



# World History since 1500



Wayne E. Sirmon

HI 104 – World History

**Extra Credit**

# Hinson Lecture February 23

(Thursday 7:00 pm)

UM Campus

College Woods Center



**Joshua D. Rothman, PhD.**  
Chairman, History Department  
University of Alabama

## THE LEDGER AND THE CHAIN

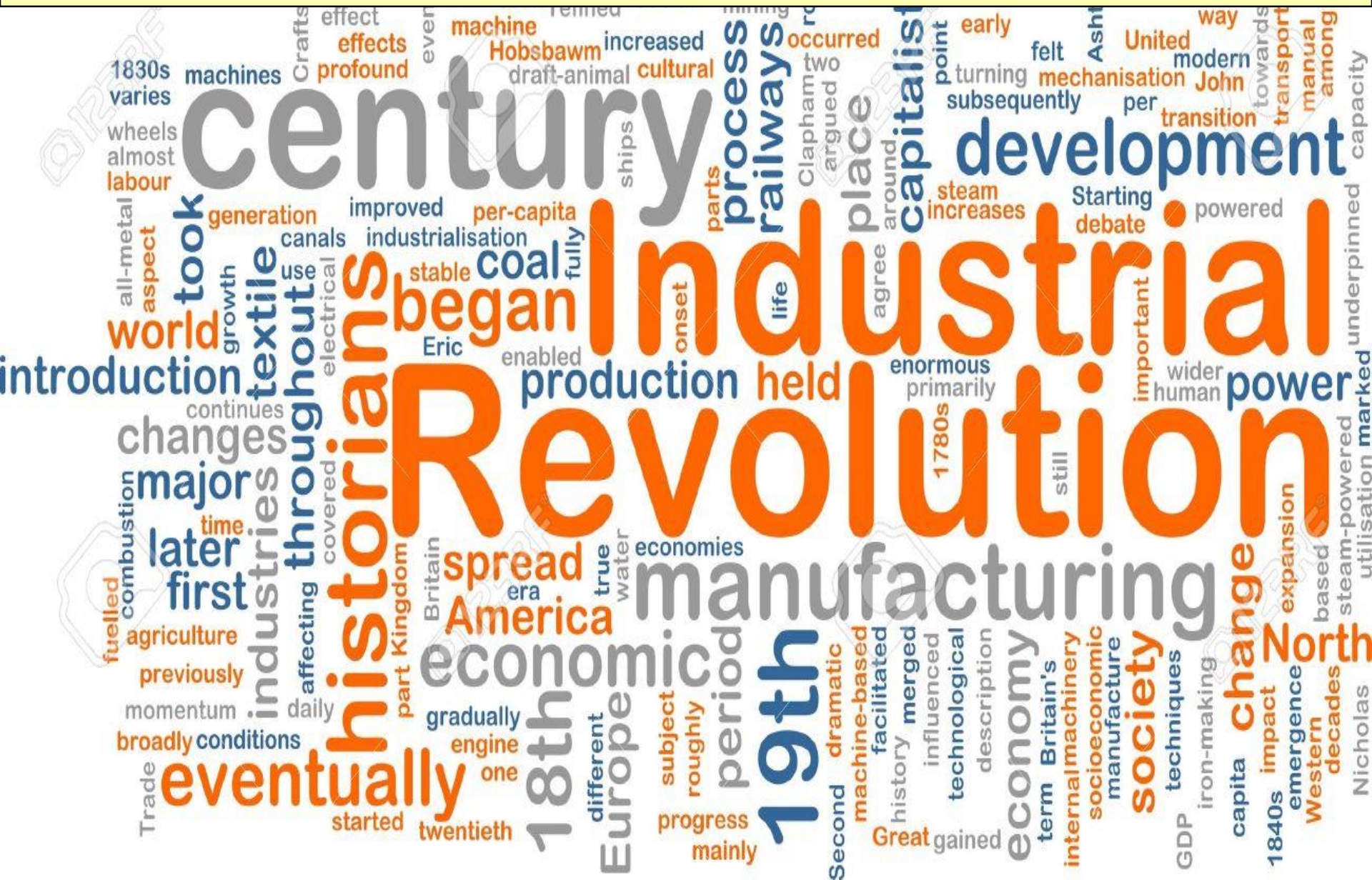
HOW  
DOMESTIC  
SLAVE  
TRADERS  
SHAPED  
AMERICA



The shocking story of the domestic slave trade. Far from social outcasts, they were rich and widely respected businessmen, and their company sat at the center of capital flows connecting southern fields to northeastern banks.

