

Section 1

The Expansion of Industry

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



The Expansion of Industry

Natural Resources Fuel Industrialization

The Growth of Industry

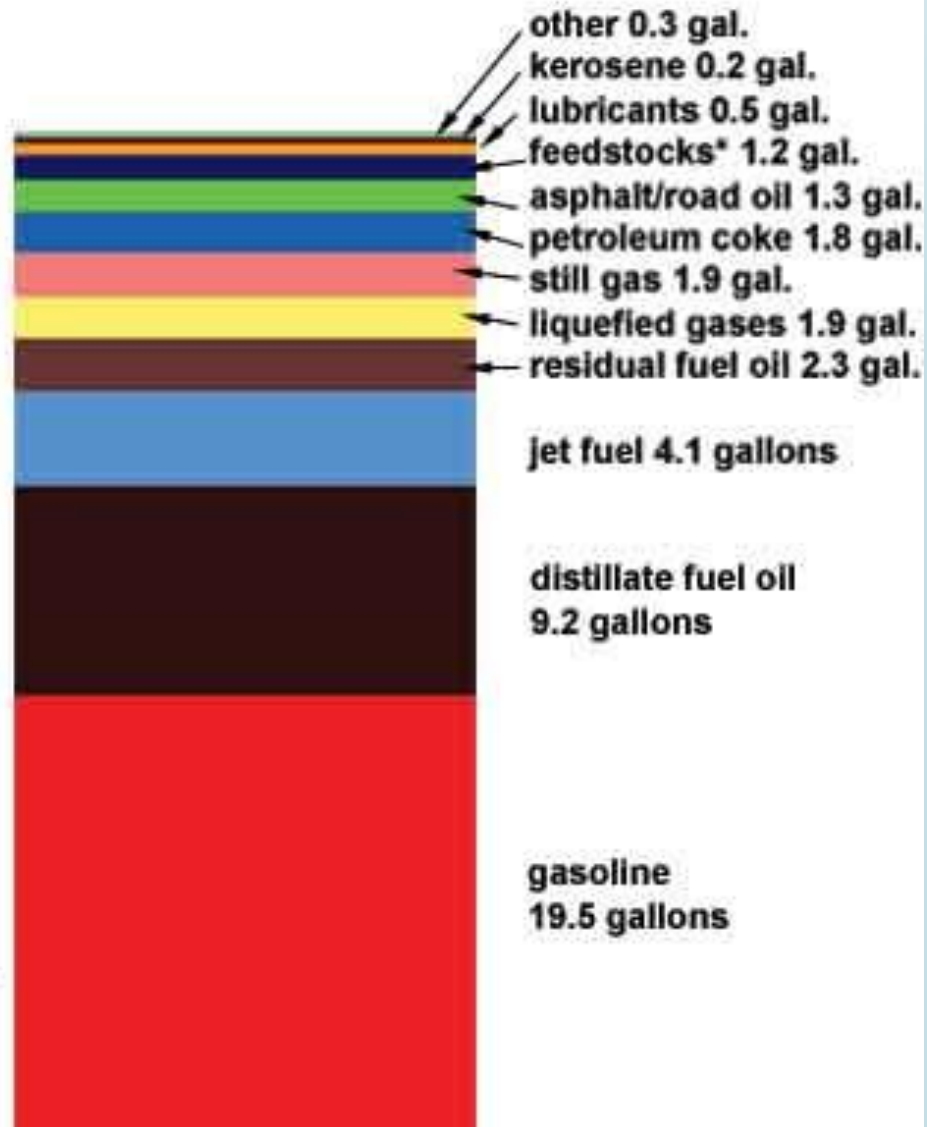
- By 1920s, U.S. is world's leading industrial power, due to:
 - wealth of natural resources
 - government support for business
 - **growing urban population**

Black Gold

- 1859, **Edwin L. Drake** successfully uses steam engine to drill for oil



what's in a barrel of oil



Source: API.
Totals more
than 44 gals.
because of
"processing
gain"

gasoline
19.5 gallons

Natural Resources Fuel Industrialization

Bessemer Steel Process

- **Bessemer process** puts air into iron to remove carbon to make steel

New Uses for Steel

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



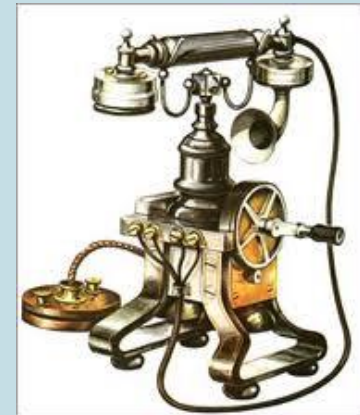
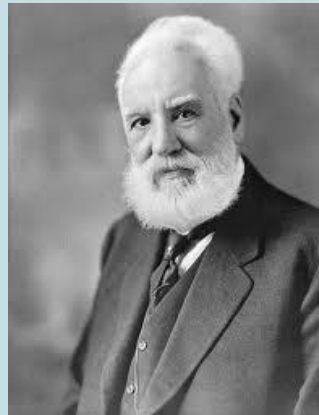


