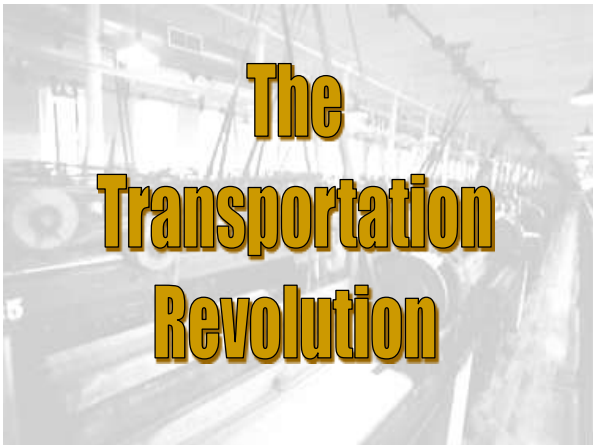




**Early 19c
Industrialization
in America:
The Market Revolution**

ESSENTIAL QUESTION:

**What were the
results of
early 19c
industrialization
in America?**



**The
Transportation
Revolution**

First Turnpike- 1790 Lancaster, PA



**By 1832, nearly 2400 mi. of road connected
most major cities.**

Cumberland (National Road), 1811



Conestoga Covered Wagons



Conestoga Trail, 1820s

Erie Canal System






Erie Canal, 1820s



Begun in 1817; completed in 1825

A historical painting depicting the construction of the Erie Canal in the 1820s. The scene shows a long, straight canal cutting through a landscape with trees and buildings. The painting is set against a background of a modern building's interior.

Robert Fulton & the Steamboat



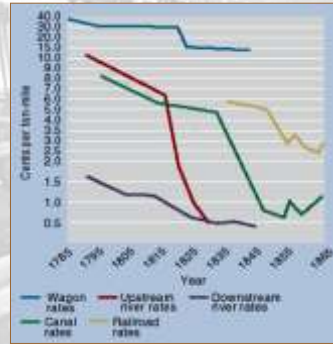
1807: *The Clermont*

A composite image featuring a portrait of Robert Fulton on the left and a drawing of the steamboat *The Clermont* on the right. The background is a faded image of a modern building's interior.

Principal Canals in 1840



Inland Freight Rates



RATES OF TOLL ALLOWED BY LAW ON PATUCKET-CANAL.

Salt per Bushel	20	Per Ton	20
Shelton Gas. Per Cask of 20 Bushels	20	Per Ton	20
Stick, Per Thousand	16	Per Ton	16
Malt Per Bushel	30	Per Ton	30
Wheat Per Ton of 40 Bushels	35	Per Ton	35
Flour	35	Per Ton	35
Spouts	30	Per Ton	30
Fire-Brick and Brick Per M. (Square)	50	Per Ton	50
Chalk	40	Per Ton	40
Archimedes' Screw	40	Per Ton	40
Clay per Ton	25	Per Ton	25
Shingles	8	Per Ton	8
Lumber	8	Per Ton	8
Feet and Haul Per Thousand	15	Per Ton	15
Terrazzo	30	Per Ton	30
Hay-Pike	30	Per Ton	30
Barrel of Wood	20	Per Ton	20
White-iron Pipe	80	Per Ton	80
Cast-iron Pipe	60	Per Ton	60
Red-iron Pipe	40	Per Ton	40
White-iron Barren	30	Per Ton	30
Red-iron Barren	20	Per Ton	20
Red-iron Hoop	40	Per Ton	40
Barren	40	Per Ton	40
Red-iron Hoop	30	Per Ton	30
Barren	30	Per Ton	30
Al other Articles	22 1/2	Per Ton	22 1/2

Article That do not pass through these Hoops. Loads now charged only half the above rates of Toll.

Clipper Ships



The "Iron Horse" Wins! (1830)



1830 → 13 miles of track built by Baltimore & Ohio RR
By 1850 → 9000 mi. of RR track [1860 → 31,000 mi.]



