1900 "What a funny little government," John D. Rockefeller observes in this satirical cartoon. His own wealth and power are presumed to dwarf the resources of the federal government.



Robber Barons Cyrus Field, Jay Gould, Cornelius Vanderbilt, and Russell Sage Kept Afloat on the Broken Backs of America's Workingmen, 1883

Library of Congress

as kerosene had rendered whale oil obsolete. Only in rural America and overseas did a market continue for oil-fired lamps.

Oil might thus have remained a modest, even a shrinking, industry but for yet another turn of the technological tide—the invention of the automobile. By 1900 the gasoline-burning internal combustion engine had clearly bested its rivals, steam and electricity, as the superior means of automobile propulsion. As the century of the automobile dawned, the oil business got a new, long-lasting, and hugely profitable lease on life.

John D. Rockefeller—lanky, shrewd, ambitious, abstemious (he neither drank, smoked, nor swore)—came to dominate the oil industry. Born to a family of precarious income, he became a successful businessman at age nineteen. One upward stride led to another, and in 1870 he organized the **Standard Oil Company** of Ohio, nucleus of the great trust formed in 1882. Locating his refineries in Cleveland, he sought to eliminate the middlemen and squeeze out competitors.

Pious and parsimonious, Rockefeller flourished in an era of completely free enterprise. So-called piratical practices were employed by "corsairs of finance," and business ethics were distressingly low. Rockefeller, operating "just to the windward of the law," pursued a policy of rule or ruin. "Sell all the oil that is sold in your district" was the hard-boiled order that went out to his local agents. By 1877 Rockefeller controlled 95 percent of all the oil refineries in the country.

Rockefeller—"Reckafellow," as Carnegie had once called him—showed little mercy. A kind of primitive savagery prevailed in the jungle world of big business, where only the fittest survived. Or so Rockefeller believed. His son later explained that the giant American Beauty rose could be produced "only by sacrificing the early buds that grew up around it." His father pinched off the small buds with complete ruthlessness. Employing spies and extorting secret rebates from the railroads, he even forced the lines to pay him rebates on the freight bills of his competitors!

Rockefeller thought he was simply obeying a law of nature. "The time was ripe" for aggressive consolidation, he later reflected. "It had to come, though all we saw at the moment was the need to save ourselves from wasteful conditions. . . . The day of combination is here to stay. Individualism has gone, never to return."

On the other side of the ledger, Rockefeller's oil monopoly did turn out a superior product at a relatively cheap price. It achieved important economies, both at home and abroad, by its large-scale methods of production and distribution. This, in truth, was the tale of the other trusts as well. The efficient use of expensive machinery called for bigness, and consolidation proved more profitable than ruinous price wars.

Other trusts blossomed along with the American Beauty of oil. These included the sugar trust, the tobacco trust, the leather trust, and the harvester trust, which amalgamated some two hundred competitors. The meat industry arose on the backs of bawling western herds, and meat kings like Gustavus F. Swift and Philip Armour took their place among the new royalty. Wealth was coming to dominate the commonwealth.

These untrustworthy trusts, and the "pirates" who captained them, were disturbingly new. They eclipsed an older American aristocracy of modestly successful merchants and professionals. An arrogant class of "new rich" was now elbowing aside the patrician families in the mad scramble for power and prestige. Not surprisingly, the ranks of the antitrust crusaders were frequently spearheaded by the "best men"—genteel old-family do-gooders who were not radicals but conservative defenders of their own vanishing influence.

The Gospel of Wealth

Monarchs of yore invoked the divine right of kings, and America's industrial plutocrats took a somewhat similar stance. Some candidly credited heavenly help. "Godliness is in league with riches," preached the Episcopal bishop of Massachusetts, and hardfisted John D. Rockefeller piously acknowledged that "the good Lord gave me my money." Steel baron Andrew Carnegie agreed that the wealthy, entrusted with society's riches, had to prove themselves morally responsible according to a "Gospel of Wealth." But most defenders of wide-open capitalism relied more heavily on the survival-of-the-fittest theories of English philosopher Herbert Spencer and Yale professor William Graham Sumner. Later mislabeled **Social Darwinists**, these theorists argued that individuals won their stations in life by competing on the basis of their natural talents. The wealthy and powerful had simply demonstrated greater abilities than the poor. Spencer and Sumner owed less to English evolutionary naturalist Charles Darwin, who stressed the adaptation of organisms, than to British laissez-faire economists David Ricardo and Thomas Malthus. In fact, Spencer, not Darwin, coined the phrase "survival of the fittest." "The millionaires are a product of natural selection," Sumner declared. In 1883 he asked, "What do social classes owe each other?" then answered his own question: nothing. Some Social Darwinists later applied this theory to explain why some nations were more powerful than others or had the right to dominate "lesser peoples," often defined by race.

Self-justification by the wealthy inevitably involved contempt for the poor. Many of the rich, especially the newly rich, had pulled themselves up by their own bootstraps; hence they concluded that those who stayed poor must be lazy and lacking in enterprise. The Reverend Russell Conwell of Philadelphia became rich by delivering his lecture "Acres of Diamonds" thousands of times. In it he charged, "There is not a poor person in the United States who was not made poor by his own shortcomings." Such attitudes were a formidable roadblock to social reform.

Plutocracy, like the earlier slavocracy, took its stand firmly on the Constitution. The clause that gave Congress sole jurisdiction over interstate commerce was a godsend to the monopolists; their high-priced lawyers used it time and again to thwart controls by the state legislatures. Giant trusts likewise sought refuge behind the Fourteenth Amendment, which had been originally designed to protect the rights of the ex-slaves as persons. The courts ingeniously interpreted a corporation to be a legal "person" and decreed that, as such, it could not be deprived of its property by a state without "due process of law" (see Amendment XIV, para. 1 in the Appendix). There is some questionable evidence that slippery corporation lawyers deliberately inserted this loophole when the Fourteenth Amendment was being fashioned in 1866.

Great industrialists likewise sought to incorporate in "easy states," like New Jersey, where the restrictions on big business were mild or nonexistent. For example, the Southern Pacific Railroad, with much of its trackage in California, was incorporated in Kentucky.

Government Tackles the Trust Evil

At long last the masses of the people began to mobilize against monopoly. They first tried to control the trusts through state legislation, as they had earlier attempted to curb the railroads. Failing here, as before, they were forced to appeal to Congress. After prolonged pulling and hauling, the **Sherman Anti-Trust Act** of 1890 was finally signed into law.

