Chapter 24 Industry Comes of Age 1865-1900

The Iron Colt Becomes an Iron Horse
Due to the expansion of the country, many new railroads were built. Congress began to advance liberal money loans to 2 favored cross-continent companies in 1862 in response to the fact that transcontinental railroad construction was so costly and risky.
Growing railroads took up more land than they were allotted because their land grants were given over a broad path through the proposed route. The railroad owners would then choose the route to build on. President Grover Cleveland ended the land dispute in 1887 when he opened up all the unclaimed public portions of the grants to the public.

Spanning the Continent with Rails
The Union Pacific Railroad was commissioned by Congress in 1862 to build a transcontinental railroad starting in Omaha, Nebraska.
Many railroad workers, including Irish "Paddies", were forced to pick up their rifles and fight when Indians attempted to defend their lands.
Rail-lying at the California end of the railroad was taken up by the Central Pacific Railroad. The 4 chief financial backers of the enterprise (the Big Four) included Leland Stanford and Collis P. Huntington. They operated through 2 construction companies.
The Union Pacific Railroad and the Central Pacific Railroad companies both received monetary aid from the government.
The transcontinental railroad was completed in 1869, increasing trade with Asia and opening up the West for expansion.

Binding the Continent with Railroad Ties
There was a total of 5 transcontinental railroads built: The Northern Pacific Railroad, running from Lake Superior to Puget Sound, was completed in 1883; the Atchison, running from Topeka to California, was completed in 1884; the Southern Pacific, stretching from New Orleans to San Francisco, was also completed in 1884; and the Great Northern, running from Duluth to Seattle, was completed in 1893 by James J. Hill.

Railroad Consolidation and Mechanization
The railroad was Cornelius Vanderbilt's enterprise.
2 significant improvements benefited the railroads; the steel rail and a standard gauge of track width. Steel rails were much stronger and safer than the traditional iron rails.

Revolution by Railways
The railroad stimulated the industrialization of the country in the post-Civil War years. It created an enormous domestic market for American raw materials and manufactured goods. Railroad companies also stimulated immigration.
At this time, every town in the United States had its own local time. In order to keep schedules and avoid wrecks, the major rail lines stated, on November 18, 1883, that the continent would be divided into 4 times zones - most towns accepted the new time method.

Wrongdoing in Railroading
With great wealth and prosperity came much corruption.
In order to increase the weight of cows, "stock watering" was employed. It entailed forcing a cow to bloat itself with water before it was weighed for sale. This technique enabled railroad stock promoters to inflate their claims about a given line's assets and profitability and sell stocks and bonds in excess of the railroad's actual value.
Railroaders, feeling they were above the law, abused the public by bribing judges and legislatures.
Railroad kings were manipulators of a huge natural monopoly and exercised too much direct control over the lives of people.
Many rail barons granted rebates or kickbacks (bribes) to powerful shippers in return for steady traffic.
Railroad companies combined with other companies in order to protect their profits. "Pools", agreements to divide the business in a given area and share the profits, were the earliest form of combinations.

**Government Bridles the Iron Horse**
With the onset of the depression of the 1870s, came protests from farmers against railroaders who ran the farmers into bankruptcy. Many Midwestern legislatures tried to regulate the railroad monopoly, but in 1886, the Supreme Court ruled in the *Wabash* case that individual states had no power to regulate interstate commerce.

In 1887, Congress passed the *Interstate Commerce Act*. It prohibited rebates and pools, required the railroads to publish their rates openly, forbade unfair discrimination against shippers, and outlawed charging more for a short trip than for a long one over the same line. It also created the *Interstate Commerce Commission* (ICC) to administer and enforce the new legislation. The new laws provided an orderly forum where competing business interests could resolve their conflicts in peaceful ways. The laws tended to stabilize the existing railroad business.

**Miracles of Mechanization**
The telephone was created in 1876 by Alexander Graham Bell. This invention revolutionized the way Americans communicated. Thomas Alva Edison invented numerous devices; the most well-known is his perfection of the electric light bulb in 1879.

**The Trust Titan Emerges**
Tycoons like Andrew Carnegie, the steel king; John D. Rockefeller, the oil baron; and J. Pierpont Morgan, the bankers' banker, circumvented their competition. Carnegie used the tactic of "**vertical integration**" to combine all phases of manufacturing into one organization. He and his business controlled every aspect of production, from mining to marketing. His goal was to improve efficiency. "**Horizontal integration**" entailed allying with competitors to monopolize a given market. This tactic of creating trusts was used by Rockefeller.

**The Supremacy of Steel**
Steel was "king" during the industrialization era. Nearly every aspect of society used it. The United States soon outdistanced all foreign competitors and was producing 1/3 of the world's steel supply. The *Bessemer process* allowed for the price of steel to drop dramatically and for its production to be done with relative ease. The process involved blowing cold air on red-hot iron in order to ignite the carbon and eliminate impurities.

**Carnegie and Other Sultans of Steel**
Andrew Carnegie was not a monopolist and actually disliked monopolistic trusts. He entered the steel business in the Pittsburgh area and created an organization with about 40 "Pittsburg millionaires." By 1900, he was producing ¼ of the nation's Bessemer steel.

J. P. Morgan financed the reorganization of railroads, insurance companies, and banks. In 1900, Carnegie was eager to sell his holdings of his company. At that time, Morgan was starting to manufacture steel pipe tubing. Carnegie threatened to ruin his rival (Morgan) by invading the same business if Morgan did not buy him out. Finally Morgan agreed to buy out Carnegie for $400 million. Morgan expanded his industrial empire and created the *United States Steel Corporation* in 1901. It was America's first billion-dollar corporation.