The Railroad Revolution, 1850s

- Immigrant labor built the No. RRs.
- Slave labor built the So. RRs.

New Inventions: "Yankee Ingenuity"

INDUSTRIAL REVOLUTION

- A shift from goods made by hand to factory and mass production
- Technological innovations brought production from farmhouse to factories
 - Invented in Britain in 1750; smuggled to U.S.
 - Beginning of US Factory System
- US slow to embrace factory system
 - Scarce labor
 - Little capital
 - Superiority of British factories

Resourcefulness & Experimentation

- Americans were willing to try anything.
- They were first copiers, then innovators.

1800 → 306 patents were approved.

1838 Clerk of the Patent Office resigns saying all worthwhile inventions had been discovered

1850 -1860 → 28,000 patents

Eli Whitney's Cotton Gin, 1791



Actually invented by a slave!



What can you make with a bale of cotton?

A bale of cotton weighs about four pounds. One bale can make 4,000 men's T-shirts or 200 pairs one-hundred dollar suits (200, 100, 100). Below are some other things that can be made from a bale of cotton:

How many more things can you make from a bale of cotton?

- 100,000 sheets of toilet paper
- 2,000,000 pairs of socks
- 1,000,000 pairs of shoes
- 1,000,000 pairs of pants
- 1,000,000 pairs of shirts





Eli Whitney's Gun Factory



Interchangeable Parts Rifle

Oliver Evans



First automated flour mill



First prototype of the locomotive

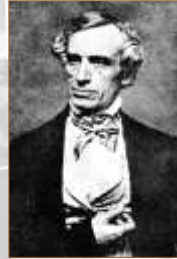
John Deere & the Steel Plow (1837)



**Cyrus McCormick
& the Mechanical Reaper: 1831**



Samuel F. B. Morse



1840 - Telegraph

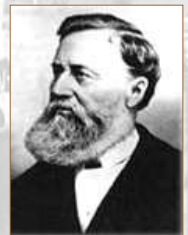
**Cyrus Field
& the Transatlantic Cable, 1858**



Elias Howe & Isaac Singer



1840s
Sewing Machine



The "American Dream"

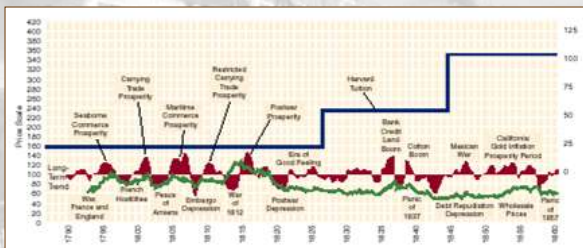
- They all regarded material advance as the natural fruit of American republicanism & proof of the country's virtue and promise.

A German visitor in the 1840s, Friedrich List, observed:

Anything new is quickly introduced here, including all of the latest inventions. There is no clinging to old ways. The moment an American hears the word "invention," he pricks up his ears.

The Northern Industrial "Juggernaut"

Boom/Bust Cycles: 1790-1860



The blue line shows, for comparison, the price of a year's tuition at Harvard College. In 1790 it was \$24, but by 1860 had risen to \$104.

Creating a Business-Friendly Climate

Supreme Court Rulings:

- * *Fletcher v. Peck* (1810)
- * *Dartmouth v. Woodward* (1819)
- * *McCulloch v. Maryland* (1819)
- * *Gibbons v. Ogden* (1824)
- * *Charles Rivers Bridge v. Warren Bridge* (1835)

General Incorporation Law → passed in New York, 1848.

Laissez faire → BUT, govt. did much to assist capitalism!

Distribution of Wealth

- \$ During the American Revolution, 45% of all wealth in the top 10% of the population.
- \$ 1845 Boston → top 4% owned over 65% of the wealth.
- \$ 1860 Philadelphia → top 1% owned over 50% of the wealth.
- \$ The gap between rich and poor was widening!