Inventions Change Lifestyles



Christopher Sholes - Typewriter

Alexander Graham Bell - Telephone



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
- Allows manufacturers to locate plants anyplace; industry grows



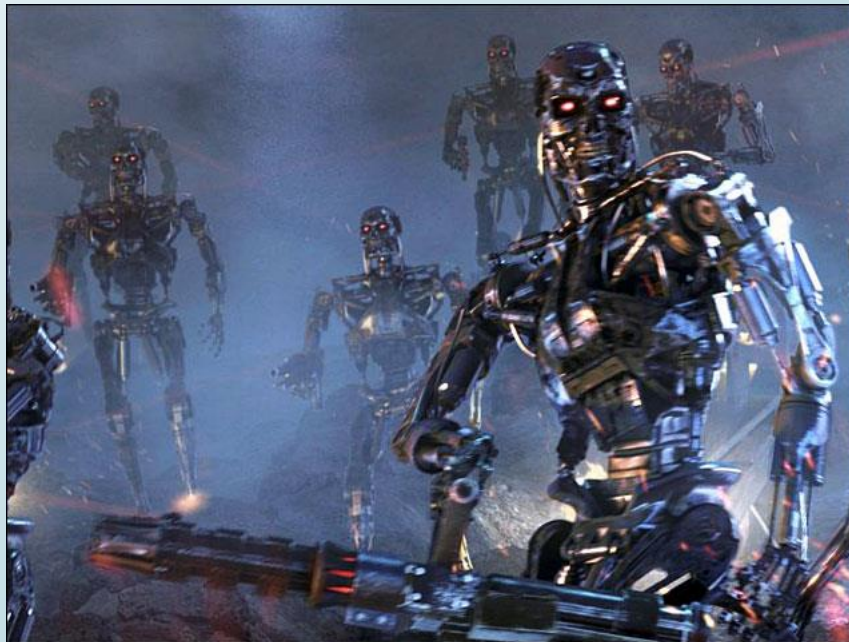
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Inventions Promote Change

Inventions Change Lifestyles













- Office work changes; by 1910, women are 40% of clerical workers
- Industrialization makes jobs easier; improves standard of living
 - by 1890, average workweek 10 hours shorter
 - Some laborers think mechanization reduces value of human worker



