

SLIDE 1

## **Chapter 6 A New Industrial Age**

Natural resources and new ideas create a boom for industry and railroads. Government addresses corruption in business, and laborers organize for better working conditions.

SLIDE 2

## **A New Industrial Age**

### **Section 1: The Expansion of Industry**

### **Section 2: The Age of the Railroads**

### **Section 3: Big Business and Labor**

SLIDE 3

### **Section 1: The Expansion of Industry**

At the end of the 19<sup>th</sup> century, natural resources, creative ideas, and growing markets fuel an industrial boom.

SLIDE 4

### **Section 1: The Expansion of Industry**

#### **Natural Resources Fuel Industrialization**

##### **The Growth of Industry**

- By 1920s, U.S. is world's leading industrial power, due to:
  - wealth of natural resources
  - government support for business
  - growing urban population

##### **Black Gold**

- Pre-European arrival, Native Americans make fuel, medicine from oil
- 1859, **Edwin L. Drake** successfully uses steam engine to drill for oil
- Petroleum-refining industry first makes kerosene, then gasoline

SLIDE 5

#### ***Continued* Natural Resources Fuel Industrialization**

##### **Bessemer Steel Process**

- Abundant deposits of coal, iron spur industry
- **Bessemer process** puts air into iron to remove carbon to make steel
- Later open-hearth process makes steel from scrap or raw materials

### **New Uses for Steel**

- Steel used in railroads, barbed wire, farm machines
- Changes construction: Brooklyn Bridge; steel-framed skyscrapers

SLIDE 6

## **Inventions Promote Change**

### **An Age of Inventions**

- Numerous new inventions change the landscape, life, work

### **The Power of Electricity**

- 1876, **Thomas Alva Edison** establishes first research laboratory
  - 1880, patents incandescent light bulb
  - creates system for electrical production, distribution
- Electricity changes business; by 1890, runs numerous machines
- Becomes available in homes; encourages invention of appliances
- Allows manufacturers to locate plants anywhere; industry grows

SLIDE 7

## ***Continued* Inventions Promote Change**

### **Inventions Change Lifestyles**

- **Christopher Sholes** invents typewriter in 1867
- 1876, **Alexander Graham Bell**, Thomas Watson introduce telephone
- Office work changes; by 1910, women are 40% of clerical workers
- Inventions impact factory work, lead to industrialization
  - clothing factories hire many women
- Industrialization makes jobs easier; improves standard of living
  - by 1890, average workweek 10 hours shorter
  - as consumers, workers regain power in market
- Some laborers think mechanization reduces value of human worker

SLIDE 8

## **Section 2: The Age of the Railroads**

The growth and consolidation of railroads benefits the nation but also leads to corruption and required government regulation.

SLIDE 9

## **Section 2: The Age of the Railroads**

### **Railroads Span Time and Space**

#### **Railroads Encourage Growth**

- Rails make local transit reliable, westward expansion possible
- Government makes land grants, loans to railroads
  - to help settle West
  - to develop country

#### **A National Network**

- 1859, railroads extend west of Missouri River
- 1869, first **transcontinental railroad** completed, spans the nation

SLIDE 10

### ***Continued* Railroads Span Time and Space**

#### **Romance and Reality**

- Railroads offer land, adventure, fresh start to many
- People of diverse backgrounds build railroad under harsh conditions:
  - Central Pacific hires Chinese immigrants
  - Union Pacific, Irish immigrants, Civil War vets
- Accidents, disease disable and kill thousands every year

#### **Railroad Time**

- 1869, C. F. Dowd proposes dividing earth's surface into 24 time zones
- 1883, U.S. railroads, towns adopt time zones
- 1884, international conference sets world zones, uses railroad time
  - Congress adopts in 1918

SLIDE 11

### **Opportunities and Opportunists**

#### **New Towns and Markets**

- Railroads require great supply of materials, parts
- Iron, coal, steel, lumber, glass industries grow to meet demand
- Railroads link isolated towns, promote trade, interdependence
- Nationwide network of suppliers, markets develops
- Towns specialize, sell large quantities of their product nationally
- New towns grow along railroad lines

SLIDE 12

## ***Continued Opportunities and Opportunists***

### **Pullman**

- 1880, **George M. Pullman** builds railcar factory on Illinois prairie
- Pullman provides for workers: housing, doctors, shops, sports field
- Company tightly controls residents to ensure stable work force

### **Crédit Mobilier**

- Wish for control, profit leads some railroad magnates to corruption
- Union Pacific stockholders form construction company, **Crédit Mobilier**
  - overpay for laying track, pocket profits
- Republican politicians implicated; reputation of party tarnished

SLIDE 13

## **The Grange and the Railroads**

### **Railroad Abuses**

- Farmers angry over perceived railroad corruption
  - railroads sell government lands to businesses, not settlers
  - fix prices, keep farmers in debt
  - charge different customers different rates

### **Granger Laws**

- Grangers sponsor state, local political candidates
- Press for laws to protect farmers' interests
- **Munn v. Illinois**—Supreme Court upholds states' right to regulate RR
- Sets principle that federal government can regulate private industry

SLIDE 14

## ***Continued The Grange and the Railroads***

### **Interstate Commerce Act**

- 1886, Supreme Court: states cannot set rates on interstate commerce
- Public outrage leads to **Interstate Commerce Act** of 1887
  - federal government can supervise railroads
  - establishes Interstate Commerce Commission (ICC)
- Legal battle with railroads; difficult for ICC to take action

### **Panic and Consolidation**

- Abuses, mismanagement, competition almost bankrupt many railroads
- Railroad problems contribute to panic of 1893, depression
- By mid-1894, 25% of railroads taken over by financial companies

SLIDE 15

### Section 3: Big Business and Labor

The expansion of industry results in the growth of big business and prompts laborers to form unions to better their lives.