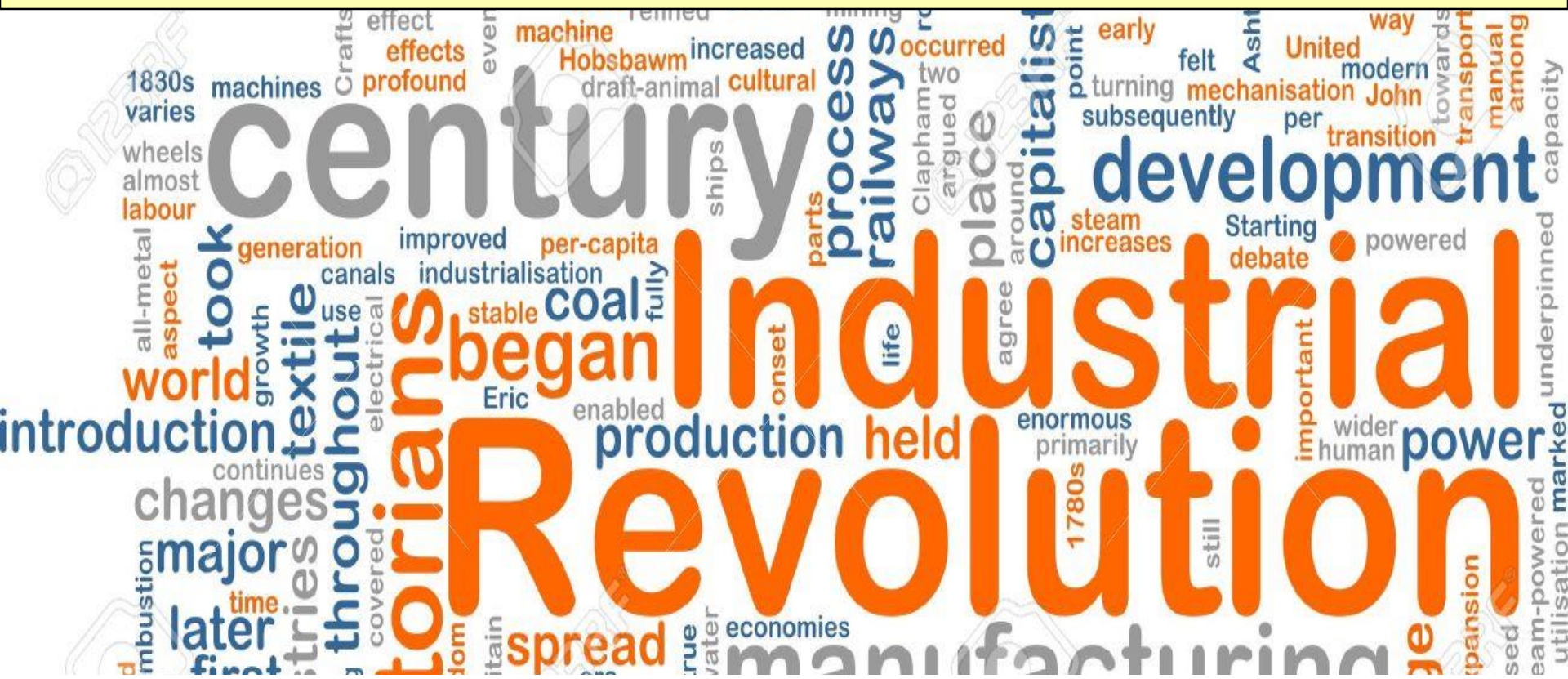


# CH. 19: Industrialization and Nationalism

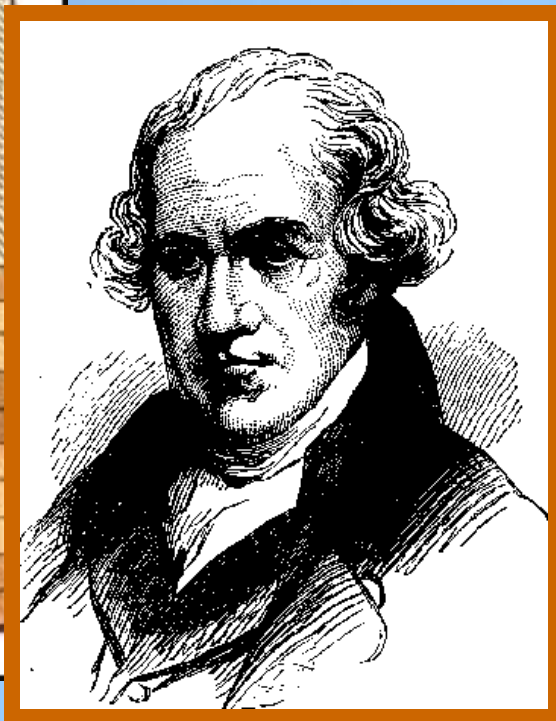
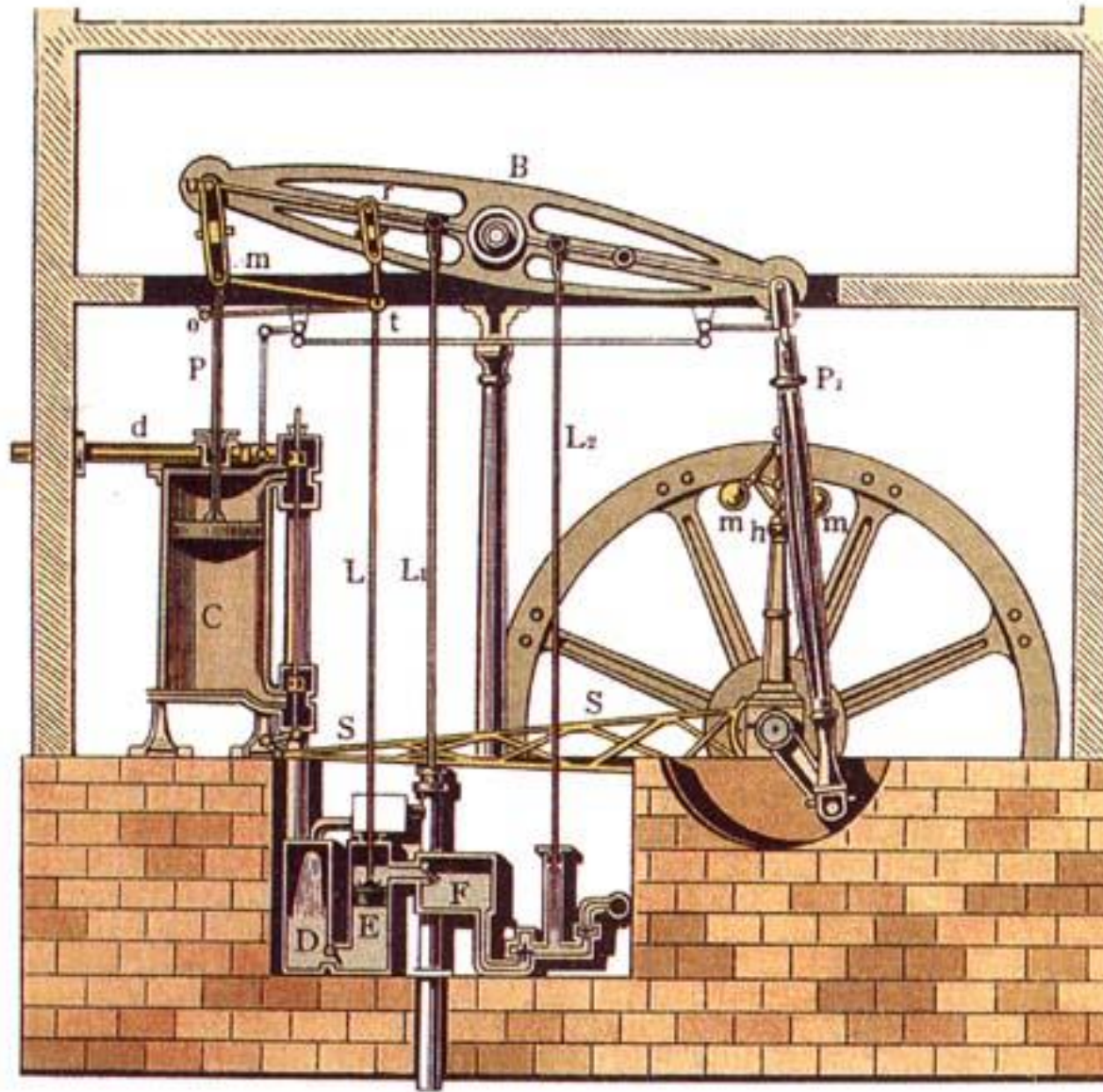