Section 2

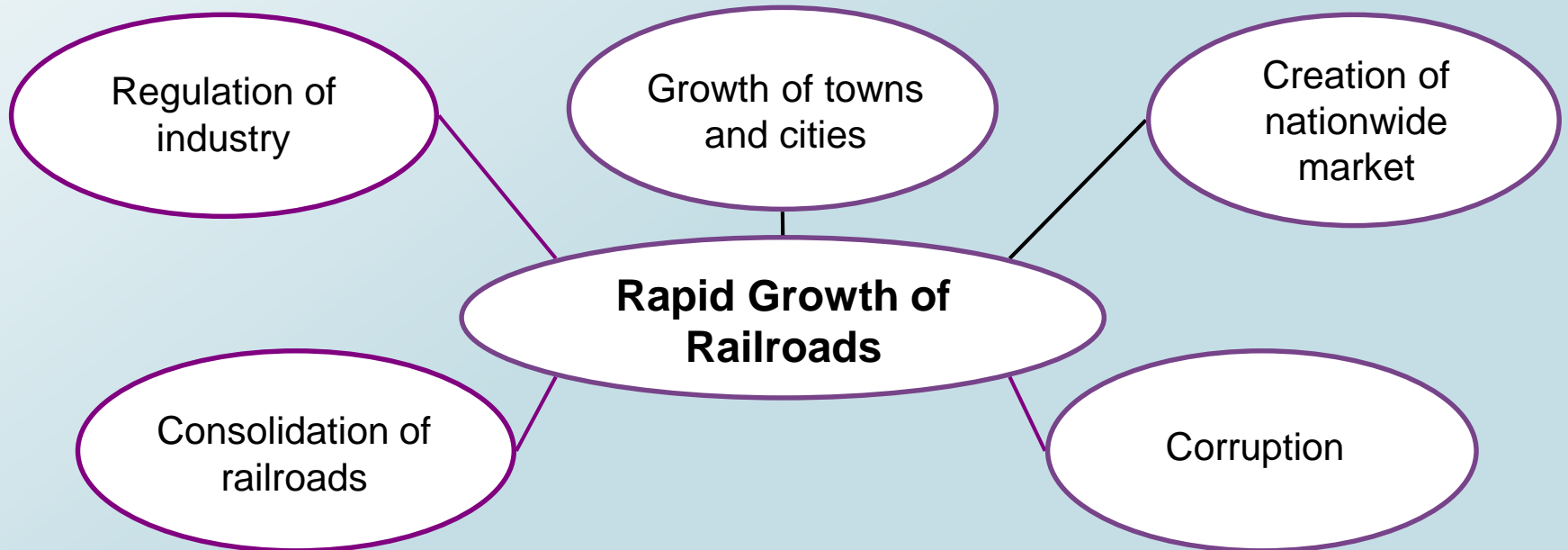
The Age of the Railroads

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

 FREE PARKING PRICE \$0	AVENUE PRICE \$0	 CHANCE PRICE \$0	AVENUE PRICE \$0	AVENUE PRICE \$0	 SHORT LINE RAILROAD PRICE \$200	AVENUE PRICE \$100	AVENUE PRICE \$100	 WHITE WORKS PRICE \$100	MARKET PLACE PRICE \$100	 GO PRICE \$100
NEW YORK AVENUE PRICE \$400										PACIFIC AVENUE PRICE \$800
TRUSTEE AVENUE PRICE \$400										NORTH CAROLINA AVENUE PRICE \$800
 COMMUNITY CHEST FOLLOW INSTRUCTIONS ON TOP CARD										 COMMUNITY CHEST FOLLOW INSTRUCTIONS ON TOP CARD
ST. LAMES PLACE PRICE \$100										PENNSYLVANIA AVENUE PRICE \$800
 SHORT LINE RAILROAD PRICE \$200										 SHORT LINE RAILROAD PRICE \$200
VIRGINIA AVENUE PRICE \$100										CHANCE ? PRICE \$100
STATE AVENUE PRICE \$100										PAKE PLAZA PRICE \$100
 ELECTRIC COMPANY PRICE \$100										LUXURY TAX  PAY \$100
ST. CHARLES PLACE PRICE \$100										BOARDWALK PRICE \$100
 VISITING PRICE \$100										CONNECTICUT AVENUE PRICE \$100

SECTION
2

Five effects of the rapid growth of railroads.

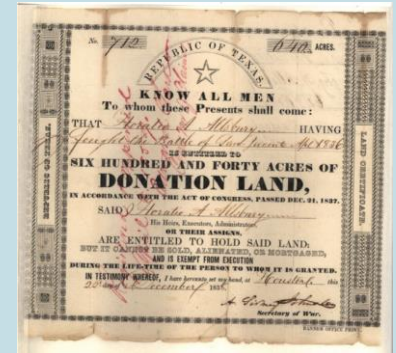


The Age of the Railroads

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

- 1869, first **transcontinental railroad** completed, spans the nation

Avoid the dangers, dangers and delays of the Panama Route! Secure Speed, Comfort and Safety by taking the Route and General Pacific Line, which runs the Miller System and the Westinghouse Power System which gives the Captain instant control of the Train and is the most perfect protection against accidents ever invented.



Maximum Through Points - Chicago, St. Louis, Kansas Springs, and Helena, and from West to the West Coast, and from the West Coast to the West Coast. This route affords the most direct and shortest route between the West Coast and the East Coast.

As General, Special and Through Tickets are sold by the American Overland Route, they are sold by the American Overland Route, and by the American Overland Route, and by the American Overland Route.

Orders for Tickets between Eastern Cities and all Points reached via the Union and General Pacific Lines can be purchased at the Co.'s offices in Ogden and Omaha, and in Omaha, New York and London for all Trans-Pacific Ports, and for the entire trip around the World.

SAN FRANCISCO TO NEW YORK!

6 DAYS AND 20 HOURS!

CENTRAL AND UNION

PACIFIC RAILROADS

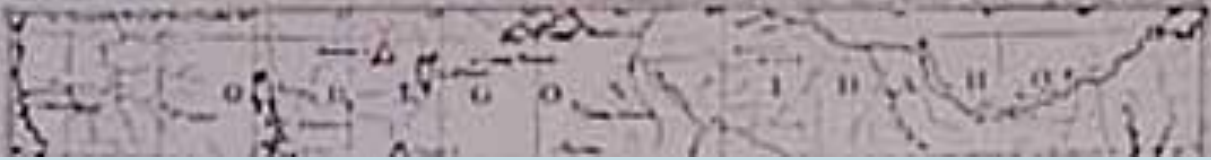
THE GREAT TRANS-CONTINENTAL ALL RAIL ROUTE!

