# 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
- Generation 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

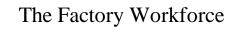
- Technology
- Finance
- Management

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



#### □ Jefferson—"Let our workshops remain in Europe"

□ Massachusetts system

– "Mill Girls"

– From area farms

- Fairly paid



OFTERDICA

(\$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

Diece 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
- Dever 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/