# CH. 19: Industrialization and Nationalism



# The key(s) to the Industrial Revolution?

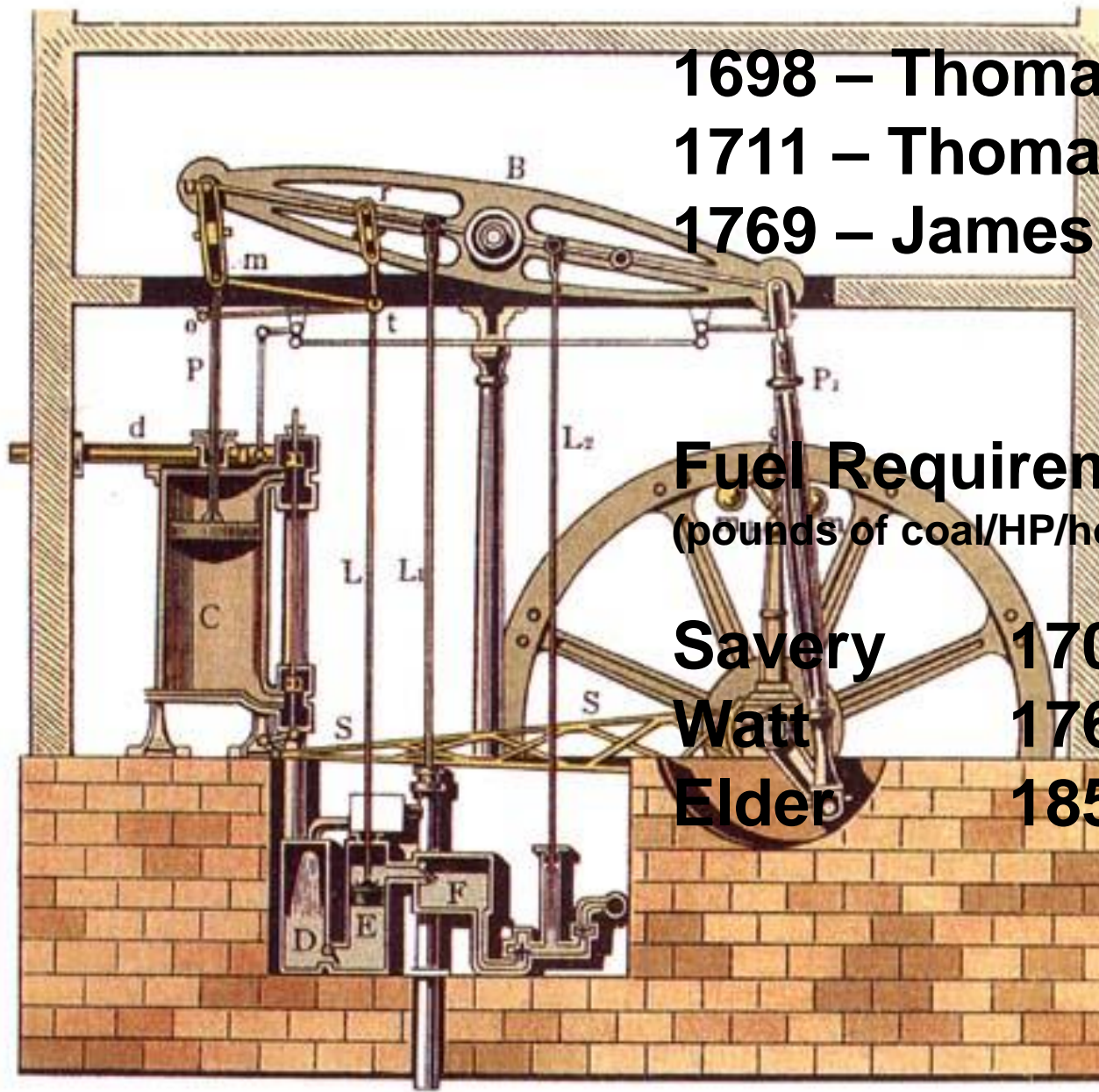




**1698 – Thomas Savery**

**1711 – Thomas Newcomen**

**1769 – James Watt**

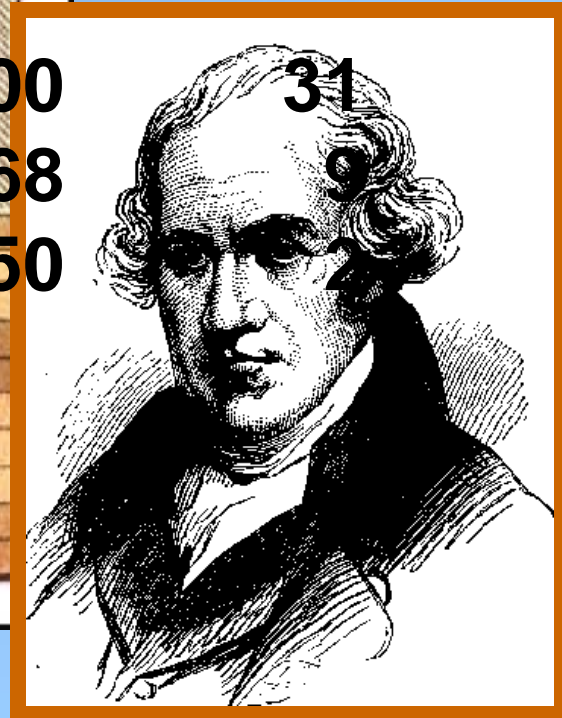