The Sherman Act flatly forbade combinations in restraint of trade, without any distinction between "good" trusts and "bad" trusts. Bigness, not badness, was the sin. The law proved ineffective, largely because it had only baby teeth or no teeth at all, and because it contained legal loopholes through which clever corporation lawyers could wriggle. But it was unexpectedly effective in one respect. Contrary to its original intent, it was used to curb labor unions or labor combinations that were deemed to be restraining trade.

Industrial millionaires were condemned in the Populist platform of 1892:

"The fruits of the toil of millions are boldly stolen to build up colossal fortunes for a few . . . and the possessors of these, in turn despise the Republic and endanger liberty. From the same prolific womb of governmental injustice we breed the two great classes—tramps and millionaires."

Granger Collection

George Eastman House

The New Rich and the New Immigrants A well-to-do family plays chess at its parlor table (left), while a tenement family does "piecework" around its kitchen table—shelling nuts for commercial use (right). The young working girl seems to be "snitching" some nuts for herself. The apparently growing gulf between the rich and the poor deeply worried reformers in the late nineteenth century. They feared that democracy could not survive in the face of such gross inequality.

Early prosecutions of the trusts by the Justice Department under the Sherman Act of 1890, as it turned out, were neither vigorous nor successful. The decisions in seven of the first eight cases presented by the attorney general were adverse to the government. More new trusts were formed in the 1890s under President McKinley than during any other like period. Not until 1914 were the paper jaws of the Sherman Act fitted with reasonably sharp teeth. Until then, there was some question whether the government would control the trusts or the trusts the government.

But the iron grip of monopolistic corporations was being threatened. A revolutionary new principle had been written into the law books by the Sherman Anti-Trust Act of 1890, as well as by the Interstate Commerce Act of 1887. Private greed should henceforth be subordinated to public need.

The South in the Age of Industry

The industrial tidal wave that washed over the North after the Civil War caused only feeble ripples in the backwater of the South. As late as 1900, the South still produced a smaller percentage of the nation's manufactured goods than it had before the Civil War. The plantation system had degenerated into a pattern of absentee landownership. White and black sharecroppers now tilled the soil for a share of the crop, or they became tenants, in bondage to their landlords, who controlled needed credit and supplies.

Southern agriculture received a welcome boost in the 1880s, when machine-made cigarettes replaced the roll-your-own variety and tobacco consumption shot up. James Buchanan Duke took full advantage of the new technology to mass-produce the dainty "coffin nails." In 1890, in what was becoming a familiar pattern, he absorbed his main competitors into the American Tobacco Company. The cigarette czar later showed such generosity to Trinity College, near his birthplace

Henry W. Grady (1851–1889), editor of the Atlanta Constitution, *urged the new South to industrialize. In a Boston speech in 1889, he described the burial in Georgia of a Confederate veteran:*

"The South didn't furnish a thing on earth for that funeral but the corpse and the hole in the ground. . . . They buried him in a New York coat and a Boston pair of shoes and a pair of breeches from Chicago and a shirt from Cincinnati, leaving him nothing to carry into the next world with him to remind him of the country in which he lived, and for which he fought for four years, but the chill of blood in his veins and the marrow in his bones."

Valentine Richmond History Center, Cook Collection

A Virginia Tobacco Factory, ca. 1880
The employment of women and children was a common practice in late-nineteenth-century American industry, north as well as south.

in Durham, North Carolina, that the trustees gratefully changed its name to Duke University.

Industrialists tried to coax the agricultural South out of the fields and into the factories, but with only modest success. The region remained overwhelmingly rural. Prominent among the boosters of a "new South" was silver-tongued Henry W. Grady, editor of the *Atlanta Constitution*. He tirelessly exhorted the ex-Confederates to become "Georgia Yankees" and outplay the North at the commercial and industrial game.

Yet formidable obstacles lay in the path of southern industrialization. One was the paper barrier of regional rate-setting systems imposed by the northern-dominated railroad interests. Railroads gave preferential rates to manufactured goods moving southward from the North, but in the opposite direction they discriminated in favor of southern raw materials. The net effect was to keep the South in a kind of servitude to the Northeast—as a supplier of raw materials to the manufacturing metropolis, unable to develop a substantial industrial base of its own.

A bitter example of this economic discrimination against the South was the "Pittsburgh plus" pricing system in the steel industry. Rich deposits of coal and iron ore near Birmingham, Alabama, worked by low-wage southern labor, should have given steel manufacturers there a competitive edge, especially in southern markets. But the steel lords of Pittsburgh brought pressure to bear on the compliant railroads. As a result, Birmingham steel, no matter where it was delivered, was charged a fictional fee, as if it had been shipped from Pittsburgh. This stunting of the South's natural economic advantages throttled the growth of the Birmingham steel industry.

In manufacturing cotton textiles, the South fared considerably better. Southerners had long resented shipping their fiber to New England, and now their cry was "Bring the mills to the cotton." Beginning about 1880, northern capitalists began to erect cotton mills in the South, largely in response to tax benefits and the prospect of cheap and nonunionized labor (see Figure 24.2 and Figure 24.3).

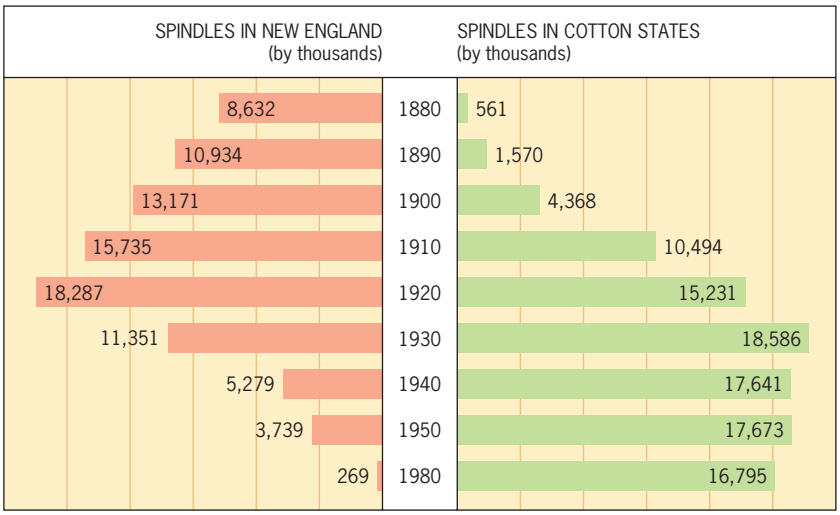


FIGURE 24.2 Cotton Manufacturing Moves South, 1880–1980 Textile manufacturing usually looms large in the early stages of industrial development. In the later stages, it gives way to higher-technology businesses. This trend can be seen here, both in the migration of textile manufacturing to the southern United States and in the decline in the number of spindles in the United States as a whole since the 1930s, as developing Third World countries became major textile producers. (Source: *Historical Statistics of the United States* and *Statistical Abstract of the United States*, relevant years.)

