Industrial Revolution 1860-1900

Agrarian Economy to Industrial Economy
Growth of Railroads
Robber Barons
Inventions and Innovations
Trusts and Monopolies
Government Intervention
Unionization
Immigration

Importance of Railroads

- Both Reflected and Assisted in Development
- Problems at time of Civil War
  - Only 30,000 miles of track
  - Most were short: average 100 miles
  - Different Gauges
  - Few direct lines connected cities
- Changes by 1900
  - 200,000 miles of well-connected track
  - Controlled by a few wealthy businessmen

Effects of the Growth of Railroads

- Employment on Railroads
  - Laborers, train crews, repair workers, etc..
- Use of wood, copper, iron, steel, etc..
- Large Sales Area for Products
  - Mass production made necessary by mass consumption
  - Advent of division of labor, specialization, and assembly line
- Construction in Towns Near Railroads
- Growth of the Corporation

The Corporation

- Necessity
  - Large sums of money needed to fund railroad
  - Other Industries – Steel, Oil, Textiles, etc..
- Format
  - Stockholders – Owners of the Corporation
  - Board of Directors – Directs the Corporation
  - Management – Runs Day-to-day Affairs
- Key Advantages
  - Organizers - Brings together large amounts of Capital
  - Investors – Limited Liability

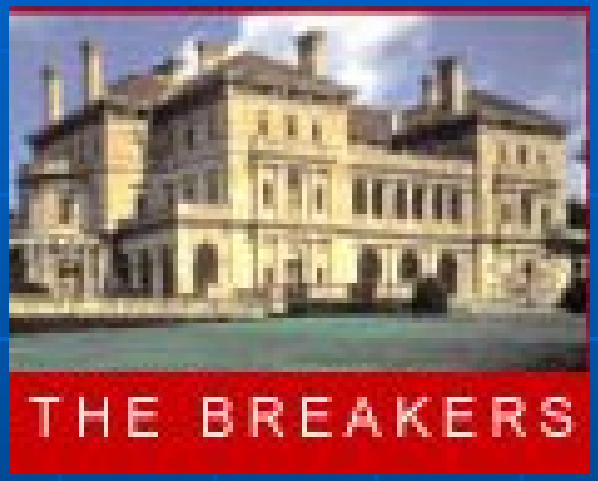
Robber Barons

- Definition
  - An American capitalist, in the late 1800s, who acquired wealth through ruthless business practices
- Business Practices
  - Cutthroat Competition
  - Formation of Trusts
  - Spies, Bribery, and Rebates

Cornelius “Commodore” Vanderbilt

- Railroad Baron
  - New York Central
    - New York to Chicago
- Vanderbilt University
- America’s Castles

Vanderbilt Mansions



Andrew Carnegie

- Steel Baron
- Scottish Immigrant
  - First Job at 14 paid him $1.20/week
- Sold U.S. Steel in 1901 for $500 M
- Great Philanthropist
  - Carnegie Hall
  - Numerous Libraries

John D. Rockefeller

- Oil Baron
- Standard Oil Trust
  - Controlled 90% of the oil business in the U.S.
  - Ruthless Business Practices
- World's First Billionaire
- Philanthropist

Richest Americans Ever

- 1. John D. Rockefeller; 1839–1937; oil;$900 million;$189.6 billion
- 2. Andrew Carnegie; 1835–1919; steel;$250 million;$100.5 billion
- 3. Cornelius Vanderbilt: 1794–1877; shipping, railroads;$105 million;$95.9 billion
- 4. John Jacob Astor; 1763–1848;real estate, fur trade;$20 million;$78 billion
- 5. William H. Gates III; 1955–software;$61.7 billion;$61.7 billion
- 6. Stephen Girard; 1750–1831; shipping, real estate; $7.5 million; $55.6 billion
- 7. A.T. Stewart: 1803–1876: retail, real estate; $50 million; $46.9 billion

Richest Americans Ever (cont.)

- 8. Frederick Weyerhaeuser; 1834–1914; lumber; $200 million; $43.2 billion
- 9. Jay Gould; 1836–1892; railroads; $72 million; $42.1 billion
- 10. Marshall Field; 1834–1906; department stores; $140 million; $40.7 billion
- 11. Sam Walton; 1918–1992; retail; $28 billion; $37.4 billion
- 12. Henry Ford;1863–1947; automobiles; $1 billion; $36.1 billion
- 13. Warren Buffett; 1930–investing; $34.2 billion; $34.2 billion
- 14. Andrew W. Mellon; 1855–1937; banking; $350 million; $32.3 billion
- 15. Richard B. Mellon; 1858–1933; banking; $350 million; $32.3 billion