CHANGE OF TIME TO TAKE EFFECT
MONDAY, May 16, 1870

FIRST CLASS TICKETS

SAN FRANCISCO

Chicago \$12.00
St. Louis \$10.00



SECOND CLASS

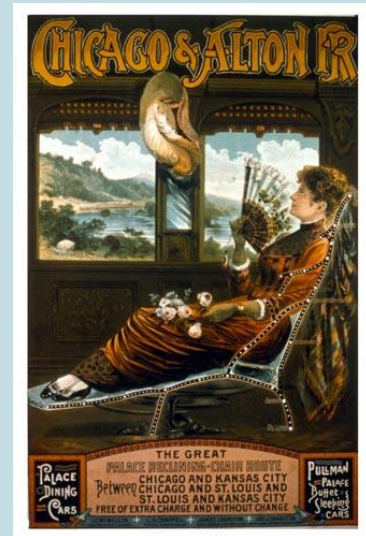
TICKETS

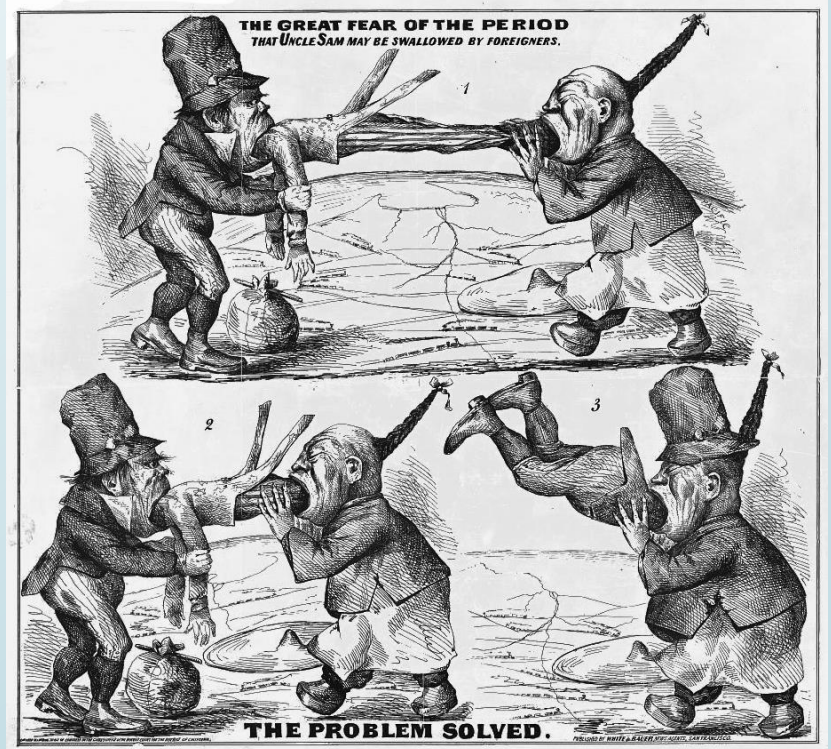
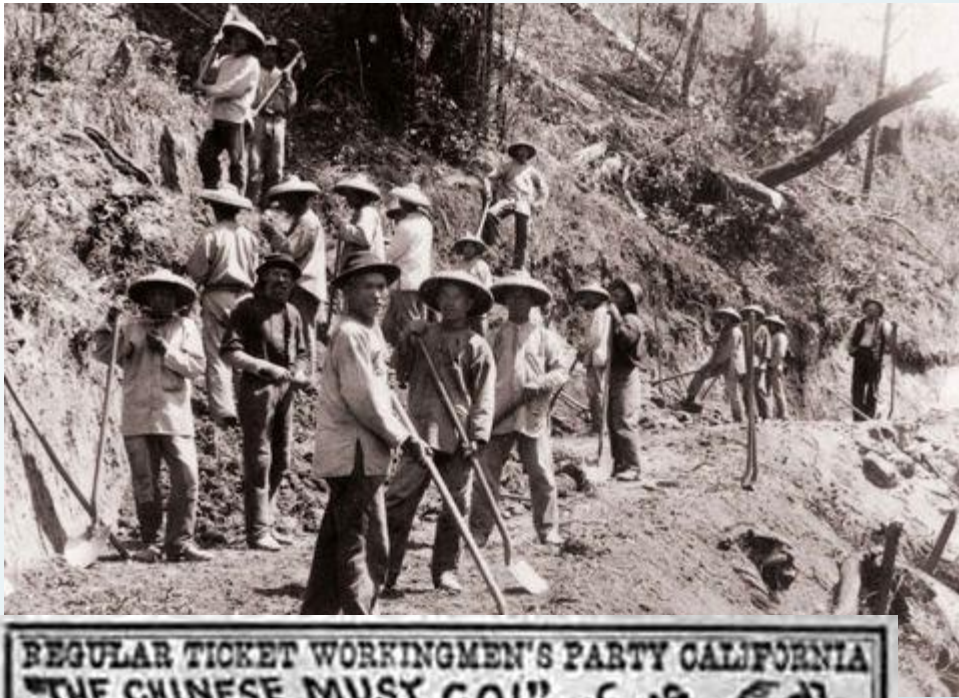
Romance and Reality