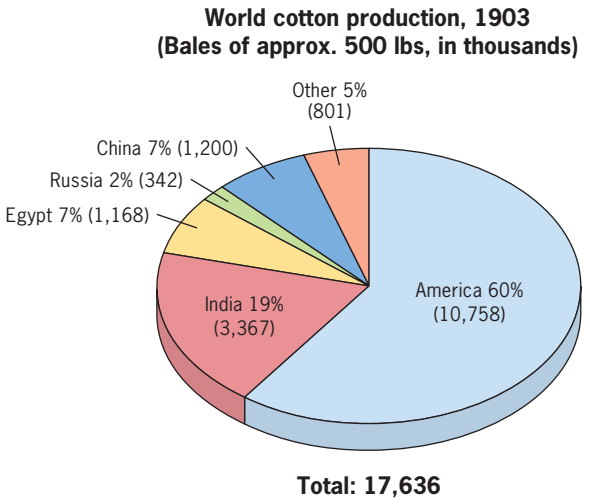


FIGURE 24.3 World Cotton Production, 1903 Cotton manufacturing grew in the United States in the early twentieth century, and raw cotton production reached higher levels than anywhere else in the world. (Source: John A. Todd, *The World's Cotton Crops* (London: A. & C. Black, 1915), 395–396.)

The textile mills proved to be a mixed blessing to the economically blighted South. They slowly wove an industrial thread into the fabric of southern life, but at a considerable human cost. Cheap labor was the South's major attraction for potential investors, and keeping labor cheap became almost a religion among southern industrialists. The mills took root in the chronically depressed Piedmont region of southern Appalachia and came to dominate utterly the communities in which they were located.

Rural southerners—virtually all of them white, for blacks were excluded from all but the most menial jobs in the mills—poured out of the hills and hollows to seek employment in the hastily erected company mill towns. Entire families—often derided as "hillbillies" or "linteads"—worked from dawn to dusk amid the whirring spindles. They were paid at half the rate of their northern counterparts and often received their compensation in the form of credit at a company store, to which they were habitually in debt. But despite their depressed working conditions and poor pay, many southerners saw employment in the mills as a salvation, the first steady jobs and wages they had ever known. With many mills anxious to tap the cheap labor of women and children, mill work often offered destitute farm-fugitive families their only chance to remain together.

The Impact of the New Industrial Revolution on America

Economic miracles wrought during the decades after the Civil War enormously increased the wealth of the Republic. The standard of living rose sharply, and well-fed American workers enjoyed more physical comforts than their counterparts in any other industrial nation. Urban centers mushroomed as the insatiable factories demanded more American labor and as immigrants swarmed like honeybees to the new jobs (see Map 24.2 and "Makers of America: The Poles," pp. xxx–xxx).

Early Jeffersonian ideals were withering before the smudgy blasts from the smokestacks. As agriculture declined in relation to manufacturing, America could no longer aspire to be a nation of small freehold farms. Jefferson's concepts of free enterprise, with neither help nor hindrance from Washington, were being thrown out the factory window. Tariffs had already provided assistance, but the long arm of federal authority was now committed to decades of corporation curbing and "trust-busting."

Older ways of life also wilted in the heat of the factory furnaces. The very concept of time was revolutionized. Rural American migrants and peasant European immigrants, used to living by the languid clock of nature, now had to regiment their lives by the factory whistle. The seemingly arbitrary discipline of industrial labor did not come easily and sometimes had to be forcibly taught. One large corporation simultaneously instructed its Polish immigrant workers in the English language and in the obligations of factory work schedules:

I hear the whistle. I must hurry.
I hear the five-minute whistle.
It is time to go into the shop. . . .
I change my clothes and get ready to work.
The starting whistle blows.
I eat my lunch.
It is forbidden to eat until then. . . .
I work until the whistle blows to quit.
I leave my place nice and clean.
I put all my clothes in the locker.
I must go home.

Probably no single group was more profoundly affected by the new industrial age than women. Propelled into industry by recent inventions, chiefly the typewriter and the telephone switchboard, millions of stenographers and "hello girls" discovered new economic and social opportunities. The "Gibson Girl," a magazine image of an independent and athletic "new woman" created in the 1890s by the artist Charles Dana Gibson, became the romantic ideal of the age. For middle-class women, careers often meant delayed marriages and smaller families. Most women workers, however, toiled neither for independence nor for glamour, but out of economic necessity. They faced the same long hours and dangerous working conditions as did their mates and brothers, and they earned less, as

MAP 24.2 American Industry in 1900 By the end of the nineteenth century, once-rural America boasted the world's largest industrial output—a development with enormous consequences for politics, diplomacy, and family life.

wages for "women's jobs" were usually set below those for men's.

The clattering machine age likewise accentuated class division. "Industrial buccaneers" flaunted bloated fortunes, and their rags-to-riches spouses displayed glittering diamonds. Such extravagances evoked bitter criticism. Some of it was envious, but much of it rose from a small but increasingly vocal group of socialists and other radicals, many of whom were recent European immigrants. The existence of an oligarchy of money was amply demonstrated by the fact that in 1900 about one-tenth of the people owned nine-tenths of the nation's wealth.

Library of Congress

Women Canning Shrimp, 1893 Long hours, low pay, and wretched working conditions were the common fate of women who labored not for "pin money," but to help support their families. The "family wage" for the workingman was more a hope than a reality.

A nation of farmers and independent producers was becoming a nation of wage earners. In 1860 half of all workers were self-employed; by the century's end, two of every three working Americans depended on wages. Real wages were rising, and times were good for workers who were working. But with dependence on wages came vulnerability to the swings of the economy and the whims of the employer. The fear of unemployment was never distant. A breadwinner's illness could mean catastrophe for an entire family. Nothing more sharply defined the growing difference between working-class and middle-class conditions of life than the precariousness of the laborer's lot. Reformers struggled to introduce a measure of security—job and wage protection, and provision for temporary unemployment—into the lives of the working class.

Gibson Girl, 1899 Illustrator Charles Dana Gibson created a sensation with his drawings of healthy, athletic, young women. The image of the "Gibson Girl" inspired new standards of female fashion as the twentieth century opened, and came to symbolize women's growing independence and assertiveness. Granger Collection

Finally, strong pressures for foreign trade developed as the tireless industrial machine threatened to saturate the domestic market. Aided by developments like the laying of a transatlantic telegraph in 1866 and the opening of the Suez Canal in 1869, international trade became ever faster, cheaper, and easier. American products radiated out all over the world—notably the five-gallon kerosene can of the Standard Oil Company. The flag follows trade, and empire tends to follow the flag—a harsh lesson that America was soon to learn.

