**SSUSH11 – the rise of big business, the growth of labor unions, and technological innovations.**

**SSUSH11a: Effect of Railroads on other businesses including steel and oil.**

The modern United States was influenced by the growth of big business, the rise of labor unions,

and advances in technological innovation. By the early 20th century, the American industrial economy

had outstripped that of European competitors. Entrepreneurs, including Andrew Carnegie and J.D.

Rockefeller, built vast corporations that changed the business landscape. By forming trusts and

monopolies, big businesses could control production and prices in the market. Production and

industries were also supplemented by new technologies that allowed for instant communication and

twenty-four-hour factory operation. With greater factory production demands came greater demands on workers. Large immigrant populations arriving in the United States during the period filled the labor

force. These immigrants were poor and willing to work for low wages. They also outnumbered the jobs

available. As a result, business owners had the upper hand and often took advantage of workers. Labor

unions emerged in the United States to address the nation's growing labor concerns. The period of

economic growth in the United States also brought with it challenges to balance big business and labor.

**Railroads, Steel and Oil**

A period of technological growth emerged after the Civil War and transformed American society

with wide ranging innovation. However, it was the **railroad industry** that impacted the economy

like no other. Railroad construction dramatically increased after the Civil War. In fact, the United States

went from having 35,000 miles of track in 1865 to over 193,000 miles of track by 1900. Railroads

connected vast regions of the United States and allowed for the efficient transport of goods. The

geographic connections railroads allowed created a national market. No longer were goods and

products regional. Instead mass production and distribution of items created larger corporations and

enormous profits.

The **steel industry** made possible the expansion of railroads given that the tracks are made of

steel. The railroad companies were the biggest customers of the steel industry because thousands of

miles of steel track were laid to connect all areas of the United States. To supply their biggest

customers, steel producers developed cheap, efficient methods for the mass production of steel rails. These low-cost methods enabled more industries, beyond just railroads, to afford the steel companies’

products. Large steel corporations, such as Carnegie Steel, produced more steel than any other

company in the world.

**Oil production** in the late 19th century was also linked to the growing railroad industry of the

period. Drilling for oil in remote areas meant that the product had to be transported east for

consumption as a fuel supply. The railroads made the transport possible from pipelines to the market.

Oil companies, such as Standard Oil, and railroads that transported the oil both made vast fortunes

during the period.

**Other industries** were also impacted by the expansion of railroads. Consider, for example, the

***Pullman Sleeping Car***, which was developed for the comfort of long distance travelers. These cars

needed glass for windows, cloth for seats, wood for the car construction, bedding for the sleepers, and a

myriad of other small fittings to hold the entire car together. To increase train safety, ***signal systems***

were developed, better braking systems were invented, and the ***national time zones*** were created out of necessity. All of these components were driven by production to support the railroad industry.

The railroads, as the single largest business in the United States in the late 19th century, also

changed the way businesses were organized. Significant capital investment was needed to create and

maintain a nation-wide business. This capital was acquired through both public (i.e. government)

subsidies to railroads and from private business investments. Large professionally trained managerial

staffs were needed to keep up with passengers, cargo, and equipment. It became necessary for new

means of accounting to track the large quantities needed for railroads to be efficient, cost effective, and

profitable. Internal organization led in turn to the consolidation of many railroads. This was especially

true as economic panic caused less profitable lines to collapse and be absorbed by larger more

profitable firms.

**SSUSH11b: The Rise of Industrial Monopolies and Trusts**

The period after the Civil War was a time when businesses sought to maximize their profits by

combining competing corporations into a single entity. These large consolidated companies were able

to control prices, production, and sales and also able to establish a monopoly. There are several

individuals from this era who are known for the monopolies they created. These include John D.

Rockefeller (Standard Oil) and Andrew Carnegie (Carnegie Steel). Others of the period, who are not

specifically included in this SSUSH11 element but could be used as other examples, include Cornelius

Vanderbilt (Railroads), Jay Gould (Railroads), and J.P. Morgan (banking and finance).

**John D. Rockefeller**

was known for his economy, precision, and foresight in creating one of America's landmark corporations: Standard Oil. After obtaining a degree in business, Rockefeller started out as a bookkeeper and clerk in a wholesale grain and produce business in Cleveland, Ohio in 1855. His diligence and hard work won him great admiration. His idea of thrift gave him the capital to start his own wholesale grain business in the early 1860s. However, Rockefeller soon realized that the growth of agriculture in the upper Mississippi Valley would eclipse Cleveland's role in grain sales and foresaw Cleveland's location could serve as a clearinghouse for raw materials.