Samuel Slater ("Father of the Factory System")



US FACTORY SYSTEM



Samuel Slater was the
*"Father of the
American Factory
System."*



- Built first textile mill in 1793 in Pawtucket, Rhode Island.
- Born in England on June 9, 1768 and worked in British factories.
- Slater came to US to make his fortune in the textile industry.
- Slatersville Mill was the largest and most modern industrial cotton mill of its day

US FACTORY SYSTEM The Lowell Mills

- Americans beat the British at their own game, made better factories
- Francis C Lowell (a British "traitor") came over here to build British factories met up with Boston mechanic, Paul Moody
 - Together they improved the mill and invented a power loom that revolutionized textile manufacturing

The Lowell/Waltham System: First Dual-Purpose Textile Plant



Francis Cabot Lowell's town - 1814



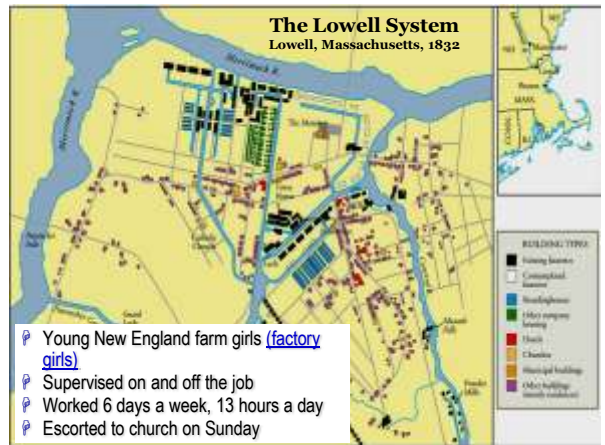
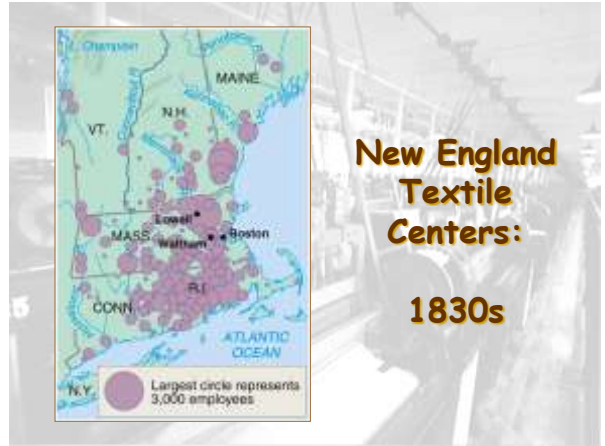
Lowell in 1850











US FACTORY SYSTEM

Women & the Economy

- 1850: 10% of white women working for pay outside home
 - Vast majority of working women were single
 - Left paying jobs upon marriage
- “Cult of domesticity”
 - Cultural idea that glorifies homemaker
- Empowers married women
 - Increased power & independence of women in home led to decline in family size

Starting for Lowell



Lowell Girls



What was their typical “profile?”



Lowell Boarding Houses



What was boardinghouse life like?





Lowell Mills Time Table

TIME TABLE OF THE LOWELL MILLS.		
<p>Arranged to make the working time throughout the year average 11 hours per day. TO TAKE EFFECT SEPTEMBER 24th, 1852.</p> <p>The Standard time being that of the meridian of Lowell, to show by the Regular Clock of 1850 DOWNS, First Wheel Street, Lowell, Mass.</p> <p>From March 24th to September 24th, inclusive, CORRECT TIME 4 1/2 A. M. LEAVE THE WORK ABOUT 4 o'clock Sunday Morning 8 A. M. A. M. 10 A. M. 12 M. 2 P. M. 4 P. M. 6 P. M. 8 P. M. 10 P. M.</p> <p>From September 24th to March 24th, inclusive, CORRECT TIME 4 1/2 A. M. LEAVE THE WORK ABOUT 4 o'clock Sunday Morning 8 A. M. A. M. 10 A. M. 12 M. 2 P. M. 4 P. M. 6 P. M. 8 P. M. 10 P. M.</p>		
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STANDARD AMERICAN WEIGHTS.		
<p>From March 24th to September 24th, inclusive, Working Day. 11 1/2 Hours. 11 1/2 Hours 8 A. M. 11 A. M. 12 P. M. 2 P. M. 4 P. M. 6 P. M. 8 P. M. 8 1/2 A. M. 10 A. M. 12 P. M. 2 P. M. 4 P. M. 6 P. M. 8 P. M.</p>		