In Unions There Is Strength

The sweat of the laborer lubricated the vast new industrial machine. Yet the wage workers did not share proportionately with their employers in the benefits of the age of big business.

The worker, suggestive of the Roman galley slave, was becoming a lever-puller in a giant mechanism. Individual originality and creativity were being stifled, and less value than ever before was being placed on manual skills. Before the Civil War, the worker might have toiled

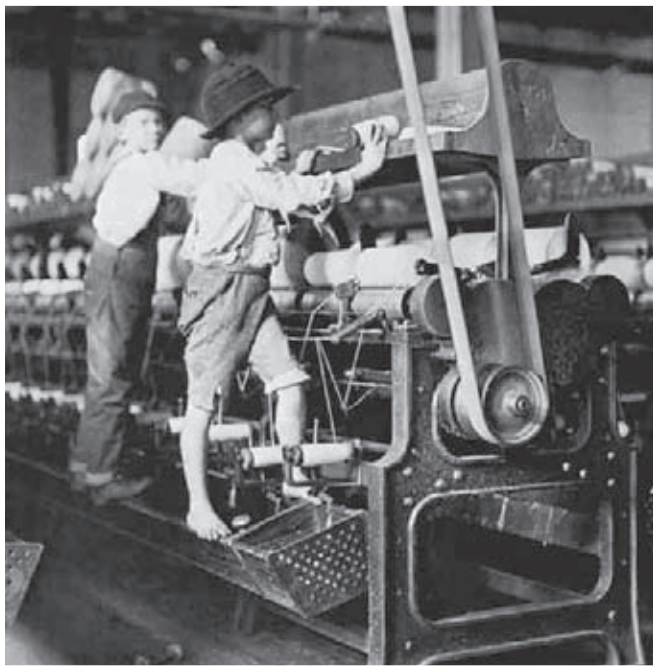
Library of Congress

Breaker Boys at South Pittson, Pennsylvania, 1911 Photographer Lewis Hine captured the grimness of these mine helpers' lives. For hours they sat on benches above a moving belt, breathing coal dust deep into their lungs and kicking large pieces of coal with their feet, breaking the lumps to uniform size for shipment. Photographs like this one became icons of the reform crusade against child labor, a campaign that succeeded only with the passage of the Fair Labor Standards Act in 1938.

Examining the Evidence

The Photography of Lewis W. Hine

The pell-mell onrush of industrialization after the Civil War spawned countless human abuses, few more objectionable than the employment of children, often in hazardous jobs. For decades reformers tried to arouse public outrage against child labor, and they made significant headway at last with the help of photography—especially the photographs of Lewis W. Hine (1874–1940). A native of Wisconsin, Hine in 1908 became the staff photographer for the National Child Labor Committee, an organization committed to ending child labor. This 1909 photo of young "doffers," whose job it was to remove fully wound bobbins from textile spinning machines, is typical of Hine's work. He shows the boys climbing dangerously on the whirling mechanism, and his own caption for the photo names the mill—"Bibb Mill No. 1, Macon, Georgia"—but not the boys, as if to underline the impersonal, dehumanizing nature of their work and the specific responsibilities of their employer. His other subjects included child workers on Colorado beet farms, in Pennsylvania coal mines and Gulf Coast fish canneries, and in the glass, tobacco, and garment trades. Hine's images contributed heavily to the eventual success of the campaign to end child labor in the New Deal era. He is also celebrated as one of the fathers of documentary photography. Why might Hine's graphic images have succeeded in stirring public opinion more powerfully than factual and statistical demonstrations of the evil of child labor? Given Hine's own reform objectives, can his photographs—or any so-called documentary images—be taken at face value as literal, accurate information about the past?



Library of Congress

in a small plant whose owner hailed the employee in the morning by first name and inquired after the family's health. But now the factory hand was employed by a corporation—depersonalized, bodiless, soulless, and often conscienceless. The directors knew the worker not, and in fairness to their stockholders, they were not inclined to engage in large-scale private philanthropy.

New machines displaced employees, and though in the long run more jobs were created than destroyed, in the short run the manual worker was often hard hit. A glutted labor market, moreover, severely handicapped wage earners. Employers could take advantage of the vast new railroad network and bring in unemployed workers, from the four corners of the country and beyond, to beat down high wage levels. During the 1880s and 1890s, several hundred thousand unskilled workers a year poured into the country from Europe, creating a labor market more favorable to the boss than the worker.

Individual workers were powerless to battle single-handedly against giant industry. Forced to organize and fight for basic rights, they found the dice heavily loaded against them. The corporation could dispense with the individual worker much more easily than the worker could dispense with the corporation. Employers could pool vast wealth through thousands of stockholders, retain high-priced lawyers, buy up the local press, and put pressure on the politicians. They could import strikebreakers ("scabs") and employ thugs to beat up labor organizers. In 1886 Jay Gould reputedly boasted, "I can hire one-half of the working class to kill the other half."

Corporations had still other weapons in their arsenals. They could call upon the federal courts—presided over by well-fed and conservative judges—to issue injunctions ordering the strikers to cease striking. If defiance and disorder ensued, the company could request the state and federal authorities to bring in troops. Employers could lock their doors against rebellious workers—a procedure called the "lockout"—and then starve them into submission. They could compel them to sign "ironclad oaths" or "yellow-dog contracts,"

Deutsches Historisches Museum, Berlin, Germany/AKG, London

The Strike, by Robert Koehler, 1886 Scenes like this were becoming more typical of American life in the late nineteenth century as industrialism advanced spectacularly and sometimes ruthlessly. Here Koehler (1850–1917) shows an entire community of men, women, and children—many of them apparently immigrant newcomers—challenging the power of the "boss." The scene is tense but orderly, though violence seems to be imminent as one striker reaches for a rock.

both of which were solemn agreements not to join a labor union. They could put the names of agitators on a "black list" and circulate it among fellow employers. A corporation might even own the "company town," with its high-priced grocery stores and "easy" credit. Often the worker sank into perpetual debt—a status that strongly resembled serfdom. Countless thousands of blackened coal miners were born in a company house, nurtured by a (high-priced) company store, and buried in a company graveyard—prematurely dead.