SLIDE 16

### Section 3: Big Business and Labor

#### Carnegie's Innovations

##### Carnegie Makes a Fortune

- **Andrew Carnegie** one of first moguls to make own fortune

##### New Business Strategies

- Carnegie searches for ways to make better products more cheaply
- Hires talented staff; offers company stock; promotes competition
- Uses **vertical integration**—buys out suppliers to control materials
- Through **horizontal integration** merges with competing companies
- Carnegie controls almost entire steel industry

SLIDE 17

### Social Darwinism and Business

#### Principles of Social Darwinism

- Darwin's theory of biological evolution: the best-adapted survive
- **Social Darwinism**, or social evolution, based on Darwin's theory
- Economists use Social Darwinism to justify doctrine of laissez faire

#### A New Definition of Success

- Idea of survival, success of the most capable appeals to wealthy
- Notion of individual responsibility in line with Protestant ethic
- See riches as sign of God's favor; poor must be lazy, inferior

SLIDE 18

### Fewer Control More

#### Growth and Consolidation

- Businesses try to control industry with mergers—buy out competitors
- Buy all others to form monopolies—control production, wages, prices
- Holding companies buy all the stock of other companies
- **John D. Rockefeller** founds Standard Oil Company, forms trust

- trustees run separate companies as if one

## SLIDE 19

### ***Continued Fewer Control More***

#### **Rockefeller and the “Robber Barons”**

- Rockefeller profits by paying low wages, underselling others
  - when controls market, raises prices
- Critics call industrialists robber barons
  - industrialists also become philanthropists

#### **Sherman Antitrust Act**

- Government thinks expanding corporations stifle free competition
- **Sherman Antitrust Act:** trust illegal if interferes with free trade
- Prosecuting companies difficult; government stops enforcing act

## SLIDE 20

### ***Continued Fewer Control More***

#### **Business Boom Bypasses the South**

- South recovering from Civil War, hindered by lack of capital
- North owns 90% of stock in RR, most profitable Southern businesses
- Business problems: high transport cost, tariffs, few skilled workers

## SLIDE 21

### **Labor Unions Emerge**

#### **Long Hours and Danger**

- Northern wages generally higher than Southern
- Exploitation, unsafe conditions unite workers across regions
- Most workers have 12 hour days, 6 day workweeks
  - perform repetitive, mind-dulling tasks
  - no vacation, sick leave, injury compensation
- To survive, families need all member to work, including children
- Sweatshops, tenement workshops often only jobs for women, children
  - require few skills; pay lowest wages

## SLIDE 22

### ***Continued Labor Unions Emerge***

#### **Early Labor Organizing**

- National Labor Union—first large-scale national organization

- 1868, NLU gets Congress to give 8-hour day to civil servants
- Local chapters reject blacks; Colored National Labor Union forms
- NLU focus on linking existing local unions
- Noble Order of the Knights of Labor open to women, blacks, unskilled
- Knights support 8-hour day, equal pay, arbitration

SLIDE 23

## **Union Movements Diverge**

### **Craft Unionism**

- Craft unions include skilled workers from one or more trades
- **Samuel Gompers** helps found **American Federation of Labor (AFL)**
- AFL uses collective bargaining for better wages, hours, conditions
- AFL strikes successfully, wins higher pay, shorter workweek

### **Industrial Unionism**

- Industrial unions include skilled, unskilled workers in an industry
- **Eugene V. Debs** forms American Railway Union; uses strikes

SLIDE 24

## ***Continued* Union Movements Diverge**

### **Socialism and the IWW**

- Some labor activists turn to socialism:
  - government control of business, property
  - equal distribution of wealth
- **Industrial Workers of the World (IWW)**, or Wobblies, forms 1905
- Organized by radical unionists, socialists; include African Americans
- Industrial unions give unskilled workers dignity, solidarity

### **Other Labor Activism in the West**

- Japanese, Mexicans form Sugar Beet and Farm Laborers' Union in CA
- Wyoming Federation of Labor supports Chinese, Japanese miners

SLIDE 25

## **Strikes Turn Violent**

### **The Great Strike of 1877**

- Baltimore & Ohio Railroad strike spreads to other lines
- Governors say impeding interstate commerce; federal troops intervene

### **The Haymarket Affair**

- 3,000 gather at Chicago's Haymarket Square, protest police brutality
- Violence ensues; 8 charged with inciting riot, convicted
- Public opinion turns against labor movement

SLIDE 26

### ***Continued Strikes Turn Violent***

#### **The Homestead Strike**

- 1892, Carnegie Steel workers strike over pay cuts
- Win battle against Pinkertons; National Guard reopens plant
- Steelworkers do not remobilize for 45 years

#### **The Pullman Company Strike**

- Pullman lays off 3,000, cuts wages but not rents; workers strike
- Pullman refuses arbitration; violence ensues; federal troops sent
- Debs jailed, most workers fired, many blacklisted

SLIDE 27

### ***Continued Strikes Turn Violent***

#### **Women Organize**

- Women barred from many unions; unite behind powerful leaders
- **Mary Harris Jones**— most prominent organizer in women's labor
  - works for United Mine Workers
  - leads children's march
- Pauline Newman—organizer for International Ladies' Garment Workers
- 1911 Triangle Shirtwaist factory fire results in public outrage

#### **Management and Government Pressure Unions**

- Employers forbid unions; turn Sherman Antitrust Act against labor
- Legal limitations cripple unions, but membership rises