The newest commodity gaining popularity and usage was oil. In 1863, Rockefeller entered the oil refining business. Oil had been discovered in Pennsylvania in 1859. For the oil to be used, it needed to be refined into a distilled spirit - kerosene. Rockefeller began by developing a business that transported petroleum products. Rockefeller sought to cut his costs by creating his own barrel-making factory. He also cut costs by buying forestland for the wood to make the barrels and horses and wagons to transport the petroleum products to market. His practice is what is known today as vertical integration. This creates a business that consists of all elements of production from raw material to sale of the finished product. As a result, profits can be maximized by cutting costs of production.

In 1870, Rockefeller created Standard Oil. Rockefeller began to buy up inefficient refineries and closed those that were too expensive to renovate and improved those that showed promise. When railroads proved inefficient for his needs, he built a pipeline from the oil field to the refinery. By 1879, Rockefeller and Standard Oil controlled 90% of the refining capacity in the United States. In 1882, Rockefeller combined his many companies into the Standard Oil Trust. The trust enabled Standard Oil to monopolize all aspects of the oil industry from production to marketing. With a monopoly or trust, the competition has been eliminated in the market. No competition means a business owner can set any price they want for the goods they are selling. A monopoly or trust is good for the business owner but harmful to consumers who pay higher prices.

**Andrew Carnegie**

Another successful big business owner of the late 19th century was Andrew Carnegie. As a boy, his family immigrated to the United States from Scotland. The family worked hard to barely scrape by as they settled in Pennsylvania. Andrew began working in a textile mill at age thirteen. He later began working in the railroad industry and progressed through the ranks to superintendent of the

Pennsylvania Railroad. With good investments, his wealth began to build. By the 1860s, Carnegie had moved to the ironworks industry.

The Carnegie Steel Company used the latest technology of the Bessemer process to forge steel more efficiently. The increased production of steel and the use of vertical integration allowed Andrew Carnegie to amass the first billion dollar company. Carnegie's use of vertical integration is like that of J.D. Rockefeller. He controlled the entire production process from resource to finished product, which included mining the raw materials, industrial production of steel, and transportation for both resources and finished products.

A feature that distinguishes Andrew Carnegie from other big business entrepreneurs is the level of philanthropy he supported with his wealth. The others certainly contributed huge sums to charity but it was Andrew Carnegie that made a mark with his investments in society. He was devoted to educational opportunities for the masses - not just the wealthy. To this end, Carnegie funded over 3,000 libraries across the United States. In addition, he gave millions of dollars to finance higher education universities in the United States and in Scotland. At the time of his death, Carnegie had given over $350 million to charitable causes. The value of his charitable donations today would be in the billions of dollars.

The rise of both J.D. Rockefeller and Andrew Carnegie as powerful and wealthy entrepreneurs is attributed to their skillful and shrewd business dealings. They could successfully maximize their profits by cutting costs in production through the practice of vertical integration. They also limited their competition by forming monopolies. The monopolies they created in the oil and steel industries allowed them to control the prices of their goods; thus, keeping them as high as possible. There was limited competition in the market to undercut their prices. The fortunes they amassed were often at the expense of small business owners and consumers. While society benefitted from their charitable investments, many people were also hurt by their business methods

**SSUSH11c: influence of key inventions on U.S. infrastructure, including the telegraph, telephone, and electric light bulb**

The infrastructure of the United States was changed over time by various inventions. Some of the most important inventions were influenced by the conduction of electric current that was realized in the 1830s. Transmitting electric current enabled instant communication by way of telegraph transmission and later the telephone. In the 1870s, Thomas Edison changed American businesses and homes with the invention of the electric light bulb. The effects of technological advances forever changed how people lived and worked.

The changes in communication, as well as the expansion of railroads, helped to better connect the quickly expanding West with the industrializing East. The transfer of information, resources, and marketable goods connected all regions of the United States. Telegraph communication was the first nationwide information transmitter. Samuel Morse invented the technology in 1832. The telegraph machine received coded messages across electric wires connecting long distances. Morse Code is the system of dots and dashes that correspond to letters of the alphabet. Telegraph operators decoded the messages sent instantaneously across the telegraph wires. With the development of telegraph technology, business could be more efficiently conducted between industrial centers in the East and their sources for raw materials in the South and West. The Civil War was the first war conducted with the use of widespread telegraph connectivity. Abraham Lincoln and his Secretary of War Edwin Stanton received almost daily updates at the Washington DC telegraph office from various fighting fronts and could coordinate the entire war based on real time information from the field.