- 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

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





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

The Grange and the Railroads

Railroad Abuses

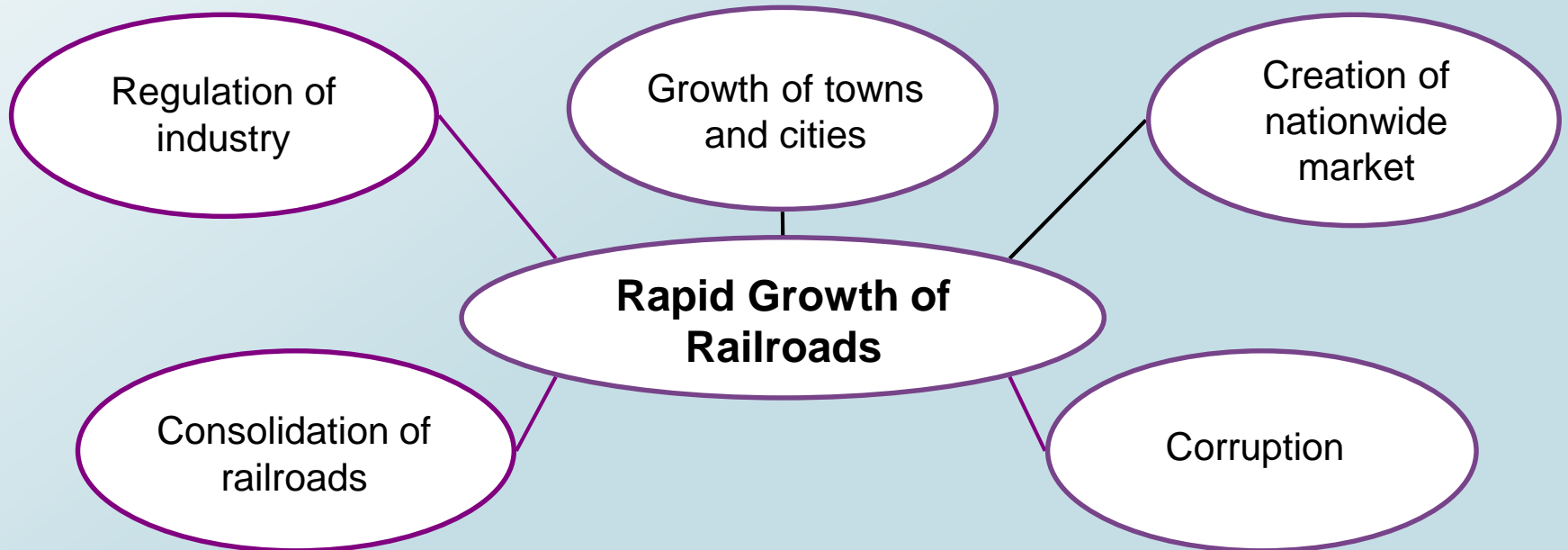
- Farmers angry over perceived railroad corruption
 - railroads sell government lands to businesses, not settlers
 - fix prices, keep farmers in debt
 - charge different customers different rates

