Introduction to Industrialism
Pre-Industrialization

• Workshop and Guild System
  – Products made by hand
    • Low Productivity
    • Varied Quality
  – Guild system created monopoly
    • Set standards for quality and price
    • Established training for new members
Resources needed for Industrialization

- Semi-Reliable Market
- Effective Central Bank
- Easy sources of Transportation
  - Rivers
  - Roads
  - Development of Railroads
- Cheap Labor
- Natural Resources
  - Coking Coal
  - Iron Ore
- Means of Shipping products to foreign Markets
  - Interlinked Rail Systems
  - Merchant Marine
Pre-Industrialization

- Cottage Industry
  - Goods made at home
    - Sold locally
    - Workers paid by the piece
    - Responsible for production, marketing, and sale of products
  - Dispersed industry
    - Varied availability of goods
The First Industrial Revolution

- James Watt’s Steam Engine
  - Changes industrial landscape
    - Industry no longer needs to be located next to water
      - Wood now main power source
    - Used to pump water out of coal mines initially
Adaptations of Steam Engine

• Iron Industry
  – Steam Engine used to supply steady supply of air to blast furnace
  – Allowed for easier smelting of iron into “pig iron”
    • Basic ingredient for all industry
Adaptations of Steam Engine

- Textile Industry
  - Power loom 1785
    - Steam Engine powered spinning of cotton into thread
  - Cotton Gin invented in 1794
    - More efficient refinement of cotton
  - Causes Britain to more heavily pursue imperialism
    - Egypt and India
Adaptations of the Steam Engine

• Transportation
  – Steam Locomotive
    • Wide-scale use begins 1804
      – Increased demand for coal
    • Took lots of modifying
  – Steam Ship
    • Developed in late 18\textsuperscript{th}-Early 19\textsuperscript{th} Centuries
      – Drastically decreased travel times
    • Trans-Atlantic Voyages began 1838
Origins of Industrialism: Britain

1. Capitalist System
   - Entrepreneurship
     • Heritage of people taking risks for economic gain
   - Middle-Class
     • Growing through guilds and trading systems
   - Patent System
     • Projection for ideas

2. Labor
   - Jethro Tull’s seed drill and enclosure movement forced people to cities to look for jobs
Origins of Industrialism: Britain

3. Easy access to resources
   – Iron and Coal
4. Transportation infrastructure
   – Ports, Roads, Canals
5. Location of resources
   – Close to rivers
6. Mature banking system
7. Stable political system
8. Colonies
   – Sources of raw materials
Effects of Industrialization

• Economic: Supply and Demand
  – More goods available at cheaper price

• Social: Urbanization
  – Labor clustering in cities

• Political: Ideology
  – Socialism/Communism
  – Capitalism
  – Liberalism
Effects of Industrialization

- Environment: Industrial Waste
  - Increased pollution

- Technological: Mechanization
  - Transportation
  - Manufacturing

- Economic: Agricultural
  - Second Agricultural Revolution
    - Mechanization of Agriculture

- Social: Demographics
  - Transition to second level of Demographic Transition Model