The middle-class public, annoyed by recurrent strikes, grew deaf to the outcry of the worker. American wages were perhaps the highest in the world, although a dollar a day for pick-and-shovel labor does not now seem excessive. Carnegie and Rockefeller had battled their way to the top, and the view was common that the laborer could do likewise. Somehow the strike seemed like a foreign importation—socialistic and hence unpatriotic. Big business might combine into trusts to raise prices, but the worker must not combine into unions to raise wages. Unemployment seemed to be an act of God, who somehow would take care of the laborer.

Labor Limps Along

Labor unions, which had been few and disorganized in 1861, were given a strong boost by the Civil War. This bloody conflict, with its drain on human resources, put more of a premium on labor; and the mounting cost of living provided an urgent incentive to unionization. By 1872 there were several hundred thousand organized workers and thirty-two national unions, representing such crafts as bricklayers, typesetters, and shoemakers.

The **National Labor Union**, organized in 1866, represented a giant bootstride by workers. One of the earliest national-scale unions to organize in the Americas or Europe, it aimed to unify workers across locales and trades to challenge their ever more powerful bosses. The union lasted six years and attracted the impressive

total of some 600,000 members, including the skilled, unskilled, and farmers, though in keeping with the times, it excluded the Chinese and made only nominal efforts to include women and blacks. Black workers organized their own Colored National Labor Union as an adjunct, but their support for the Republican party and the persistent racism of white unionists prevented the two national unions from working together. The National Labor Union agitated for the arbitration of industrial disputes and the eight-hour workday, winning the latter for government workers. But the devastating depression of the 1870s dealt it a knockout blow. Labor was generally rocked back on its heels during the tumultuous years of the depression, but it never completely toppled. Wage reductions in 1877 touched off such disruptive strikes on the railroads that nothing short of federal troops could restore order.

A new organization—the **Knights of Labor**—seized the torch dropped by the defunct National Labor Union (see "Makers of America: The Knights of Labor," pp. 534–535). Officially known as the Noble and Holy Order of the Knights of Labor, it began inauspiciously in 1869 as a secret society, with a private ritual, passwords, and a special handshake. Secrecy, which continued until 1881, would forestall possible reprisals by employers.

The Knights of Labor, like the National Labor Union, sought to include all workers in "one big union." Their slogan was "An injury to one is the concern of all." A welcome mat was rolled out for the skilled and unskilled, for men and women, for whites and blacks, some ninety thousand of whom joined. The Knights barred only "nonproducers"—liquor dealers, professional gamblers, lawyers, bankers, and stockbrokers.

Setting up broad goals, the embattled Knights refused to thrust their lance into politics. Instead they campaigned for economic and social reform, including producers' cooperatives and codes for safety and health. Voicing the war cry "Labor is the only creator of values and capital," they frowned upon industrial warfare while fostering industrial arbitration. The ordinary workday was then ten hours or more, and the Knights waged a determined campaign for the eight-hour stint. A favorite song of these years ran,

Hurrah, hurrah, for labor,
it is mustering all its powers,
And shall march along to victory
with the banner of eight hours.

Under the eloquent but often erratic leadership of Terence V. Powderly, an Irish American of nimble wit and fluent tongue, the Knights won a number of strikes for the eight-hour day. When the Knights staged a successful strike against Jay Gould's Wabash Railroad in 1885, membership mushroomed to about three-quarters of a million workers.

Unhorsing the Knights of Labor

Despite their outward success, the Knights were riding for a fall. They became involved in a number of May Day strikes in 1886, about half of which failed. A focal point was Chicago, home to about eighty thousand Knights. The city was also honeycombed with a few hundred anarchists, many of them foreign-born, who were advocating a violent overthrow of the American government.

Tensions rapidly built up to the bloody **Haymarket Square** episode. Labor disorders had broken out, and on May 4, 1886, the Chicago police advanced on a meeting called to protest alleged brutalities by the authorities. Suddenly a dynamite bomb was thrown that killed or injured several dozen people, including police.

Hysteria swept the Windy City. Eight anarchists were rounded up, although nobody proved that they had anything to do directly with the bomb. But the judge and jury held that since they had preached incendiary doctrines, they could be charged with conspiracy. Five were sentenced to death, one of whom committed suicide, and the other three were given stiff prison terms.

Agitation for clemency mounted. In 1892, some six years later, John P. Altgeld, a German-born Democrat of strong liberal tendencies, was elected governor of Illinois. After studying the Haymarket case exhaustively, he pardoned the three survivors. Violent abuse was showered on him by conservatives, unstinted praise by those who thought the men innocent. He was defeated for reelection and died a few years later in relative obscurity, "The Eagle Forgotten." Whatever the merits of the case, Altgeld displayed courage in opposing what he regarded as a gross injustice.

The Haymarket Square bomb helped blow the props from under the Knights of Labor. They were associated in the public mind, though mistakenly, with the anarchists. The eight-hour movement suffered correspondingly, and subsequent strikes by the Knights met with scant success.

Another fatal handicap of the Knights was their inclusion of both skilled and unskilled workers. Unskilled labor could easily be replaced by strikebreaking "scabs." High-class craft unionists, who enjoyed a semimonopoly of skills, could not readily be supplanted and hence enjoyed a superior bargaining position. They finally wearied of sacrificing this advantage on the altar of solidarity with their unskilled coworkers and sought refuge in a federation of exclusively skilled craft unions—the American Federation of Labor. The desertion of the skilled craft unionists dealt the Knights a body blow. By the 1890s they had melted away to 100,000 members, and these gradually fused with other protest groups of that decade.

The Knights of Labor

It was 1875. The young worker was guided into a room, where his blindfold was removed. Surrounding him were a dozen men, their faces covered by hoods. One of the masked figures solemnly asked three questions: "Do you believe in God?" "Do you gain your bread by the sweat of your brow?" "Are you willing to take a solemn vow, binding you to secrecy, obedience, and mutual assistance?" Yes, came the reply. The men doffed their hoods and joined hands in a circle. Their leader, the Master Workman, declared, "On behalf of the toiling millions of earth, I welcome you to this Sanctuary, dedicated to the service of God, by serving humanity." Then the entire group burst into song:

Storm the fort, ye Knights of Labor,
Battle for your cause;
Equal rights for every neighbor,
Down with tyrant laws!

The carefully staged pageantry then drew to a close. The worker was now a full-fledged member of the Knights of Labor.

