**Unit 11, Part 2: The Gilded Age: Chapter 14: Industrialization**

**The Rise of Industry**

**I. The United States Industrializes**

**A.** With the end of the Civil War, American industry expanded and millions of people left their farms to work in mines and factories.

**B.** By the early 1900s, the United States had become the world’s leading industrial nation. By 1914 the **gross national product** (**GNP**), or total value of goods and services produced by a country, was eight times greater than at the end of the Civil War.

**C.** Water, timber, coal, iron, and copper are natural resources found in the United States that led to the country’s industrial success. Transcontinental railroads increased industrialization by bringing settlers and miners to the West and moving resources to the factories in the East.

**D.** Petroleum could be turned into kerosene for lanterns and stoves. The demand for kerosene created the American oil industry. In 1859 **Edwin Drake** drilled the first oil well near Titusville, Pennsylvania. As oil production increased, so did economic expansion.

**E.** Between 1860 and 1910, the population of the United States tripled. This provided a large workforce and a greater demand for consumer goods.

**II. Free Enterprise**

**A. Laissez**-**faire,** a French phrase that means “let people do as they choose,” was a popular idea in the late 1800s. Many Americans believed the government should not interfere with the economy. Instead, they wanted supply and demand to regulate prices and wages.

**B. Entrepreneurs** risked their capital to organize and run a business. In the late 1800s, entrepreneurs were attracted to manufacturing and transportation fields. As a result, hundreds of factories and thousands of miles of railroad were built.

**C.** Another important source of private capitol was Europe. Foreign investors saw more opportunity for profit in the U.S. than they did at home.

**III. Government’s Role in Industrialism**

**A.** In the late 1800s, state and federal government had a laissez-faire attitude by keeping taxes and spending low and by not imposing regulations on industry. The government did not control wages or prices. It adopted policies to help industry.

**B.** Since the early 1800s, the northeastern states and southern states debated on economic policies. Northerners wanted high tariffs to protect their industries from foreign competition. Southerners opposed tariffs to keep the cost of imported goods down. The Civil War ended the economic debate. After the south seceded, the **Morrill Tariff** was passed, which reversed years of declining tariffs.

**C.** The high tariffs contradicted laissez-faire policies and harmed many Americans. As the United States raised tariffs on foreign products, other countries responded by raising tariffs against American products. American companies who sold goods overseas, especially farmers, were hurt by these high tariffs.

**D.** Many business leaders and members of Congress felt tariffs were necessary to protect American industry against the already established European factories.

**E.** By the early 1900s, American industries were larger and highly competitive. Many business leaders began to encourage free trade, believing they could compete internationally and succeed.

**IV. New Inventions**

**A.** New inventions increased America’s productivity, which in turn produced wealth and job opportunities.

**B.** In 1876 Scottish-American inventor **Alexander Graham Bell** invented the telephone. In 1877 Bell and his associates organized the Bell Telephone Company, which later became the American Telephone and Telegraph Company (AT&T).

**C.** In the late 1800s, **Thomas Alva Edison** invented or perfected the phonograph, the light bulb, the electric generator, the dictaphone, and the motion picture. In 1882 an Edison company began to transform American society when it started supplying electric power to customers in New York City.

**D.** The clothing industry increased productivity in the mid-1800s with the introduction of the Northrop automatic loom, the power driven sewing machine, and cloth cutters.

**E.** Mass production in the shoe industry allowed large factories to produce shoes more cheaply and efficiently than local cobblers. The savings then resulted in lower prices.

**F.** Technology improved connections among people. In 1866 Cyrus Field laid a telegraph cable across the Atlantic Ocean, providing instant contact between the United States and Europe. Another innovation, the radio, became common in American homes in the 1920s.

**The Railroads**

**I. Linking the Nation**

**A.** After the Civil War, railroad construction dramatically expanded. In 1862 President Abraham Lincoln signed the **Pacific Railway Act,** which provided for the construction of a transcontinental railroad by the Union Pacific and Central Pacific railroad companies. To encourage rapid construction, the government offered each company land along its right of way.

**B.** In 1865 the Union Pacific, under engineer **Grenville Dodge,** pushed westward from Omaha, Nebraska. Weather, labor, money, and engineering problems hampered the project. The workers included Civil War veterans, Irish immigrants, farmers, miners, cooks, and ex-convicts. Camp life was dangerous.

**C.** Four merchants known as the “Big Four” invested in the Central Pacific Railroad. They each bought stock in the railroad and eventually made a fortune. One of them, **Leland** **Stanford,** became governor of California, founded Stanford University, and later became a United States senator.

**D.** Because of a labor shortage, the Central Pacific Railroad hired about 10,000 workers from China.

**II. Railroads Spur Growth**

**A.** Railroads encouraged the growth of American industry. They linked the nation and increased the size of markets. The railroad industry stimulated the economy by spending large amounts of money on steel, coal, and timber.

**B.** In the early 1800s, most railways served only local needs, resulting in many unconnected rail lines. Eastern capitalists wanted to create a single rail transit system from the many smaller railroads. Eventually seven systems controlled most of the railroad traffic.