**Fuel Requirements**  
(pounds of coal/HP/hour)

**Savery 1700**

**Watt 1768**

**Elder 1850**



**31**

**9**

**2**

# *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

## *British Coal and Iron*

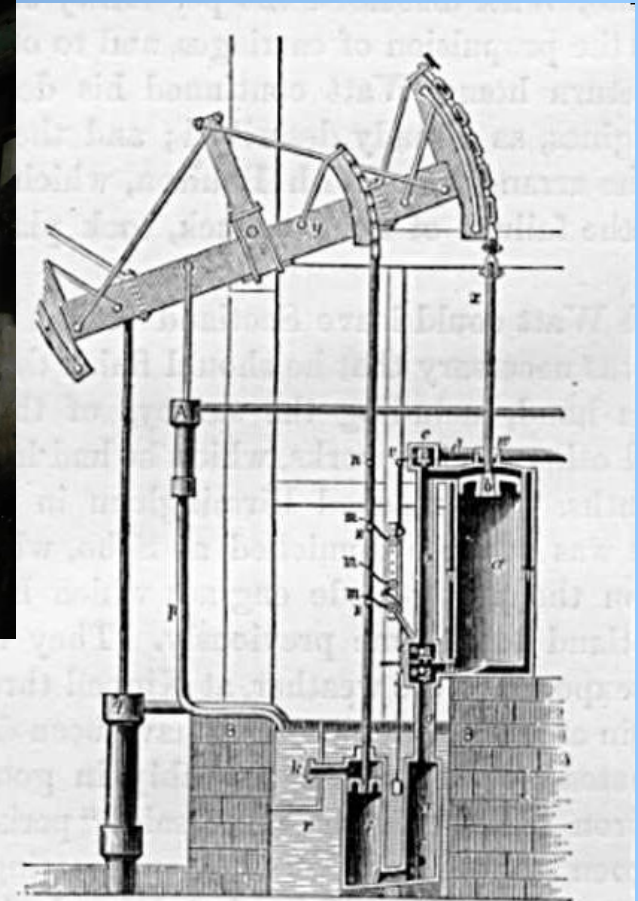
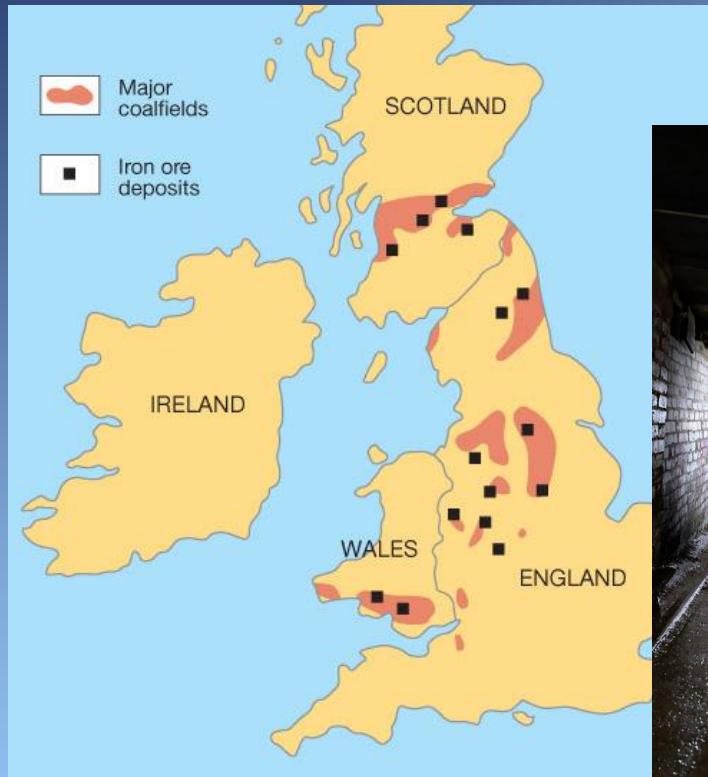


