
History 1302
U.S. From 1877

Chapter 17

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Industrialization

Industrialization boom from 1870 – 1905:

- Steel, Electricity & Gasoline engine built an age.
 - - Technology was Man's Civilizing factor – driving out ignorance, superstition, poverty and ignorance?
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 - Drives class and economic differences / discontent faster
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 - Population up 300% / Manufacturing up 1400%
 - Built on the commercial / industrial revolutions of the early 19th Century
 - Civil War aftermath
 - Northern Industry seen as margin of victory
 - Massive government spending during war
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 - Massive opportunity in US
 - Natural Resources / Land availability / Internal Market
 - Technological improvement – geometric change
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 - 1870s Expansion of Steam Engine capability
 - 1870s Telephone – Alexander G. Bell
 - 1870s Refrigerator ships / cars introduced
 - 1879 Cash Register – James Ritty
 - 1885 Gasoline
 - 1891 Adding machine – Wm Burroughs
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Railroads lead economic engine:

- Railroad economic / industrial engine
 - - Massive land grants fuel expansion
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 - Corporate links between Big Steel & Big RR
 - Provides cheaper food, bigger cities, more manufacturing capability
 - - \$360M receipts by 1867
 - - Accounting complexity
 - Operations in real time
 - Personnel decisions based on productivity & cost
 - Massive data collection, processing & assessment
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- Feeding the Steel / Railroad industry
 - Open Hearth System Hewitt produced bigger, stronger and cheaper steel in 1868
 - Government – time zones by 1883
 - Great Lakes Steamers / Ports / Treatment facilities
 - Oil for lubrication / Coal for power
 - Massive Capitalization – intra-corporate profits turned back into development

Expanding impact of industrialization:

- Technology becomes a business force:
 - Large scale, inter-related complex mass produced and mass used items
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- Labor force
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 - Agricultural problems
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- Gasoline Revolution:
 - Gasoline engines introduced in 1885
 - Revolutionized agriculture by 1900
 - 1896 on gasoline farmer could out harvest 18 men and a team of 8 horses
 - Automobiles in 1903 / Airplanes in 1903
- Research for “New Production”
 - Private exploration to academic and professional process
 - Engineer inter-related with Scientist
 - Market Driven (Edison electric lights 1878 – 84)
 - Heroic to Corporate (Eastman 1890 – 1910)

Science of Production:

- Frederick Winslow Taylor – “Taylorism” – 1911
“Scientific method to discover and develop human actions that are compatible with the demands of modern industrial tasks.”
 - Subdivision of tasks “Stop-watch studies”
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 - Interchangeability of parts / sub-systems
 - Flow of Production is key to cost control
 - - 1893 Successful gas auto production – high cost
 - 1899 40 mfg about 2,500 cars
 - 1903 Ford Motor Founded
 - 1905 Model N – car designed around mfg
 - 1908 Model T introduced at \$800 / 1916 - \$350
 - 1915 GM introduces on credit to compete
 - 2.5M cars
 - 66% sold on credit
 - Huge Capital forces institutional consolidation
 - Social and economic ramifications
 - Workers 8 hour - \$5 day affluent worker
 - Infrastructure needs cause expansion boom
 - Interlocking technologies
 - Consolidation of rural life
 - Popular culture explosion – races, etc.
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The Rise of the Corporation:

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 - Decreasing connection to locality or employees
 - Large administrative “Middle Management” organizations for control
 - Division and Hierarchy of responsibilities
 - Cost Accounting through data processing
 - Goal of capturing (“Cornering”) the market
 - Provided huge standard of living increases for technical / managerial specialists
- - Raise huge amounts of cash for capital investment
 - No liability for legal actions of the corporation
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 - Companies that buy companies
 - Extended Control – unseen management
 - 1% of corporations controlled 33% of Manufacturing
 - Rise of the “Barons” – the “American Hero”
- - Depression of 1873 allowed weak companies to be bought by larger ones
 - Defense against “Price wars” & market destabilization
 - Tactics of “Trusts” / “Pools” / “Holding Companies”
 - Horizontal and Vertical Integration
 - “Pools” or collusion efforts – price / service fixing “Cartels”
 - US Supreme Court 1886 & 1898 kept states from regulating interstate commerce