In 1876, Alexander Graham Bell further expanded on the telegraph's capability for instant communication. He invented the telephone, which allowed for voice - to - voice communication over electric wires. As was true for the telegraph, the telephone impacted the United States by allowing instant communication. With the invention of the telephone, conversations were more efficient and true discussion between individuals in distant locations was made possible.

Thomas Edison was one of the most famous and successful American inventors. He invented a wide variety of technologies and held over 1,000 patents. Edison established the concept of industrial research, which allowed him to develop and expand his wide-ranging ideas. He founded a research laboratory in Menlo Park, New Jersey that was staffed by engineers and technicians under his direction.

One of Edison's most revolutionary inventions was the electric light bulb. Not only did this development allow factories to be lit and operate twenty-four hours a day, but the light bulb also illuminated buildings, streets, and neighborhoods across the United States. The light bulb was developed in the 1870s and quickly replaced the more dangerous and expensive lamp oils that burned for illumination.

With greater technological innovation, such as the telegraph, telephone, and electric light bulb came greater connectivity and productivity for the development of industry in the United States. The late nineteenth century was a time of great change in the way people lived and conducted business in part because of these inventions. Communities invested in the technology that in turn cut costs to individuals. The United States became a contending industrial producer during the same period in part because of the efficient production of products and ease of communication for business across great distances.

**SSUSH11d: the change in immigrants’ origins and their influence on the economy, politics, and culture of the United States.**

The last quarter of the nineteenth century was marked by a great deal of turmoil in Europe. Low wages, unemployment, disease, forced military conscription, and religious persecution inspired immigrants to flee their homelands and immigrate to the United States. These groups formed the bulk of the "new immigration" coming to America. Chinese immigrants also came to America and settled in California. Immigrants who entered the United States were processed at Ellis Island in New York and Angel Island in California. Each facility conducted the screening of immigrants in vastly different ways. The immigrants who did enter the United States influenced the nation's economy, politics, and culture.

Prior to the 1880s, most immigrants to the United States came from northern and western Europe. During the colonial period immigrants were overwhelmingly English, with smaller groups of Scots, Germans, and French settling in America. In the decades after the American

Revolution, large groups of Irish and German immigrants arrived. After the Civil War, more Eastern and Southern Europeans immigrated to America. Between 1880 and 1920, over 20 million immigrants entered the United States.

These latest newcomers greatly affected the social as well as the economic and political landscape. Because poverty and political instability were common in their home countries, the new immigrants were likely to be poor. Often, they were Jewish or Catholic and spoke no English. Poverty prevented many from buying farmland, so most worked as unskilled laborers and mostly lived in northern cities. Whether Asian on the west coast or European on the east coast, these new immigrants tended to settle in areas populated by people from their same country. They formed neighborhoods where immigrants spoke the same languages and worshipped in the same ways. The new immigrants did not appear to blend into American society in the way earlier immigrants had There were 21 immigrant-processing centers.

***The two most famous were Ellis Island in New York and Angel Island in California.***

**Ellis Island Immigrant Station** located in New York Harbor was opened in 1892. By 1924, the station had processed 12 million immigrants. By some estimates, 40% of all Americans today can trace their port of entry back to Ellis Island. Upon arrival in New York Harbor, immigrants were transported from their ships by barges to the immigrant-processing center.

Arrivals to Ellis Island were asked 29 questions including name, occupation, and the amount of money carried. The inspection process lasted from three to seven hours. As more restrictive laws were passed in the 1890s, more rigorous provision for entry was required. About 2% of the immigrants seeking entry were denied admission to the United States and sent back to their country of origin. Some of the reasons for denied access were chronic and contagious disease, criminal background or insanity.

**Angel Island Immigrant Station** was quite different from Ellis Island. Approximately 1 million Asian immigrants were processed at Angel Island between 1910 and 1940. There was strong resistance to Chinese immigrants in the late 1800s, which resulted in the passage of the Chinese Exclusion Act in 1882. Chinese immigrants had been hired as workers to complete construction of the Transcontinental Railroad in the 1860s. They were discriminated against and taken advantage of by railroad companies. The Chinese workers were paid half of what European workers earned and were required to do the most dangerous jobs of blasting and laying rail ties over the treacherous terrain of the high Sierra Mountains. Once the railroad was complete, the hostility toward Chinese immigrants escalated.