FIG. 26.—Watt's Engine, 1774.

**British turn to coal after forests cut down**

**Coal veins below water table**

**Steam driven water pump (Savery – 1698)**

**James Watt – more efficient engine**





# **Industrial Revolution**

**Changing the Way the World Does Business**

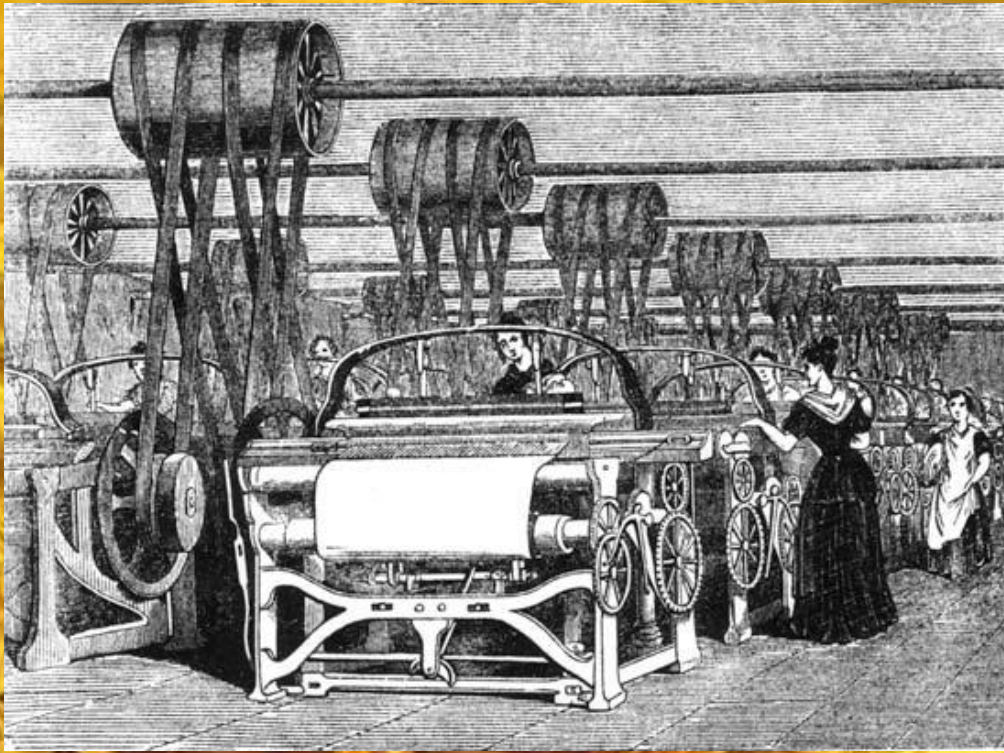
**Metric System .....Standardization**

**Telegraph ..... Communication**

**Steam Power ..... Location**

**Public Health ..... Application of Knowledge**





# Cotton Imports to England

(million pounds)

**1781 – 6.0**

**1785 – 18.4**

**1790 – 31.4**

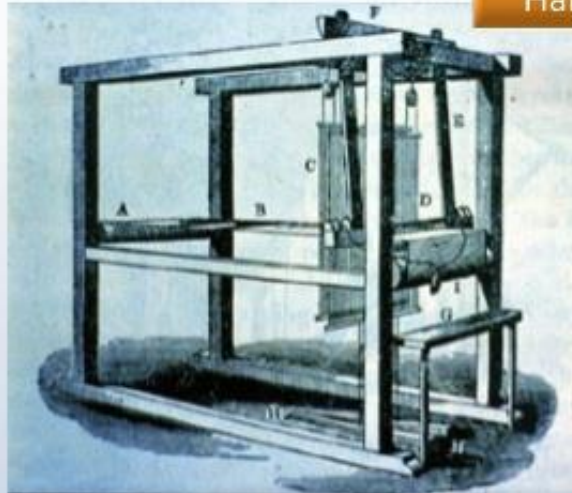
## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### ***The Factory & Factory Life***

#### Inventions of the Industrial Revolution

- Britain's textile industry would be the first to be transformed.
- Traditionally, human and animal labor were used to do work.

Hand Powered



**1733 – John Kay –  
“Flying Shuttle”**

A shuttle sped back and forth on wheels. The flying shuttle, a boat-shaped piece of wood to which yarn was attached, doubled the work a weaver could do in a day.