Birth of the “New” South:

- “Redeemers” or modernizing Democrats – sponsored an Industrialized South
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 - Self-capitalized from 1878 onward from cotton
 - Urban centers grow in size and importance:
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 - Creates a new class of white southerner – workers which strains traditional political models
 - Culturally mixed between rural and northern
 - Democrat Hegemony through white voting unity
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 - To keep taxes low for poor whites, governments stopped spending on infrastructure / services
 - Entire South spent less on Education than NY
 - 50% Whites were illiterate / 75% of blacks
 - Southern success:
 - Cigarettes from Tobacco (Duke)
 - Non-union textiles
 - Southern Steel manufacture in Birmingham, AL

New South Segregation from 1878 :

- Southern Industrialization from 1878
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 - - Segregated schools to “educate” the Whites away from racism
 - Civil Rights Law of 1875 which allowed Black access to public offerings (except schools) – but civil matter not criminal
 - 188 lynchings a year in 1880s
 - Supreme Court ruling of 1883 - Vitiating the Civil Rights Act of 1875 allowing for re-segregation
 - “Jim Crow” laws of 1886 onward to clarify Black position & allow races to live close together
 - Plessy v Ferguson 1896 - “separate but equal”
- - Tuskegee Institute focus on skills & economic gains
 - Wait for political rights, accept White dominance for economic rise
 - Rise of the segregated Black economy / middle class

Cultural reactions to “Modern” industry:

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- - Farmers & merchants hate the Corporations & Railroads
 - Middle-class v the rich
 - Skilled v Unskilled labor
 - Scientists of the Engineers
- - Riches available to all
 - work hard enough
 - lucky enough
 - believe enough
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 - Social Darwinism popularized by Herbert Spencer
 - Virtue of competition and the “Free Market”
 - Gospel of Wealth a evangelical response to national corporations centering on community growth
- “Dynamic Sociology” - Frank Ward 1883:
 - Modern society is not just “Natural Selection” but can be affected by but thought and action
 - Middle class responsibility
 - Christian obligation
 - Unionization
 - Socialist Labor parties

Results of Industrial concentration:

- - Reduced competition & inefficiency through market control
 - Huge profits yet slower growth & innovation
 - Against the public interest (?)
- - - 42% were foreign born v 13% of America generally
 - South and central European
 - 1M Mexicans between 1900 - 1930
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 - - Workers and owners lived in different worlds
 - Physically
 - Culturally
 - Politically
 - Labor Contract Law - Indentured Servitude repealed in 1895
 - - Little to no control of working conditions
 - Little enforcement of existing laws
 - No liability for accidents
 - Increase in number and percentage of unskilled
 - Women and Children – work for less

Unionization Movement:

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 - Molly Maguires – an Irish working fraternity
 - Radical violence against management
 - Railroad strike of 1877
 - 10% wage reduction and lay-offs
 - Broken by State & Federal Government reaction
- - Theories reducing the affects of Wage Slavery
 - Monetary fixes – Greenbackism, George’s single tax
 - Socialism – gov’t ownership of the means and of land
 - Cooperative Activity
 - Idealism of “Hearth and Home”
 - - Idlers – bankers and speculators
 - Corrupt – lawyers, liquor dealers, gamblers
 - Social Parasites – purveyors of vice and all of the above
 - Leadership: intelligentsia of the working class – editors of labor press – skilled workers with some if not almost total control of their workplace –

19th Century Union organizations:

- - Industrialized labor in “new world”
 - Permanency of wage labor status
 - Destructive affect of Industrialized workplace
 - Capital’s arrogance about lives of working force
 - “Economic” reforms such as 8 hour day & end to “Child Labor”
 - Stressed “Cooperative “ gains through united action
 - 1886 strike failures lead to dissolution
- - 1881 becoming AFL in 1886 led by Samuel Gompers organizing workers in Crafts / Skills
 - Economic issues of wages / hours / working conditions
 - - Public reaction is negative – seen as mixed with Bomb throwing Anarchist
 - Homestead Strike
 - Corporate dispossessing the union
 - Pinkertons and Strike Breakers 1892
- - Culturally negative
 - Governmental opposition
 - Supply & Demand for workers