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

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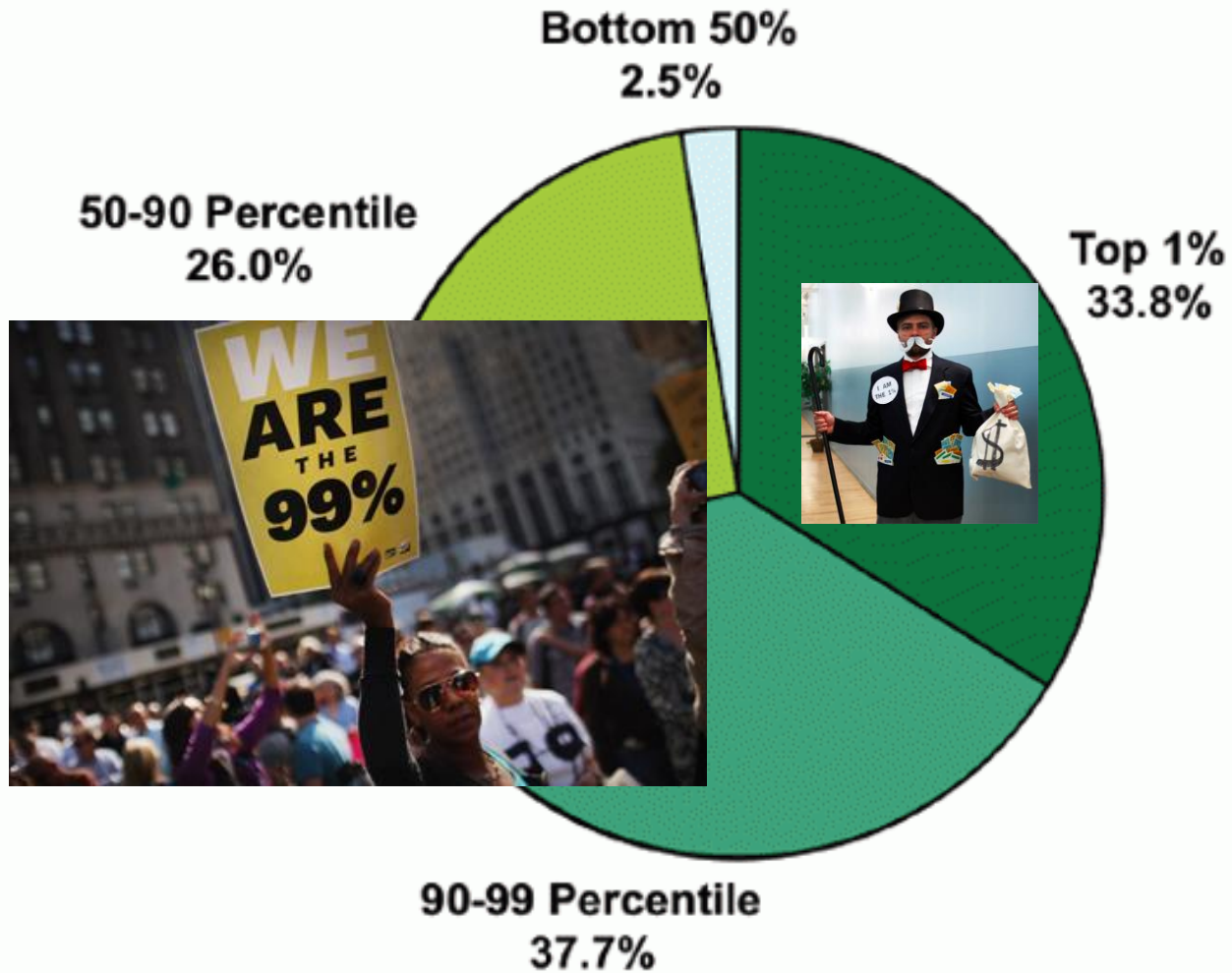


Section 3

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.

Distribution of U.S. Wealth, 2007



Big Business and Labor

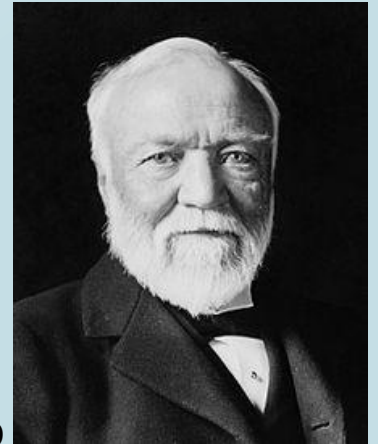
Carnegie's Innovations

Carnegie Makes a Fortune

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

New Business Strategies

- Hires talented staff; offers company stock; promotes competition
- Uses **vertical integration**—buys out suppliers to control materials
- Through **horizontal integration** merges with competing companies



Retail



Shipping



Manufacture Manufacture Manufacture Manufacture Manufacture Manufacture Manufacture Manufacture Manufacture