**C.** The most famous railroad consolidator, **Cornelius Vanderbilt,** merged three short New York railroads to form the New York Central in 1869. He was the first to offer direct rail service from New York City to Chicago.

**D.** In 1883 rail service became safer and more reliable when the American Railway Association divided the country into four **time zones,** or regions, where the same time was kept.

**E.** Large integrated railroad systems provided increased efficiency, a decrease in time spent in long distance travel, and it united Americans from different regions.

**III. The Land Grant System**

**A. Land grants** were given to railroad companies by the federal government to encourage railroad construction.

**B.** Railroad companies like the Union Pacific and Central Pacific were able to cover all their building costs by selling the land to settlers, real estate agencies, and other businesses.

**IV. Robber Barons**

**A.** The wealth of railroad entrepreneurs led to accusations that they had acquired their wealth through illegal means. One of the entrepreneurs with the worst reputation was **Jay Gould,** who used information he obtained as a railroad owner to manipulate stock prices to his benefit.

**B.** Railroad investors realized they could make more money through land grants than by running a railroad, so many investors bribed members of Congress to vote for more land grants.

**C.** In 1872 corruption in the railroad system became public with the **Crédit Mobilier** scandal. Several stockholders of the Union Pacific set up the Crédit Mobilier, a constructioncompany. The investors signed contracts with themselves. The companygreatly overcharged Union Pacific, and the railroad agreed to pay the inflated bills.

**D.** When the railroad was completed, the investors had made a fortune, but the railroad was almost bankrupt. Congress agreed to give additional grants to the railroad after several members of Congress were given shares in Union Pacific at a price well below market value. An investigation implicated several members of Congress, including James Garfield, who later became president.

**E.** Not all railroad entrepreneurs were corrupt. **James J**. **Hill** built the Great Northern Railroad without any federal land grants or subsidies. It became the most successful transcontinental railroad and the only one not to go bankrupt.

**Big Business**

**I. The Rise of Big Business**

**A.** By 1900 big business dominated the economy of the United States.

**B.** A **corporation** is an organization owned by many people but treated by law as though it was a single person. **Stockholders,** the people who own the corporation, own shares of ownership called **stock.** Issuing stock allows a corporation to raise large sums of money but spreads out the financial risk.

**C.** From the sale of stock, corporations could invest in new technologies to increase their efficiency. By making goods quicker and cheaper, these corporations achieved **economies of scale.**

**D.** All businesses have two kinds of costs. **Fixed costs** are the costs a company has to pay whether it is operating or not. Examples of fixed costs would be loans, mortgages, and taxes. **Operating costs** are costs that occur when a company is in operation. These costs include wages, shipping charges, and supplies.

**E.** Big corporations had an advantage over small manufacturing companies. Big corporations could produce more cheaply, and they could continue to operate even in poor economic times by cutting prices to increase sales. Many small businesses with high operating costs were forced out of business.

**II. The Consolidation of Industry**

**A.** Competition between corporate leaders caused lower prices for consumers, but it also cut business profits. To stop prices from falling, companies organized **pools**—agreements to keep prices at a certain level. Pools usually did not last long. As soon as one member cut prices, the pool broke apart. By the 1870s, competition had reduced industries to a few large, highly efficient corporations.

**B. Andrew Carnegie,** a poor Scottish immigrant, worked his way up from a bobbin boy in a textile factory to the president of the Pennsylvania Railroad. He invested much of his money in railroad-related businesses and later owned his own business. He opened a steel company in 1875 and quickly adapted his steel mills to use the **Bessemer process.**

**C.** Carnegie began **vertical integration** of the steel industry. A vertically integrated company owns all the different businesses it depends on for its operation. This not only saved money but also made the big company bigger.

**D.** Business leaders also pushed for **horizontal integration,** combining many firms doing the same type of business into one large corporation.

**E.** A **monopoly** occurs when one company gains control of an entire market. In the late 1800s, Americans became suspicious of large corporations and feared monopolies. Many states made it illegal for a company to own stock in another company without permission from the state legislature.

**F.** In 1882 Standard Oil formed the first **trust,** which merged businesses without violating laws against owning other companies. A trust allows a person to manage another person’s property.

**G.** A **holding company** did not produce anything itself. Instead, it owned the stock of companies that did produce goods. The holding company controlled all the companies it owned, merging them all into one large enterprise.

**III. Selling the Product**

**A.** Retailers looked for new ways to market and sell their goods. Advertising changed, with illustrations replacing small-type line ads.

**B.** The department store changed the idea of shopping by bringing in a huge assortment of products in a large, glamorous building.

**C.** Chain stores, like Woolworth’s, focused on offering low prices instead of special services or fancy decor.

**D.** Mail-order catalogs were created to reach rural Americans. Montgomery Ward and Sears, Roebuck were the two largest catalog retailers.