**1764 – James Hargreaves –  
“Spinning Jenny”**

A spinning wheel used to weave yarn. It allowed a spinner to work 8 threads at a time.



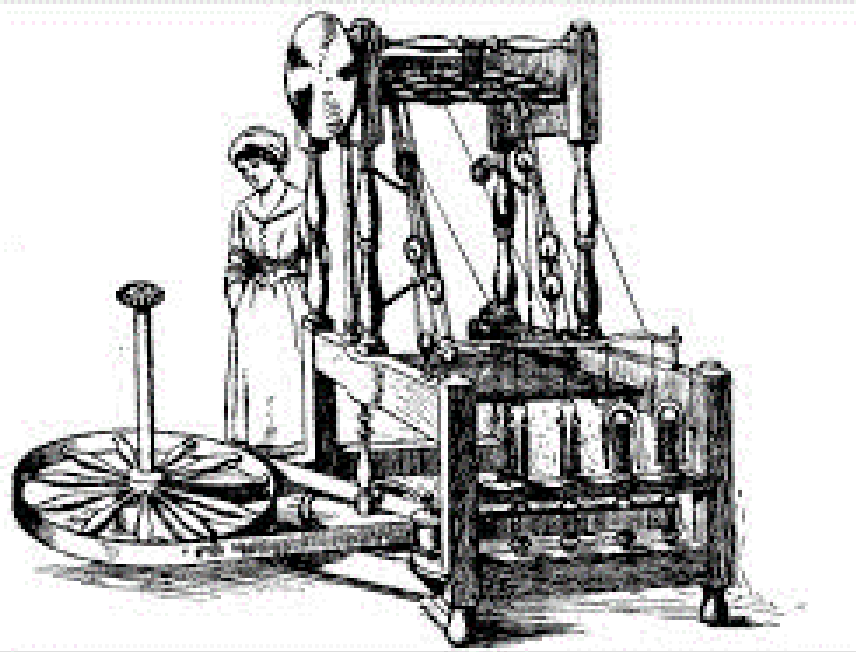
## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### *The Factory & Factory Life*

**Richard Arkwright 1769**

**“Water Frame”**

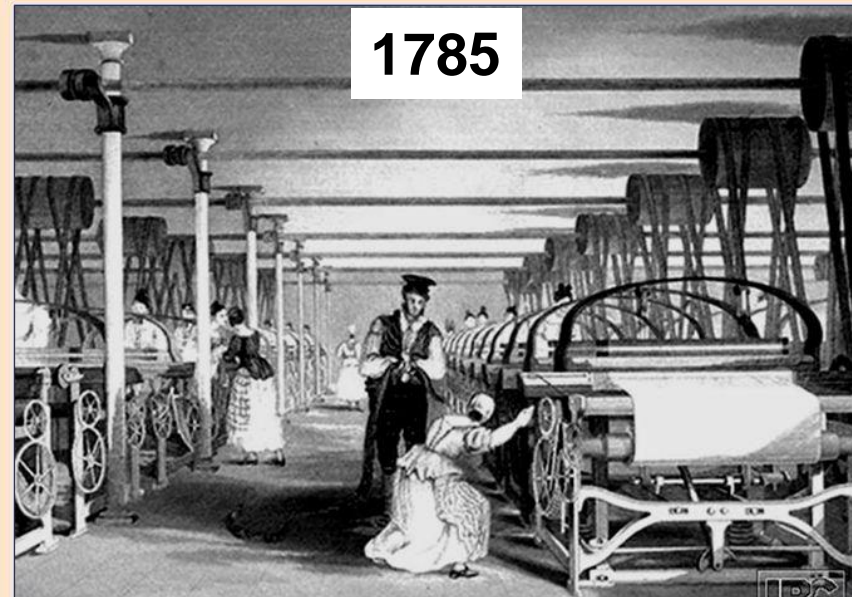
Spinning machine - makes cotton yarn



**The Power Loom- by**

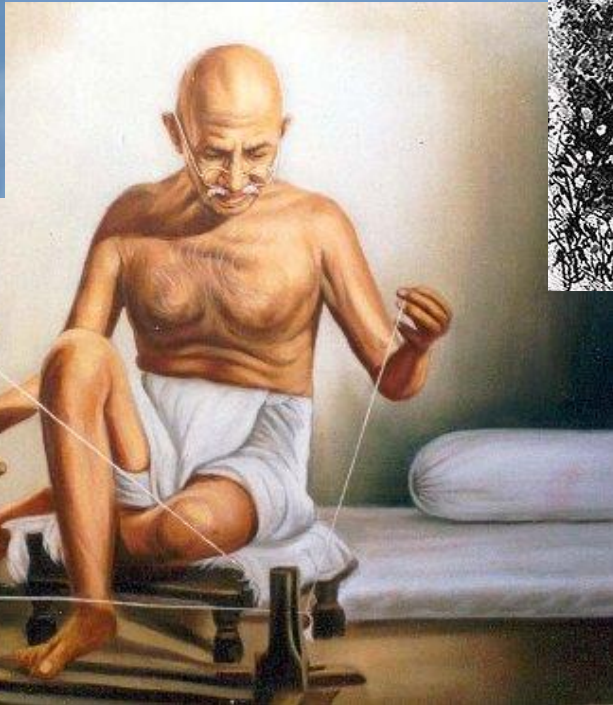
Edmund Cartwright

**1785**



## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### ***Limiting Industrialization to Europe***