Communications Revolution

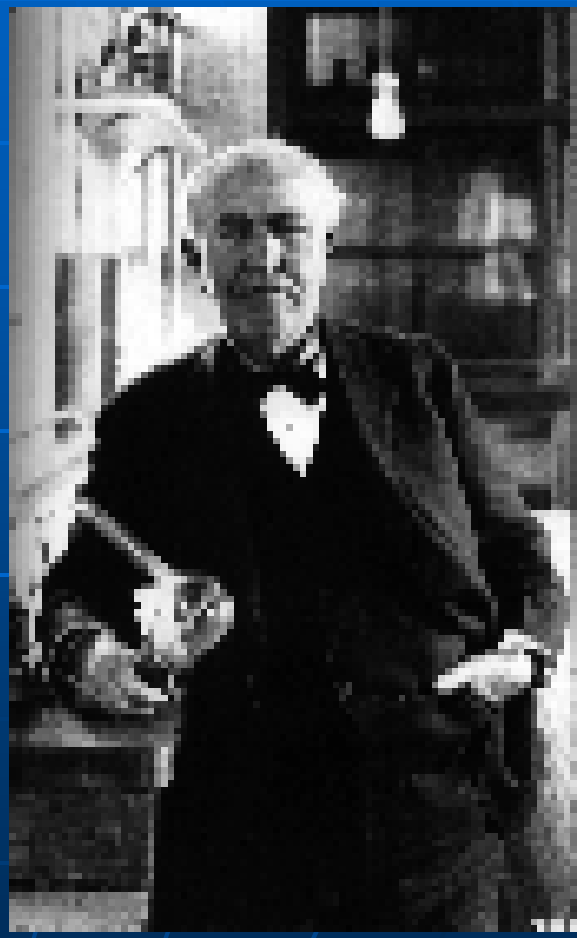
- Telegraph
  - Samuel F.B. Morse
  - May 23, 1844 “What hath God wrought!”
  - By 1860, U.S. connected by lines
  - 1866 - Cable across the Atlantic
- Telephone
  - Alexander Graham Bell
  - First demonstrated in 1876
  - AT & T formed in 1885

Impact of Communications Revolution

- Made world smaller
- Business World
  - Managers knew when supplies would arrive
  - Managers knew where demand was greatest for products
  - Managers knew what prices were being charged by competition

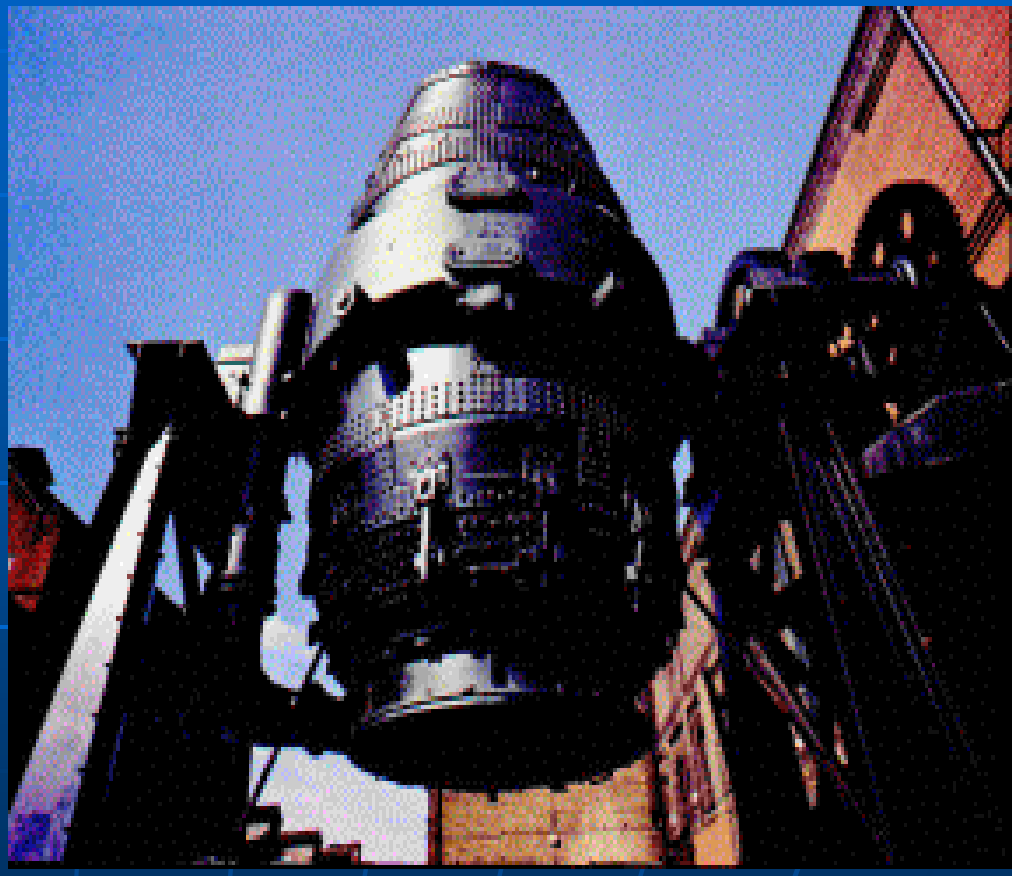
Thomas Alva Edison
"The Wizard of Menlo Park"

