

The Threads of Change

Lowell, Massachusetts
and the
American Industrial Revolution

The Beginnings—Mid 1700s

- Britain**
 - Island kingdom
 - Sea power with colonialist tendencies
- Huge war debt**

The Beginnings—Mid 1700s

- Changes in agriculture**
 - Poor harvests
 - Increased productivity in farming allows growth of cities/factories

British Textiles—Wool

- Woolen Industry**
 - Prevented export of
 - Machinery
 - Knowledge
 - Great political power
 - Laws for woolen burial clothing

British Textiles—Cotton

- Cotton Thread**
 - The “Mule” by Samuel Crompton (1779)
 - Drawing machine
 - Spinning jenny
 - 48 threads at once

British Textiles—Cotton

- Automated Loom**
 - Patented in 1786 by Edmund Cartright
 - Improved in 1803
 - Thread (yarn) in one plant, cloth in another

American Textiles

- ❑ Cotton yarn
 - Almy and Brown’s spinning mill in Pawtucket, RI
 - Opened in 1790 by Samuel Slater a British engineer
- ❑ Weaving
 - Domestic handicraft

American Espionage

- ❑ Before the War of 1812
 - Scarcity of high quality cotton
 - Handlooms unable to meet needs
- ❑ Francis C. Lowell
 - visits Manchester 1811

American Espionage

- ❑ Paul Moody
 - Master Mechanic (1813/14)
 - America’s first power loom
 - Inferior cloth, but inexpensive
 - Survived post war glut of English imports

Lowell, Massachusetts

- ❑ America’s premier center of textile manufacturing
- ❑ Boston Manufacturing Company (1814)
 - Raw cotton to finished cloth at a single site

Lowell, Massachusetts

- ❑ Comprehensive industrial system was an integration of
 - Technology
 - Finance
 - Management



US National Park Service model

“City of Spindles”

- ❑ Twenty-two mills in operation by 1836
 - 130,000 spindles
 - 4,200 looms
 - 6,800 workers (80% women)
- ❑ 320,000 spindles by 1850

The Factory Workforce

- Jefferson—"Let our workshops remain in Europe"
- Massachusetts system
 - "Mill Girls"
 - From area farms
 - Fairly paid (\$2.25-\$4.00/week less \$1.25 R/B)



Working Conditions

- Dark, dusty, and deadly...
 - Windows nailed shut to control humidity
 - Close quarters (110 looms, 55 operators)
 - 5 a.m. to 7 p.m. with two half hour breaks for breakfast and noontime dinner

Working Conditions

- Piece rates
- "Kiss of Death"—sucking broken threads through bobbin spread tuberculosis and other infectious diseases

Lowell, MA—Today

- Major tourist attraction
- Museums (NPS)
 - Boott Mill
- Power Station still working
- Pawtucket Canal Tours

Lowell, MA—Today

- Looms still manufacture cloth
 - Souvenir dish towels
 - 1920s weaving room
 - Looms moved up from TN & SC

NPS Web Page:
<http://www.nps.gov/lowe/>