# *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

## *The Factory & Factory Life*

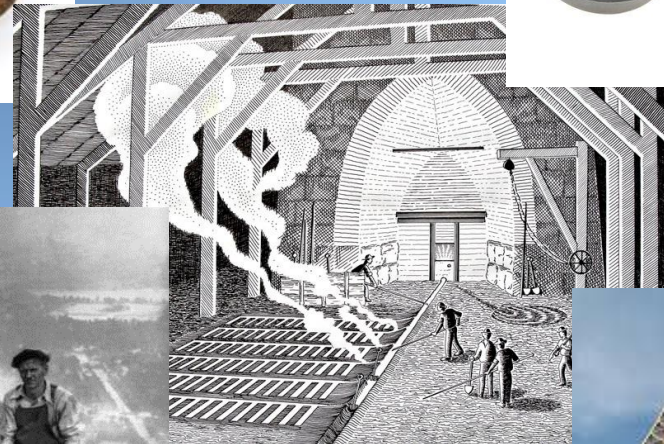
Iron Ore

Pig Iron

Cast Iron

Wrought Iron

Steel



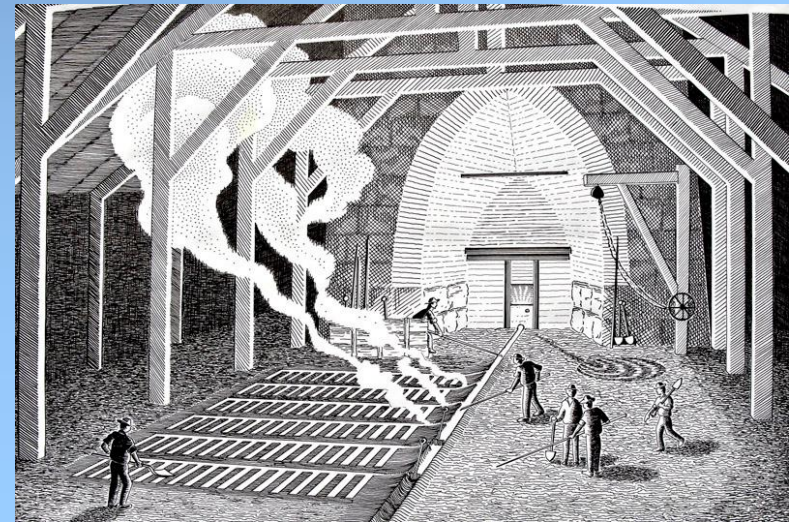
## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### *The Factory & Factory Life*

#### Iron Ore Pig Iron



The crude impure iron, which is extracted from iron ores, is known as **pig-iron** and it forms the basic material for the manufacture of cast-iron, wrought iron and steel.





## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### ***The Factory & Factory Life***

**Cast iron** is manufactured by remelting pig iron with coke and limestone. The impurities of pig iron are removed to some extent by oxidation. The molten cast iron is led into molds (casts) of required shapes.



**Wrought iron** is almost pure and it hardly contains carbon more than 0.15 percent. But the process of its manufacture is laborious and tedious. It can be easily forged and welded, is ductile, malleable and tough and is unaffected by saline water.

It is used for rivets, chains, ornamental iron work, water and steam pipes, bolts and nuts, horse shoe bars, hand rails, etc.



## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### ***The Factory & Factory Life***

Steel is an iron alloy with a few tenths of a percent carbon added to improve fracture toughness resistance when compared to other kinds of iron. Many elements may exist or be added.

Corrosion- and oxidation-resistant stainless steels normally require an additional 11 percent chromium.