He had just joined a loose-knit organization of some 100,000 workingpeople, soon to swell to nearly a million after the Knights led several successful strikes in the 1880s. The first women Knights joined in 1881, when an all-female local was established in the shoe trade in Philadelphia, and one in ten members was a woman by 1885. Women were organizers, too. Fiery Mary Harris ("Mother") Jones got her start agitating for the Knights in the Illinois coalfields. The first all-black local was founded among coal miners in Ottumwa, Iowa. The Knights preached tolerance and the solidarity of all working men and women, and they meant it, but even their inclusionary spirit had its limits. Chinese workers were barred from joining, and the Knights vigorously supported the Chinese Exclusion Act of 1882. They also championed the Contract Labor Law of 1885, which aimed to restrain competition from low-wage immigrant workers—though immigrants, especially the Irish, were themselves disproportionately represented among the Knights' membership.

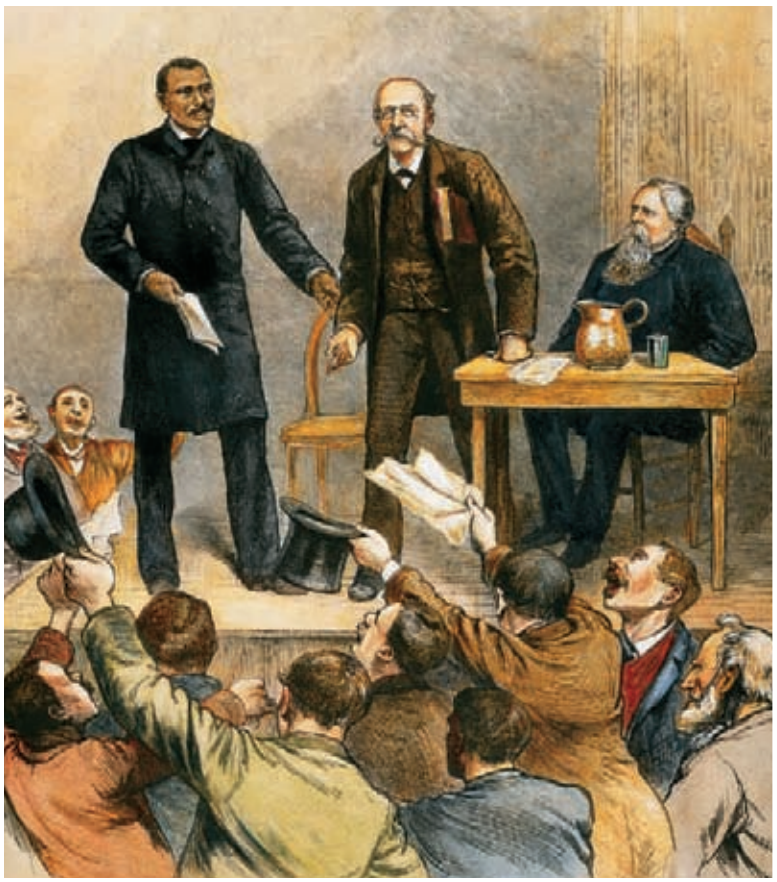
Terence V. Powderly, born to Irish immigrant parents in Carbondale, Pennsylvania, in 1849, became the Grand Master Workman of the Knights in 1879. Slightly built, with mild blue eyes behind glasses, he had dropped out of school at age thirteen to take a job guarding railroad track switches and rose to mayor of Scranton, Pennsylvania, in the 1870s. In 1894 he became a lawyer—despite the fact that the Knights excluded lawyers from membership. A complex, colorful, and sometimes cynical man, he denounced the "multimillionaires [for] laying the foundation for their colossal fortunes on the bodies and souls of living men." In the eyes of Powderly and his Knights, only the economic and political independence of American workers could preserve republican traditions and institutions from corruption by monopolists and other "parasites."

Powderly denounced "wage-slavery" and dedicated the Knights to achieving the "cooperative commonwealth." Shunning socialism, which advocated government ownership of the means of production, Powderly urged laborers to save enough from their wages to purchase mines, factories, railroads, and stores. They would thereby create a kind of toilers' utopia; because labor would own and operate those enterprises, workers themselves would be owner-producers, and the conflict between labor and capital would evaporate. The Knights actually did operate a few businesses, including coal mines in Indiana, but all eventually failed.

Powderly's vision of the cooperative commonwealth reflected the persistent dream of many nineteenth-century American workers that they would all one day

Granger Collection

"Mother Jones"



Granger Collection

Machinist Frank J. Ferrell, Black Delegate of District Assembly No. 49, Introducing General Master Workman Terence Powderly to the Tenth Annual Convention of the Knights of Labor, Held in Richmond, Virginia, 1886

become producers. As expectant capitalists, they lacked "class consciousness"—that is, a sense of themselves as a permanent working class that must organize to coax what benefits it could out of the capitalist system. Samuel Gompers, by contrast, accepted the framework of American capitalism, and his American Federation of Labor sought to work within that framework, not to overturn it. Gompers's conservative strategy, not Powderly's utopian dream, eventually carried the day. The swift decline of the Knights in the 1890s underscored the obsolescence of their unrealistic, even naive, view that a bygone age of independent producers could be restored. Yet the Knights' commitment to unifying all workers in one union—regardless of race, gender, ethnicity, or skill level—provided a blueprint for the eventual success of similarly committed unions like the Congress of Industrial Organizations in the 1930s.

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Women Delegates to the 1886 Convention of the Knights of Labor

Brown Brothers

Samuel Gompers (1850–1924) Gompers (second from the right in the first row), shown here marching in a labor demonstration in Washington, D.C., in 1919, once declared, "Show me the country in which there are no strikes and I'll show you that country in which there is no liberty."

The AF of L to the Fore

The elitist **American Federation of Labor**, born in 1886, was largely the brainchild of squat, square-jawed Samuel Gompers. This colorful Jewish cigar maker, born in a London tenement and removed from school at age ten, was brought to America when thirteen. Taking his turn at reading informative literature to fellow cigar makers in New York, he was pressed into overtime service because of his strong voice. Rising spectacularly in the labor ranks, he was elected president of the American Federation of Labor every year except one from 1886 to 1924.

Significantly, the American *Federation* of Labor was just what it called itself—a federation. It consisted of an association of self-governing national unions, each of which kept its independence, with the AF of L unifying overall strategy. No individual laborer could join the central organization.

Gompers adopted a down-to-earth approach, soft-pedaling attempts to engineer sweeping social reform. A bitter foe of socialism, he shunned politics for economic strategies and goals. Gompers had no quarrel with capitalism, but he demanded a fairer share for labor. All he wanted, he said, was "more." Promoting what he called a "pure and simple" unionism, he sought better wages, hours, and working conditions. Unlike the somewhat utopian Knights of Labor, he was not concerned with the sweet by-and-by, but with the bitter here and now. A major goal of Gompers was the "trade agreement" authorizing the **closed shop**—or all-union labor. His chief weapons were the walkout and the boycott, enforced by "We don't patronize" signs. The stronger craft unions of the federation, by pooling funds, were able to amass a war chest that would enable them to ride out prolonged strikes.