Processed

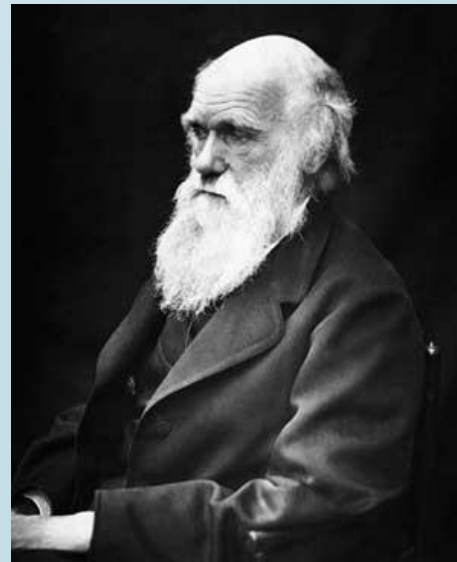
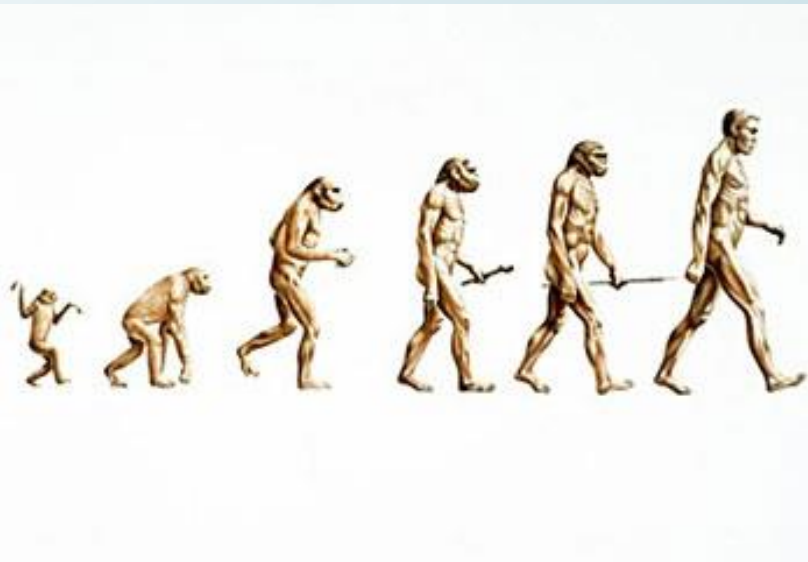


Raw

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**



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
- **John D. Rockefeller** founds Standard Oil Company, forms **trust**
 - trustees run separate companies as if one



Rockefeller and the “Robber Barons”

- Rockefeller profits by paying low wages, underselling others
 - when controls market, raises prices

Sherman Antitrust Act

- Government thinks expanding corporations stifle free competition
- **Sherman Antitrust Act**: trust illegal if interferes with free trade