**Unions**

**I. Working in the United States**

**A.** Workers in industrial America faced monotonous work, dangerous working conditions, and an uneven division of income between the wealthy and the working class.

**B.** Between 1865 and 1897, the United States experienced **deflation,** or a rise in the value of money. Relations between workers and employers were made more difficult by deflation. Deflation caused prices to fall and companies to cut wages. To the workers, it seemed their company wanted to pay them less for the same work.

**C.** Workers felt the only way to improve their working environment was to organize unions.

**II. Early Unions**

**A.** Two types of workers were a part of industrial America. Craft workers had special skills and were generally paid more. Common laborers had few skills and as a result received lower wages.

**B.** In the 1830s, craft workers formed **trade unions,** which were unions limited to people with specific skills. By 1873 there were 32 trade unions in the United States.

**C.** Employers opposed **industrial unions,** which united all craft workers and common laborers in a particular industry. Companies went to great lengths to prevent unions from forming. Companies would have workers take oaths or sign contracts promising not to join a union. They would also hire detectives to identify union organizers.

**D.** Workers who organized a union or strike were fired and put on a **blacklist**—a list of troublemakers. Once blacklisted, a worker could get a job only by changing trade, residence, or his or her name.

**E.** If a union was formed, companies used a **lockout** to break it. Workers went without pay and were locked out of the property. If the union did strike, employers would hire replacement workers called **strikebreakers,** also known as scabs.

**F.** There were no laws that gave workers the right to organize.

**G. Marxism,** the ideas of Karl Marx, was popular in Europe. Marx felt it was the class struggle between the workers and the owners that shaped society. He believed the workers would revolt and gain control. After the revolution, Marx believed a socialist society would be created in which the wealth was evenly divided, and classes would no longer exist.

**H.** Many labor supporters agreed with Marxism, and some supported the idea of anarchism. Anarchists believed society did not need government and that a few acts of violence would cause the government to collapse.

**I.** As ideas of Marxism and anarchism spread in Europe, tens of thousands of immigrants arrived in the United States. People began to associate Marxism and anarchism with immigrants. They became suspicious of unions as well.

**III. The Struggle to Organize**

**A.** Workers attempted to create large unions, but rarely succeeded. Many times confrontations between owners and government ended in violence.

**B.** The Great Railroad strike of 1877 occurred after a severe recession in 1873 forced many companies to cut wages. The result was the first nationwide labor protest in Martinsburg, West Virginia, as workers walked off their jobs and blocked tracks. The strike spread until 80,000 railroad workers in 11 states stopped working. Violence erupted. President Hayes ordered the army to stop the strike. In the end, 100 people died and millions of dollars in property were lost.

**C.** The failure of the great railroad strike led to a need for better organized laborers. By the late 1870s, the first nationwide industrial union called the **Knights of Labor** was formed. They demanded an eight-hour workday, a government bureau of labor statistics, equal pay for women, an end to child labor, and worker-owned factories. They supported **arbitration,** a process where an impartial third party helps mediate between workers and management.

**D.** The **Haymarket Riot** caused the popularity of the Knights of Labor to decline. A nationwide strike was called to show support of an eight-hour workday. A clash in Chicago left one striker dead. The next evening, a meeting at Haymarket Square was scheduled to protest the killing. Someone threw a bomb. In the end, seven police and four more workers were killed. Although no one ever knew who threw the bomb, one\ man arrested was a member of the Knights of Labor. This hurt the reputation of the organization, and people began dropping out.

**E.** In 1893 railroad workers created the American Railway Union (ARU). They unionized the Pullman Palace Car Company in Illinois. After a recession caused the company to cut wages, a boycott of Pullman cars occurred across the United States. It tied up the railroads and threatened the economy. To end the boycott, U.S. mail cars were attached to Pullman cars. Refusing to handle a Pullman car would result in tampering with the mail, a violation of federal law. After an **injunction,** or formal court order, stopped the boycott, the strike and the ARU both ended.

**IV. The American Federation of Labor**

**A.** In 1886 delegates from over 20 of the nation’s trade unions organized the **American Federation of Labor** (AFL). The AFL’s first leader was **Samuel Gompers,** whose plainand simple approach to labor relations helped unions become accepted. Gomperswanted to keep unions out of politics and to fight for small gains such as higherwages and better working conditions.

**B.** Under Gompers’s leadership, the AFL had three goals: to get companies to recognize unions and agree to collective bargaining; to push for **closed shops,** where companies could only hire union members; and to promote an eight-hour workday.

**C.** By 1900 the AFL had over 500,000 members. The majority of workers, however, were still unorganized.

**V. Working Women**

**A.** By 1900 women made up more than 18 percent of the labor force. Women worked as domestic servants, teachers, nurses, sales clerks, and secretaries.

**B.** Women were paid less than men. It was felt that men needed a higher wage because they needed to support a family. Most unions excluded women.

**C.** A separate union for women was created by Mary Kenney O’Sullivan and Leonora O’Reilly. The **Women’s Trade Union League** (WTUL) was the first national association dedicated to promoting women’s labor issues.