The AF of L thus established itself on solid but narrow foundations. Although attempting to speak for all workers, it fell far short of being representative of them. Composed of skilled craftsmen, like the carpenters and the bricklayers, it was willing to let unskilled laborers, including women and especially blacks, fend for themselves. Though hard-pressed by big industry, the federation was basically nonpolitical. But it did attempt to persuade members to reward friends and punish foes at the polls. The AF of L weathered the panic of 1893 reasonably well, and by 1900 it could boast a membership of 500,000. Critics referred to it, with questionable accuracy, as "the labor trust."

Labor disorders continued, peppering the years from 1881 to 1900 with a total of over 23,000 strikes. These disturbances involved 6,610,000 workers, with a total loss to both employers and employees of $450 million. The strikers lost about half their strikes and won or compromised the remainder. Perhaps the gravest weakness of organized labor was that it still embraced only a small minority of all workingpeople—about 3 percent in 1900.

But attitudes toward labor had begun to change perceptibly by 1900. The public was beginning to concede the right of workers to organize, to bargain collectively, and to strike. As a sign of the times, Labor Day was made a legal holiday by act of Congress in 1894. A few enlightened industrialists had come to perceive the wisdom of avoiding costly economic warfare by bargaining with the unions and signing agreements. But the vast majority of employers continued to fight organized labor, which achieved its grudging gains only after recurrent strikes and frequent reverses. Nothing was handed to it on a silver platter. Management still held the whip hand, and several trouble-fraught decades were to pass before labor was to gain a position of relative equality with capital. If the age of big business had dawned, the age of big labor was still some distance over the horizon.

Varying Viewpoints

Industrialization: Boon or Blight?

The capitalists who forged an industrial America in the late nineteenth century were once called captains of industry—a respectful title that bespoke the awe due their wondrous material accomplishments. But these economic innovators have never been universally admired. During the Great Depression of the 1930s, when the entire industrial order they had created seemed to have collapsed utterly, it was fashionable to speak of them as robber barons—a term implying scorn for their highhanded methods. This sneer often issued from the lips and pens of leftist critics like Matthew Josephson, who sympathized with the working classes that were allegedly brutalized by the factory system.

Criticism has also come from writers nostalgic for a preindustrial past. These critics believe that industrialization stripped away the traditions, values, and pride of native farmers and immigrant craftspeople. Conceding that economic development elevated the material standard of living for working Americans, this interpretation contends that the Industrial Revolution diminished their spiritual "quality of life." Accordingly, historians like Herbert Gutman and David Montgomery portray labor's struggle for control of the workplace as the central drama of industrial expansion.

Nevertheless, even these historians concede that class-based protest has never been as powerful a force in the United States as in certain European countries. Many historians believe that this is so because greater social mobility in America dampened class tensions. The French observer Alexis de Tocqueville noted in the 1830s that America had few huge inherited fortunes and that most of its wealthy men were self-made. For two centuries a majority of Americans have believed that greater opportunity distinguished the New World from the Old.

In the 1960s historians led by Stephan Thernstrom began to test this long-standing belief. Looking at such factors as occupation, wealth, and geographic mobility, they tried to gauge the nature and extent of social mobility in the United States. Most of these historians concluded that although relatively few Americans made rags-to-riches leaps like those heralded in the Horatio Alger stories, large numbers experienced small improvements in their economic and social status. Few sons of laborers became corporate tycoons, but many more became line bosses and white-collar clerks. These studies also have found that race and ethnicity often affected one's chances for success. For instance, the children and grandchildren of Jewish immigrants tended to rise faster in the professions than Americans of Italian and Irish descent. Throughout the nineteenth and early twentieth centuries, blacks lagged far behind other groups in almost every category.

In recent years such studies have been criticized by certain historians who point out the difficulties involved in defining social status. For instance, some white-collar clerical workers received lower wages than manual laborers did. Were they higher or lower on the social scale? Furthermore, James Henretta has pointed out that different groups defined success differently: whereas Jewish immigrants often struggled to give their sons professional educations, the Irish put more emphasis on acquiring land and the Italians on building small family-run businesses.

Meanwhile, leftist historians such as Michael Katz have argued that the degree of social mobility in America has been overrated. These historians argue that industrial capitalism created two classes: a working class that sold its labor, and a business class that controlled resources and bought labor. Although most Americans took small steps upward, they generally remained within the class in which they began. Thus, these historians argue, the inequality of a capitalistic class system persisted in America's seemingly fluid society.

Chapter Review

KEY TERMS

Wabash, St. Louis & Pacific Railroad Company* v. *Illinois (519)
Interstate Commerce Act (519)
vertical integration (521)
horizontal integration (521)
trust (521)
interlocking directorates (522)
Standard Oil Company (524)
Social Darwinists (525)
Sherman Anti-Trust Act (525)
National Labor Union (532)
Knights of Labor (533)
Haymarket Square (533)
American Federation of Labor (536)
closed shop (536)

PEOPLE TO KNOW

Cornelius Vanderbilt
Alexander Graham Bell
Thomas Alva Edison
Andrew Carnegie
John D. Rockefeller
Samuel Gompers

CHRONOLOGY

1862 Congress authorizes transcontinental railroad

1866 National Labor Union organized
First working transatlantic telegraph cable

1869 Transcontinental railroad joined near Ogden, Utah
Knights of Labor organized
Suez Canal completed

1870 Standard Oil Company organized

1876 Bell invents telephone

1879 Edison invents electric light

1886 Haymarket Square bombing
Wabash case
American Federation of Labor formed

1887 Interstate Commerce Act

1890 Sherman Anti-Trust Act

1901 United States Steel Corporation formed

TO LEARN MORE

Edward L. Ayers, *The Promise of the New South: Life After Reconstruction* (1992)
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Richard Hofstadter, *Social Darwinism in American Thought, 1860–1915* (rev. ed., 1955)
Tera W. Hunter, *To 'Joy My Freedom: Southern Black Women's Lives and Labors After the Civil War* (1997)
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David Montgomery, *The Fall of the House of Labor: The Workplace, the State, and American Labor Activism, 1865–1925* (1987)
Daniel T. Rodgers, *The Work Ethic in Industrial America, 1850–1920* (1978)
Richard White, *Railroaded: The Transcontinentals and the Making of Modern America* (2011)

A complete, annotated bibliography for this chapter—along with brief descriptions of the People to Know—may be found on the American Pageant website. The Key Terms are defined in a Glossary at the end of the text.