THE LOWELL OFFERING:
 A MEMORIAL
 OF
 ORIGINAL ARTICLES ON VARIOUS SUBJECTS,
 EDITED
 BY FACTORY OPERATIVES,
 "THE OFFICE OF THE OFFERING" was
 first opened to receive articles in Lowell, Mass.,
 for their collection in the "Offering."
 BY SMALLER EMPLOYEES IN THE MILLS.

No. 1. Price Sixts.

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LOWELL, MASS.
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 THE OFFICE OF THE OFFERING, AND BY THE OFFICE OF THE OFFERING AND DISTRIBUTION.

The Factory Girl's Garland



February 20, 1845 issue.

I'm a Factory Girl Filled with Wishes

I'm a factory girl!
 Everyday filled with fear
 From breathing in the poison air
 Wishing for windows!
 I'm a factory girl!
 Tired from the 13 hours of work each day
 And we have such low pay
 Wishing for shorten work times!
 I'm a factory girl!
 Never having enough time to eat
 Nor to rest my feet
 Wishing for more free time!
 I'm a factory girl!
 Sick of all this harsh conditions
 Making me want to sign the petition!
 So do what I ask for because I am a factory girl
 And I'm hereby speaking for all the rest!



Irish Immigrant Girls at Lowell



The Early Union Movement

Workingman's Party (1829)

- * Founded by Robert Dale Owen and others in New York City.

Early unions were usually local, social, and weak.

Commonwealth v. Hunt (1842).

Worker political parties were ineffective until the post-Civil War period.

Workers & Wage Slaves

- With industrial revolution, large impersonal factories surrounded by slums full of “wage slaves” developed
- Long hours, low wages, unsanitary conditions, lack of heat, etc.
 - Labor unions illegal
- 1820: 1/2 of industrial workers were children under 10

Workers & Wage Slaves

- 1820s & 1830s: right to vote for laborers
 - Loyalty to Democratic party led to improved conditions
 - Fought for 10-hour day, higher wages, better conditions
- 1830s & 1840s: Dozens of strikes for higher wages or 10-hour day
 - 1837 depression hurt union membership
- *Commonwealth v. Hunt*
 - Supreme Court ruled unions not illegal conspiracies as long as they were peaceful

**What's
Happening
in
America
by the 1850s?**

Regional Specialization

EAST → Industrial

SOUTH → Cotton & Slavery

WEST → The Nation's "Breadbasket"

American Population Centers in 1820

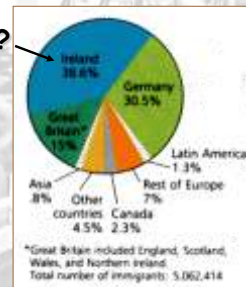


American Population Centers in 1860



National Origin of Immigrants: 1820 - 1860

Why now?



Know-Nothing Party:
"The Supreme Order of the Star-Spangled Banner"

NATIVES OF THE SOIL!
AROUSE!
 Shall American Labor be Protected
 Against Foreign Competition in the Home Labor Market?
THE WATCHWORD OF NATIVE AMERICANS:
 "Don't let 'em in!"
FOSTER BRYANT, ESQ.

**Changing Occupation Distributions:
 1820 - 1860**

	1820	1840	1860
Agriculture	78.8%	63.1%	52.9%
Mining	0.4	0.6	1.6
Construction	—	5.1	4.7
Manufacturing	2.7	8.8	13.8
Trade	—	6.2	8.0
Transport	1.6	1.8	2.0
Service	4.1	5.0	6.4
Other	12.4	9.4	10.6

Source: U.S. Bureau of the Census.