Carnegie dedicated the rest of his life to donating the rest of his money to charities.

**Rockefeller Grows an American Beauty Rose**
Kerosene was the first major product of the oil industry. But, the invention of the light bulb rendered kerosene obsolete.

By 1900, the gasoline-burning *internal combustion engine* had beaten out its rivals as the primary means of automobile propulsion. The birth of the automobile gave a great lift to the oil industry. John D. Rockefeller organized the *Standard Oil Company of Ohio* in 1870, attempting to eliminate the middlemen and knock out his competitors. By 1877, he controlled 95% of all the oil refineries in the nation. Rockefeller grew to such a great power by eliminating his competitors.
Other trusts grew in addition to the oil American Beauty of oil. These included the sugar trust, the tobacco trust, the leather trust, and the harvester trust.

**The Gospel of Wealth**
The wealthy proclaimed that they were justified by God to have so much wealth. They claimed that God gave them their money or they were a product of natural selection.

**Plutocracy**, government controlled by the wealthy, took control of the Constitution. The clause that gave Congress sole jurisdiction over the interstate commerce was a bonus for the monopolists; they used their lawyers to thwart controls by state legislatures. Large trusts also sought safety behind the 14th Amendment, arguing that corporations were actually legal "people."

**Government Tackles the Evil Trust**
Hailing to public demand, Congress passed the Sherman Anti-Trust Act of 1890. The Act forbade combinations in restraint of trade without any distinction between "good" trusts and "bad" trusts. The law proved ineffective because it contained legal loopholes and it made all large trusts suffer, not just bad ones.

**The South in the Age of Industry**
Throughout the industrial strive in the North, the South produced a smaller percentage of the nation's manufactured goods. Southern agriculture received a boost in the 1880s when machine-made cigarettes replaced earlier methods of producing cigarettes. This caused tobacco consumption to shoot up.

James Buchanan Duke took advantage of the growing tobacco business and formed the American Tobacco Company in 1890.

Numerous obstacles lay in the path of southern industrialization. Northern-dominated railroad companies charged lower rates on manufactured goods moving southward from the North, but higher rates when raw materials were shipped from the South to the North.

The "Pittsburgh plus" pricing system was economic discrimination against the South in the steel industry. Rich deposits of coal and iron ore were discovered in Birmingham, Alabama. The steel lords of Pittsburgh brought pressure to bear on the compliant railroads. As a result, Birmingham steel was charged a fictional fee, no matter where it was shipped.

The South strived in manufacturing cotton textiles. By 1880, northern capital had created cotton mills in the South. Those who worked the cotton mills were in perpetual debt and were paid extremely low wages.

**The Impact of the New Industrial Revolution on America**
During the decades after the Civil War, economic miracles increased the standard of living in the United States. The industry of agriculture declined to manufacturing.

Women were most affected by the new industrial age. Women found jobs as inventions arose; the typewriter and the telephone switchboard gave women new economic and social opportunities. The nation of farmers and independent producers was becoming a nation of wage earners. By the beginning of the 1900s, the vast majority of the nation's population earned wages.

**In Unions There Is Strength**
Due to the rise in wage-earners in factories, the owners of the factories did not have any relationship with their employees.

New machines displaced employees but in the long run, more jobs were created than destroyed.

Factory workers eventually began to go on strike, complaining of their wages. Corporations sometimes compelled their workers to sign "ironclad oaths" or "yellow-dog contracts" saying that the workers would not join a labor union.

Some corporations even owned the "company town," increasing the prices of basic living so that the company could gain wealth.

The middle-class public grew tired of constant strikes, knowing that American wages were of the highest in the world.

**Labor Limps Along**
The Civil War, which put a premium on human labor, gave a boost to labor unions.

The National Labor Union, organized in 1866, lasted 6 years and attracted 600,000 members. Black workers also formed their own Colored National Labor Union. The Colored National Labor Union's
support for the Republican Party and racism of white unionists prevented it and the National Labor Union from working together.

After the National Labor Union pretty much died out in 1877, the Knights of Labor took over.

Led by Terence V. Powderly, the Noble and Holy Order of the Knights of Labor was formed in 1869 as a secret society and remained secret until 1881. It sought to include all workers in one big union and campaigned for economic and social reform, including and codes for safety and health.

**Unhorsing the Knights of Labor**

On **May 4, 1886 in Haymarket Square**, Chicago police advanced on a meeting called to protest alleged brutalities by authorities. A dynamite bomb was thrown and killed dozens of people. 8 anarchists were tried and convicted; 5 were sentenced to death while the other 3 were sent to jail. In **1892**, the governor of Illinois, John P. Altgeld, pardoned the 3 who were in prison.

The Knights of Labor were blamed for incident at Haymarket Square and as a result, it lost public support. Another downfall of the Knights of Labor was that it included both skilled and unskilled workers. When unskilled workers went on strike, they were just replaced.

The American Federation of Labor’s inclusion of only skilled worked drained the Knights of Labor of its participants.

**The AF of L to the Fore**

The American Federation of Labor was founded in **1886** and was led by Samuel Gompers. The federation consisted of an association of self-governing national unions, each of which kept its own independence. It sought for better wages, hours, and working conditions. The federation’s main weapons were the walkout and the boycott.

The greatest weakness of organized labor was that it still embraced only a small minority of all working people.

**Labor Day** was created by Congress in **1894**.