AP* Review Questions for Chapter 24

1. All of the following economic developments were significant factors in enabling America to industrialize rapidly EXCEPT
   (A) private foreign investment.
   (B) a plentiful supply of skilled, unskilled, and cheap labor.
   (C) technological innovations.
   (D) increased overseas trade.
   (E) the sale of confiscated Confederate land and property.

2. Which of the following two industries were most significantly expanded as a result of the completion of the transcontinental railroad?
   (A) Textiles and shoemaking
   (B) Mining and agriculture
   (C) Banking and real estate
   (D) Shipping and fishing
   (E) Electricity and telecommunications

3. Which effort represented the first attempt to regulate the monopolizing and pricing practices of the railroad corporations during this period?
   (A) Congressional establishment of the Interstate Commerce Commission
   (B) The U.S. Supreme Court decision of *Wabash, St. Louis, and Pacific Railroad* v. *Illinois*
   (C) An executive order issued by President Cleveland that limited the monopolizing and excessive pricing practices of the railroad corporations
   (D) Congressional legislation aimed at curbing the monopolizing and pricing practices of the railroad corporations
   (E) Laws passed by state legislatures that regulated the monopolizing and pricing practices of the railroad corporations

4. Which of the following was NOT among the common forms of corruption practiced by the wealthy railroad barons?
   (A) Bribing judges and state legislatures
   (B) Requiring their employees to buy railroad stock as a condition of employment
   (C) Providing free railroad passes to journalists and politicians
   (D) Watering down railroad stocks and bonds in order to sell them at inflated prices
   (E) Granting kickbacks to powerful shippers

5. Which of the following best describes the Europeans' approach to ownership or investment in private companies in the United States during this period?
   (A) Appointing European managers to key positions in the company
   (B) Allowing Americans to manage the business unless an economic crisis occurred
   (C) Requiring American banks to issue regular reports on the profitability of their companies
   (D) Steering most of their investment profits back into European investments
   (E) Insisting that the companies employ a percentage of immigrants from the nation owning the company

6. How did the American system of mass manufacture of standardized, interchangeable parts influence the behavior of U.S. capitalists?
   (A) It motivated U.S. capitalists to invest in training their workforce.
   (B) It led U.S. capitalists to hire American workers rather than foreign immigrants.
   (C) It stimulated U.S. capitalists to replace skilled labor with unskilled workers and machinery.
   (D) It caused the building of extremely large factories in dedicated industrial districts.
   (E) It led U.S. capitalists to pay higher wages to retain a stable workforce.

7. What two technological innovations greatly expanded the industrial employment of women in the late nineteenth century?
   (A) Typewriter and telephone
   (B) Electric light and phonograph
   (C) Bessemer steel process and internal combustion engine
   (D) Streetcar and bicycle
   (E) Electric refrigerator and stove

8. All of the following economic strategies were employed by the titans of industry, during this period, to maximize their corporations' profits EXCEPT
   (A) vertical integration of all facets of an industry, from raw materials to final product, within a single company.
   (B) horizontal integration within a single market by securing favorable alliances with potential competitors.
   (C) improving the efficiency of production by making supplies more reliable.
   (D) utilizing technological advances in mechanization and industrial processes to mass-produce products in a cost-effective manner.
   (E) seeking stable labor relations with their workers by permitting collective bargaining with unions.

9. Which of the following best describes the intellectual viewpoint of Andrew Carnegie as expressed in the "Gospel of Wealth"?
   (A) All of the teachings of Jesus should guide a businessman's approach to acquiring and managing his wealth.
   (B) The wealthy should exhibit moral and social responsibility in their use of their God-given money.
   (C) Poor immigrants and ethnic minorities should be provided with substantial government assistance so they can acquire substantial wealth.
   (D) Labor precedes capital in permitting a person to acquire, increase, and maintain wealth.
   (E) A "survival of the fittest" approach to capitalism, emphasizing wealth creation as a result of natural selection

10. Which entity was first prosecuted for alleged restraint-of-trade violations by the U.S. government using the Sherman Anti-Trust Act of 1890?
   (A) Labor unions
   (B) Manufacturing corporations
   (C) State legislatures
   (D) Railroad corporations
   (E) Banking syndicates

11. All of the following were major attractions for potential investors in southern manufacturing industries EXCEPT
   (A) low wages for workers.
   (B) nonunionized labor.
   (C) tax benefits by government.
   (D) plentiful natural resources such as cotton.
   (E) a well-educated and ethnically diverse work force.

12. Despite generally rising wages in the nineteenth century, industrial workers were extremely vulnerable to all of the following EXCEPT
   (A) economic swings and depressions.
   (B) employers' whims.
   (C) new educational requirements for jobs.
   (D) sudden unemployment.
   (E) illness and accident.

13. Which of the following was NOT a strategy utilized by late-nineteenth-century employers to gain leverage over workers seeking to improve their wages and working conditions?
   (A) Closed shop
   (B) Lockouts
   (C) Yellow-dog contracts
   (D) Seeking federal court injunctions against union activity
   (E) Creation of company towns

14. All of the following were reasons that the Knights of Labor ultimately failed to sustain their union independence and membership by the 1890s EXCEPT
   (A) defections by skilled craft unionists to the American Federation of Labor (AFL).
   (B) lack of class consciousness.
   (C) the public's association of the Knights of Labor with the violent activities of anarchists in cities such as Chicago.
   (D) unsuccessful strikes and scant progress in their efforts to secure the eight-hour day.
   (E) racial and gender exclusiveness in their membership.

15. Which of the following was NOT a difference between the Knights of Labor and the American Federation of Labor (AFL)?
   (A) The Knights of Labor included all workers; the AFL only advocated for skilled workers.
   (B) The Knights of Labor welcomed all genders and ethnicities; the AFL excluded women and blacks.
   (C) The Knights of Labor discarded ideas of class in the United States; the AFL worked within those societal limits.
   (D) The Knights of Labor was a huge union, and the AFL was a federation of many specialized unions.
   (E) The Knights of Labor refused to condone striking; the AFL believed that strikes could help the workers' cause.

16. Railroads changed the American landscape in all of the following ways EXCEPT by
   (A) making the United States the single largest integrated national market in the world.
   (B) stimulating mining and agriculture in the West.
   (C) limiting the number of people moving to overcrowded cities.
   (D) employing more people than any other industry.
   (E) displacing buffalo and plowing through the prairies.