As a result of this open discrimination and Nativist opposition, Chinese immigrants wanting entry into the United States spent weeks, months, and sometimes years on Angel Island awaiting approval for entry into the United States. Approximately 18% of immigrants to Angel Island were rejected, of which the vast majority were from China. The interrogation process at Angel Island was much more lengthy and specific than at Ellis Island. Immigrants had to have American witnesses or family members come to Angel Island to vouch for the accuracy of their answers.

The impact of immigrants on American society was significant. Over-crowded cities led to increased problems with crime and disease. Increased demand for agricultural and industrial goods spurred economic growth. Low-wage labor was available to work in the growing American industrial economy. New cultural items such as Italian opera, Polish polkas, Russian literature, kindergarten, and new foods, such as spaghetti, frankfurters and hamburgers, became a part of the American culture and diet. Nativists viewed the fast-growing immigrant population as dangerous to the American political system. Poll taxes and literacy tests were used to restrict immigrants from voting in ways similar to those used to restrict Blacks from voting in many Southern states.

The United States is a nation of immigrants. The number of immigrants coming to the United States for opportunity increased during the last decades of the nineteenth century. The immigrants arriving at that time were also from different areas of Europe and Asian than had previously been common. Although there was bitter resistance to these immigrants, there were many positive contributions to the economy and social makeup of the United States.

**SSUSH11e: the origins, growth, influence, and tactics of labor unions including the American Federation of Labor.**

Unskilled laborers were subject to low wages, long workdays, no vacations, and unsafe workplaces. Because individual workers had little power to change the way an employer ran a business, workers banded together in labor unions to demand better pay and working conditions. There was strength in numbers. Over time, labor unions grew significantly and influenced business operation. Union strategies included strikes, protest, and political influence. The American Federation of Labor is an example of one of the early labor unions in the United States that wielded significant power.

Originally, labor unions were organized for either skilled or unskilled workers. Each group had its own union. The unions relied on collective bargaining to obtain their demands. However, when employers refused to bargain, unions used direct action (i.e., labor strikes) to obtain concessions. The earliest national labor union to use these methods was the Knights of Labor, which was founded in 1869. Members of the union were both skilled and unskilled workers. While initially effective, the union lost influence and power after the organization failed to win concession in the Missouri Pacific Railroad Strike and suffered distrust from the Haymarket Affair in 1886. Furthermore, skilled workers were reluctant to support lower paid unskilled workers when the latter went out on strike.

Samuel Gompers, a Jewish immigrant from England who came to the United States in 1863, was a cigar maker by trade. In 1886, he helped create the American Federation of Labor, often referred to as the AFL. He was president of the union from 1886-1924. His union accepted only skilled workers. The AFL was also designed in such a way that workers were organized by craft rather than by geography, which had been the method used by the Knights of Labor. Gompers did not see capitalism as the enemy, as had radical members of the Knights of Labor. He also urged union members to work with owners for higher pay and better working conditions. The American Federation of Labor was not trying to reform the universal economic system; rather it promoted practical goals that would impact the daily lives of individual workers. Even though Gompers supported negotiation between workers and owners, he was not above using work stoppages (labor strikes) to obtain what was desired.

Gompers' tactics proved to be very effective until the Great Depression. The AFL was successful due to its sheer numbers - over one million members by 1901 and four million members at its height of power. The development of labor unions of the United States, including the AFL and others, brought more awareness to the growing division between business management and workers. The conflict between the two groups sometimes turned violent, as was the case at the Haymarket protest and the Homestead Steel Factory strike. The labor unions did bring about a much greater awareness of the need for better unity between all employee levels in a business.

**SSUSH11 – Discussion Questions**

1. **What effect did the Railroad Industry have on other industries? Give Examples.**
2. **How did John D. Rockefeller build his Oil Monopoly?**
3. **How did Andrew Carnegie build his steel Monopoly? What was his lasting legacy?**
4. **Who were some of the most famous inventors and how did their inventions support and enhance the rise of big industry in the United States?**
5. **How were the new wave of immigrants to the US different than those who came before?**
6. **How were immigrants that came through Ellis Island treated in comparison with those that came through Angel Island?**
7. **What was the impact of the new wave of immigrants on American Society?**
8. **Describe the origins, growth, influence, and tactics of labor unions such as the AFL?**
9. **How did changes in technology, business, and immigration, lead to the need for reform in during the Industrial Revolution?**