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**History 1301**  
**U.S. to 1877**

Unit 3 - Lecture 2

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America's Economic  
Revolution

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# Changing America:

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- American industrial revolution was due to advances in transportation, communications, manufacturing & new systems of business organization.
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  - Transportation linked NE, MA, and Mid-west to become “The North”
  - Internal market spurred by cheap land and food, meant higher wages, more technology isolated from European industrial powers
  - Erie Canal proposed 1808 / began 1817 / opened 1825 – “Clockwise Nation” as Great Lakes took over water routes from Mississippi
- Demographics:
  - Population 1790 - 4M / 1820 – 10M / 1840 -17M
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  - More people lived in towns and cities:
    - 26% of US was living in towns of 2500 or more 14% increase (South was 6% up to 10%) NYC 1840 – 321K / 1860 – 800K
    - Uneconomic NE farming forces people to cities & west
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      - Rural growth 2.9X to “Urban” 14.5X
      - 1.9 M workers to 11M (20% were in Northern factories)
    - Immigrant boom spawned political resistance and ethnic settlement
    - Rich get richer – 1800 10% controlled 45% / 1860 70%

# Transportation Revolution:

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- Turnpike age: (\$10K per mile)
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- Canal Age: 1820 – 1830s rapid building boom for cheaper transportation costs (\$25K per mile)
  - Quick way to beat Mississippi / Overland route
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  - Cut transportation costs by 90%
  - Canals in Indiana and Ohio to feed lakes and Erie brought Midwest products to eastern seaboard fast and cheap
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- Rail Roads began in 1830s but took off in 1840s (\$35k per mile)
  - 1830 first RR - Baltimore and Ohio by 1836 1K miles of track by 1860 – 27K miles of track – 25 – 30 mph average
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  - Required massive amounts of capital – gov't funding in forms of public land grants (\$300M in land in 1850)
  - 1830 NYC – Chicago 3 weeks / 1850s – two days 4X more efficient than canals
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- Telegraph:
  - 1835 Morse developed system / 1843 First commercial use / 1846 fed NYC newspapers
  - 1860 50K miles of wire
  - Fast communications and made RR more effective

# Commerce and Industry:

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- Business Evolution to drive and support revolution
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- New forms of organization Incorporation – 1800 limited to public works efforts
  - 1822 – NY, “Special Partnership” laws limited liability to amount of investment
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  - Bankruptcy Laws of 1840s
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- Factory method
  - War of 1812 – industry in households or workshops
  - Concentration of process to leverage of high cost labor and high yield (but high cost) machinery
    - Available low cost energy – water then coal
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    - On-site professional management different than ownership
    - - Rhode Island system
      - Waltham system
      - Fall River System -- wage ties only
      - Immigrant workers
        - » **1820s – 129K immigrants**
        - » **1830s – 540K**
        - » **1840s – 1.5 M**
        - » **1850 – 2.8M**

# Industrialization:

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- Economy of scale
  - Growth of the Factory System
    - 1840 \$483M from factories / 1860 \$2B
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  - Lowell – Ma – State’s second largest city – 10K employees & 1M yards of cloth a week
  - - Cost effective on investment
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  - Machine Tools or tools that make tools – advances in machine tools
    - High skill / increasing rate of change, volatility of business operational environment.
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- Pig Iron production (foundation for steel production)  
~ 1810 54K tons / 1820 540K
- Coal replaced water & wood
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  - Requires expensive deep mining operations and railroad to markets & lots of cheap labor
- Invention
  - Patent system holdover from England
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  - 1839 – Charles Goodyear – Vulcanization of Rubber
  - 1846 – Elias Howe – Sowing machine / Singer

# New Society:

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- Urban growth:
  - Western cities grew rapidly – boom conditions
  - Growth of urban middle class
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    - Urban housing became differentiation in evolution of ethnic & class “neighborhoods” around 1820
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  - Police and urban services 1820 – 1840s
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  - Immigrant slums
  - Rigorous racial segregation
- Wealth rules:
  - 45% of the industrialized value in 10% of people
  - Owning more important than doing “Idle Rich”
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- Rich:
  - Northern – money grows money
    - Anonymous investment allows owners to be totally free of “Noblesse oblige” constraints
  - Technology or transportation innovation / Investments
  - Western Land
  - South – concentration of land or move west for more of the same

## New Society II:

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- Middle Classes:
  - Skilled wage earners / professions
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  - Household possessions and technology (ice boxes)
  - Fashion and formal, complex dress requirements
  - Food / Health crazes
  - Fewer Children – “Child Centered Family”
    - 1860 average 3 children to middle class homes
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  - Protestant / Self-denial / Results of hard work
    - Temperance
  - Job centered life - Male
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  - Home centered life - Female
    - Few professions – nursing / teaching but little outside
    - Women “Superior” to men in “Domestic Virtue”
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    - Cult of domesticity (even on farms)
      - Respectability & Control
      - Provide a civilized refuge and raise virtuous children
      - Chief consumer / Household technology
      - Children's Character not occupation

# New Society III:

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- Working Classes:
  - Upper echelon
    - Holding on to lagging technology
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    - Fearful of competition – Nativist
    - Political control / system – Tammany Hall
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  - Lower echelon
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    - Widows, orphans and free Blacks
      - Blacks are objects of intense and complete segregation
    - Immigrant fed
    - Economic times destroyed combination power
    - Fearful of female labor
- Northern Agriculture
  - Market based
  - Labor shortage drove intense use of technology
  - Cheap labor
- Leisure:
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  - Sports
    - Boxing / Horse Racing
  - Spectacle – PT Barnum & Freak -shows
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