- Greatest Inventor of the Age
  - Phonograph
  - Stock Ticker
  - Practical Electric Light
  - Improvements to:
    - Telegraph
    - Telephone
    - Motion Pictures
  - Over 1,000 Patents



Bessemer Converter

- Developed by Henry Bessemer
- Used in U.S. in 1864
- Makes mass production of steel possible
- Importance
  - Steel stronger than Iron
  - Railroads would not have expanded like they did
  - Basic Building Block of the Industrial Revolution



Business Innovations

- Department Store
  - John C. Wannamaker – Philadelphia
  - Marshall Field – Chicago (1881)
- Chain Stores
  - Woolworth's
  - Great Atlantic and Pacific Tea Company
- Mail-Order Catalogues
  - Montgomery Ward (1872)
  - Sears (mid-1870s)

Trust and Monopolies

- Definitions
  - Trust
    - A legal agreement under which several companies group together to regulate production and eliminate competition
    - Stockholders of the separate companies turned stock over to a single board of trustees
  - Monopoly
    - Exclusive control of a product or service in a particular market by a single company

Trust and Monopolies (cont.)

- First seen in the Oil Industry
  - Standard Oil Trust
  - By 1900, almost every branch of manufacturing was controlled by a few producers
- Pros
  - Efficient, Economies of Scale, Innovation, Employment, etc..
- Cons
  - Destroy small businesses, raise prices once competition was eliminated

THE BOSSES OF THE SENATE

Antitrust Movement

- Started by small businesses, farmers, consumers, and laborers
- Interstate Commerce Act (1887)
- Sherman Antitrust Act (1890)

Interstate Commerce Act (1887)

- Targeted the Railroad Industry
- Created Interstate Commerce Commission
- Components
  - Rates must be "reasonable and just"
  - Rates must be made public and not changed without notice
  - Pools and rebates were made illegal
- Weaknesses
  - "Reasonable and just" not defined
  - Small Enforcement Staff

Sherman Antitrust Act (1890)

- Law banned combination "in the form of trust or otherwise" that restricted interstate trade or commerce
- Weaknesses
  - Failed to define restraint of trade
  - Cases ended up in courts that usually sided with businesses

Impact of Antitrust Movement

- Little impact initially
  - Impact will be felt later as acts and agencies created by them are strengthened
- Started era of government agency creation
- Signals beginning of limitations being placed on “Free Enterprise”

Factory Work

- Division of Labor and Specialization
- Machines increased production and lowered prices
- Factories were run like military
  - Work numbers assigned
  - Permission needed to get a drink or use bathroom
  - Patrolling guards – no talking
- Conditions in Clothing Industry were the worst
  - Garment District = “Sweatshops”
- Child Labor

Unionization

- Difficulties in Formation
  - Workers had varied interests
  - Different leaders had different goals
  - Constant influx of immigrants
  - Faced strong opposition from employers
    - Oaths swearing they would not join a union
    - Yellow-dog contracts
    - Blacklists

Unionization (cont.)

- Knights of Labor (1869)
  - Facts:
    - Attempted to bring all laboring people together
    - Led by Terence V. Powderly
    - Supported equal pay, end to child labor, cooperatively owned businesses, etc..
    - Peaked in 1886 at 700,000 members
  - Problems:
    - Too large
    - Too many varied interests
    - Poorly Managed
  - Demise:
    - Haymarket Bombing – Chicago (1886)

Unionization (cont.)

- American Federation of Labor (AFL)
  - Facts:
    - Organized in 1886
    - Led by Samuel Gompers
    - Allowed only skilled workers and craftsmen
    - Organized into separate union according to craft
    - Focused on bread and butter issues
      - Better pay, shorter hours, and better conditions
    - Initiated collective bargaining
  - Famous Event:
    - Homestead Strike

Homestead Strike

- Carnegie Steel Plant in 1892
- Striking workers are locked out by Henry Clay Frick – Carnegie's partner
- Strikebreakers, called scabs, were hired
- Pinkertons hired to escort Scabs
- Fighting broke out between Pinkertons and Strikers – Result was nine dead strikers and seven dead Pinkertons
- Governor sent in National Guard
- Strike lasted four months with strikers ultimately giving in