

Second Industrial Revolution

A. The Age of Invention & Innovation

1. Prior to the 1850s, converting iron ore into steel was very expensive & impractical, but with the invention of the ***Bessemer steel process*** more steel could be produced in one day than older techniques could produce in a week
 - a. American industries quickly adopted the *Bessemer process* that offered a strong, inexpensive source of building material, which made possible the expansion of the railroad industry, more sophisticated machinery, skyscrapers, & suspension bridges
 - (1)
 - (2)
 - b. Andrew Carnegie controlled nearly 50% of all U.S. steel production using a principle known as ***vertical integration*** (gaining control of the many different businesses that make up all phases of a product's development)
 - (1)
 - (2)
2. In the late 1850s, processes began to refine crude oil into more useful products, like kerosene, lubricating oils & waxes, & eventually gasoline
 - a. ***John D. Rockefeller*** proved to be the leader of American oil production, controlling 90% of U.S. oil refineries using mostly ***horizontal integration*** (gaining control of businesses that make the same product)
 - (1)
 - (2)
 - b. Like Carnegie, Rockefeller also used vertical integration to drive competitors out of business
3. The innovations in the steel & oil industries allowed for the development & improvement of many transportation methods
 - a. Railroad companies vastly increased the number of railways throughout the U.S. due to these developments
 - (1)
 - (2)

- (3)
- b. Other forms of travel advanced during this time period
 - (1)
 - (2)
 - (3)
- 4. This era also gave way to massive advances in communications that changed the face of business departments across the country
 - a.
 - b.
 - c.
- 5. Supported by wealthy industrialists, *Thomas Edison* established a research laboratory at Menlo Park, NJ in 1876 that was responsible for hundreds of inventions or innovations
 - a. *Edison* opened his direct current electric company in 1879 in NYC & formed the Edison General Electric Co. in 1888 to produce light bulbs
 - (1)
 - (2)
 - b. *Edison* & his team were also responsible for the inventions of the phonograph & the motion picture camera
- 6. This was a time that saw many other inventions & innovations in assorted fields
 - a.
 - b.
 - c.
 - d.
 - e.

B. The Rise of Big Business

1. During the late 1800s, the U.S. operated under a *laissez-faire capitalism* economic system, which called for no government intervention in the economy
 - a. Under such a *free-enterprise* system, it was believed that government needed to leave the economy alone to not disrupt the natural forces of supply & demand
 - (1)
 - (2)
 - b. *Free-enterprise* never really existed because the government did intervene, just always in favor of big businesses & never in favor of laborers
 - (1)
 - (2)
 - c. To increase businesses influence, many industries turned to *corporations* (a type of business with many owners, yet if it failed, the owners could not lose more than was originally invested) & *trusts* (agreement where companies are placed under the control of a single managing board in order to form a monopoly)
 - (1)
 - (2)
2. Since big businesses were completely unchecked by the government, there were no limits to what they could do to eliminate all smaller competitors
 - a. Many critics claimed that large monopolies had no incentive to maintain quality or keep prices low, so in response, Congress passed the *Sherman Antitrust Act (1890)* & created the *Interstate Commerce Commission (ICC)*
 - (1)
 - (2)
 - b. In the mid-1800s, German philosopher *Karl Marx* argued that businesses were allowed to take advantage of workers due to capitalism & proposed a new political system that would remove the inequalities of wealth, which could take the form of either *socialism* or *communism*
 - (1)

(2)

3. Many American business leaders responded to *Marx's* concerns by embracing the theory of ***Social Darwinism***
 - a. With *Social Darwinism*, ***Herbert Spencer*** applied the biological concepts of Charles Darwin's theory of evolution to the workings of society
 - (1)
 - (2)
 - b. *Social Darwinists* even claimed that governments & charitable intervention to improve the conditions of the poor slowed social progress
 - (1)
 - (2)

C. The Rise of Organized Labor

1. While industrial growth produced great wealth for business owners & brought improvements to American society, those performing the work struggled to survive
 - a. Laborers suffered from low wages, long workdays, dangerous & unhealthy working conditions, irregular employment, technological unemployment, *company towns*, & impersonal owner-employee relations
 - (1)
 - (2)
 - b. Many workers were forced to live in ***company towns*** (towns owned by the business & rented out to employees)
 - (1)
 - (2)
 - c. With families unable to make ends meet, children commonly had to work to keep families afloat

2. Due to the problems faced by laborers, many turned to labor unions
 - a.
 - b.
3. In 1869, the ***Knights of Labor*** were formed, which were led by ***Terence V. Powderly*** who believed that a single, powerful union was the best means of gaining benefits for workers
 - a. Membership to the *Knights* were open to both skilled & unskilled laborers
 - (1)
 - (2)
 - b. *Powderly* called for reforms of the currency system, abolition of child labor, regulation of trusts & monopolies, & government ownership of public utilities
 - (1)
 - (2)
 - c. While the *Knights* enjoyed some success, they failed to survive the *Panic of 1893*
4. In 1886, ***Samuel Gompers*** formed the ***American Federation of Labor (AFL)***, which was a labor union that was a loose organization of skilled workers from some 100 local unions devoted to specific crafts or trades
 - a. With the AFL, the local unions retained their individuality but gained strength in bargaining through their affiliation & sought goals like higher wages, shorter workdays, improved working conditions, & more leisure time
 - (1)
 - (2)
 - (3)
 - b. *AFL* organization & leadership was so effective that they thrived even during the *Panic of 1893*

D. Strikes Sweep Across the Nation

1. In mid-July 1877 the B&O Railroad announced their 3rd consecutive 10% wage cut

- a. Led by the union, the workers went on strike, where they seized a junction at Martinsburg, WV
 - (1)
 - (2)

- b. This *Railroad Strike of 1877* paralyzed transportation in the Midwest & much of the industrial Northwest
 - (1)

 - (2)

2. On May 4, 1886, about 3,000 workers gathered to protest the killing & wounding of several striking McCormick Harvester Co. workers by the police
 - a. The event was generally dull & peaceful, but as the meeting was breaking up, local police unexpectedly charged the crowd
 - (1)
 - (2)

 - (3)

 - b. Industrialists, city officials, & the local press convinced the public that the bombing was a prelude to an anarchistic revolution
 - (1)
 - (2)

 - c. After the *Haymarket Square Riot*, all unions were branded as un-American & violent in the public mind, which resulted in union memberships declining rapidly
 - (1)

 - (2)

3. In 1892, a strike broke out after workers' wages were cut at a Carnegie Steel plant in Homestead, PA
 - a. Henry Frick (Andrew Carnegie's partner) responded to the strike by bringing in the *Pinkertons* (a private police force known for their ability to break up strikes)
 - (1)

 - (2)

- b. The ***Homestead Strike of 1892*** was one of an epidemic of steelworkers' & miners' strikes that took place as economic depression spread across America, all of which seeing troops & local militia sent into suppress the unrest
- 4. In Pullman, IL in 1894, *the Pullman Palace Car Company* laid off 2/3 of its workers & cut wages of the rest
 - a. After a delegation of workers attempted to get George Pullman to lower company-owned housing rent or prices at stores in his company town, Pullman responded by firing 3 workers & shutting down the plant
 - (1)
 - (2)
 - b. After Illinois governor John Altgeld refused to interfere with the ***Pullman Strike of 1894***, railroad executives turned to the federal government
 - (1)
 - (2)
 - c. Only after federal troops arrived did violence occur
 - (1)
 - (2)