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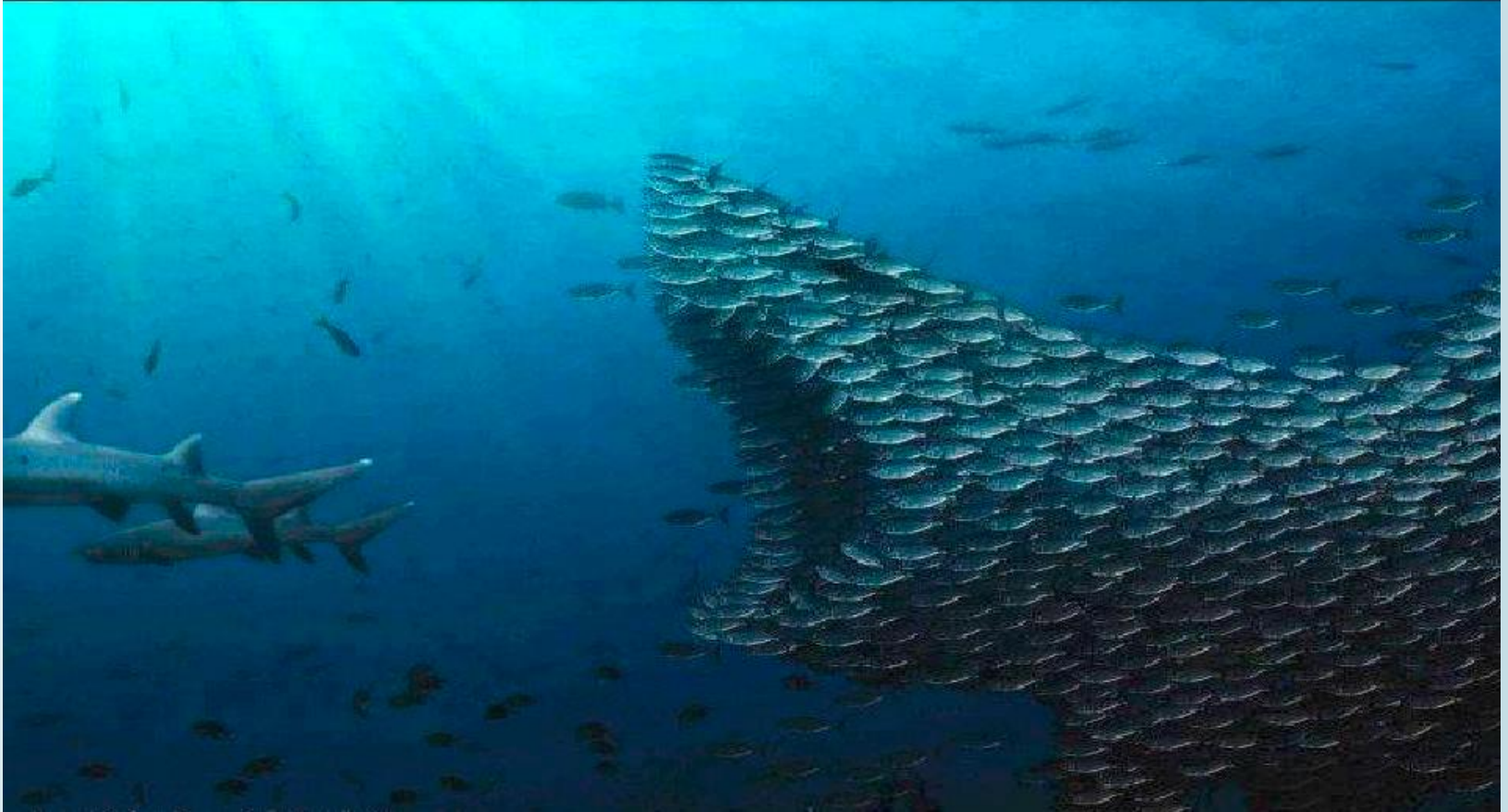
Labor Unions Emerge

Long Hours and Danger

- 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 members to work, including children
- Sweatshops, tenement workshops often only jobs for women, children

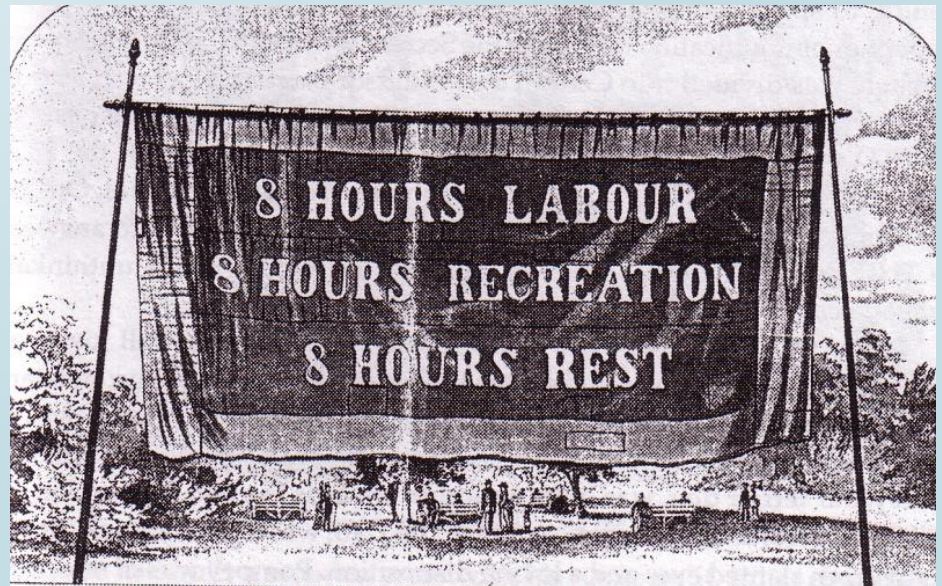


DON'T PANIC, ORGANIZE!



Early Labor Organizing

- National Labor Union—first large-scale national organization
- 1868, NLU gets Congress to give 8-hour day to civil servants



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



Women Organize

- **Mary Harris Jones**— most prominent organizer in women's labor
 - works for United Mine Workers
 - leads children's march
- 1911 Triangle Shirtwaist factory fire results in public outrage



Socialism

- ▶ Under Socialism the **government owns the means of production and operates them for the benefits of all, rich or poor.**
 - ▶ Wanted to do away with profit motive and competition.
 - ▶ Everyone had the right to share in the profits.