# Chapter 19 – Industrialization and Nationalism in 19<sup>th</sup> C.

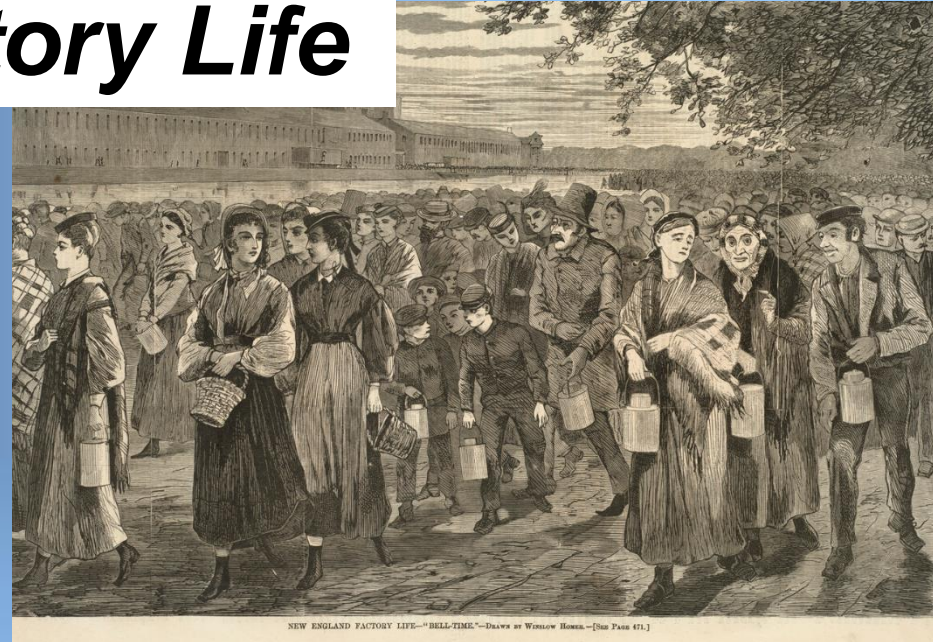
## The Factory & Factory Life

Specialization of labor

Efficient organization

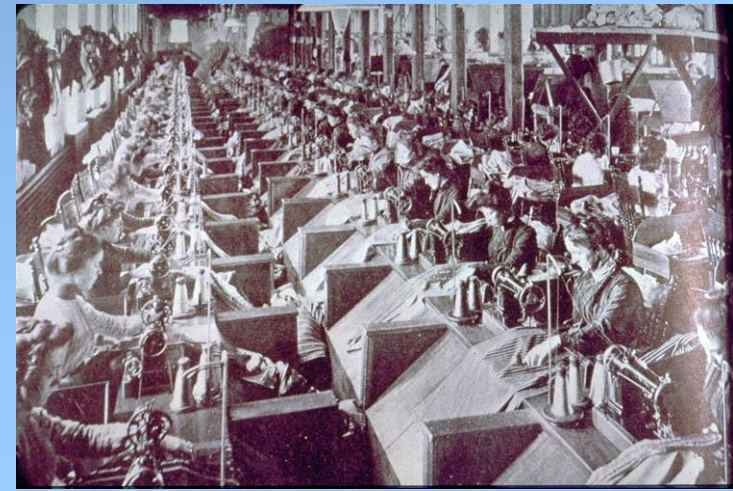
Power-driven machinery

Time clocks, bells and whistles



**Factory Wages  
in Lancashire, 1830**

Age of Worker	Male Wages	Female Wages
under 11	2s 3d.	2s. 4d.
11 - 16	4s. 1d.	4s. 3d.
17 - 21	10s. 2d.	7s. 3d.
22 - 26	17s. 2d.	8s. 5d.
27 - 31	20s. 4d.	8s. 7d.
32 - 36	22s. 8d.	8s. 9d.
37 - 41	21s. 7d.	9s. 8d.
42 - 46	20s. 3d.	9s. 3d.
47 - 51	16s. 7d.	8s. 10d.
52 - 56	16s. 4d.	8s. 4d.
57 - 61	13s. 6d.	6s. 4d.



## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### *Custom Barriers – Tariffs and Taxes*





# *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

## *The Structure of Society*

Aristocracies and Peasants

Upper Class

The Middle Classes:

Upper – bankers, industrialists

Middle – merchants, lawyers, doctors

Lower – clerks, teachers, shopkeepers

Working Class

Under Class

(poor)



# *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

## *Family Life in the 19th C.*

Urbanization and factory life  
Poor housing  
unemployment  
weakened family ties



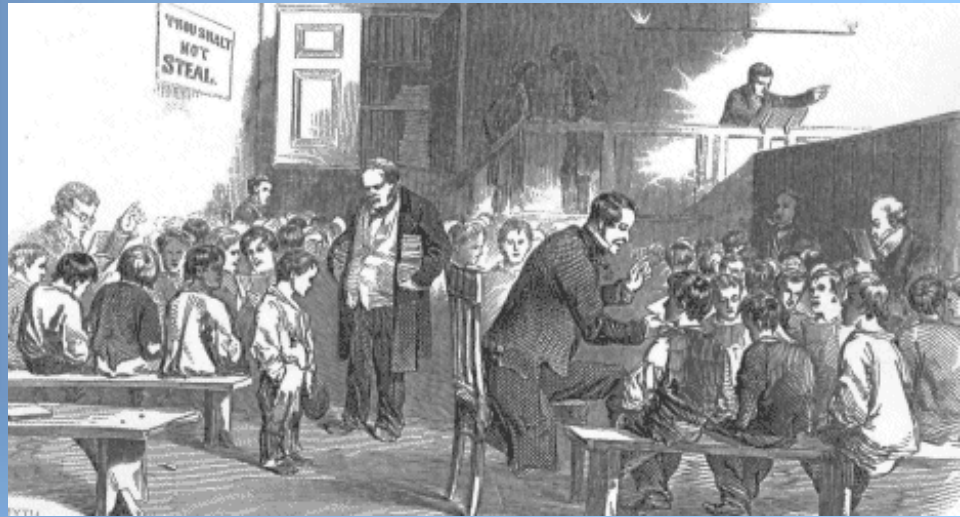


# *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

## *Family Life in the 19th C.*

Help for the poor:

William Booth and the  
Salvation Army – 1878



# Chapter 19 – Industrialization and Nationalism in 19<sup>th</sup> C.

## Family Life in the 19th C.

Help for the poor:

William Booth and the  
Salvation Army – 1878



### GENERAL WILLIAM BOOTH ENTERS INTO HEAVEN

*(To be sung to the tune of THE BLOOD OF THE LAMB with  
indicated instruments.)*

Booth led boldly with his big bass drum.

*Are you washed in the blood of the Lamb?*

The saints smiled gravely, and they said, "He's come."

*Are you washed in the blood of the Lamb?*

Walking lepers followed, rank on rank,

Lurching bravos from the ditches dank,

Drabs from the alleyways and drug-fiends pale —

Minds still passion-ridden, soul-powers frail!

Vermin-eaten saints with mouldy breath,

Unwashed legions with the ways of death —

*Are you washed in the blood of the Lamb?*



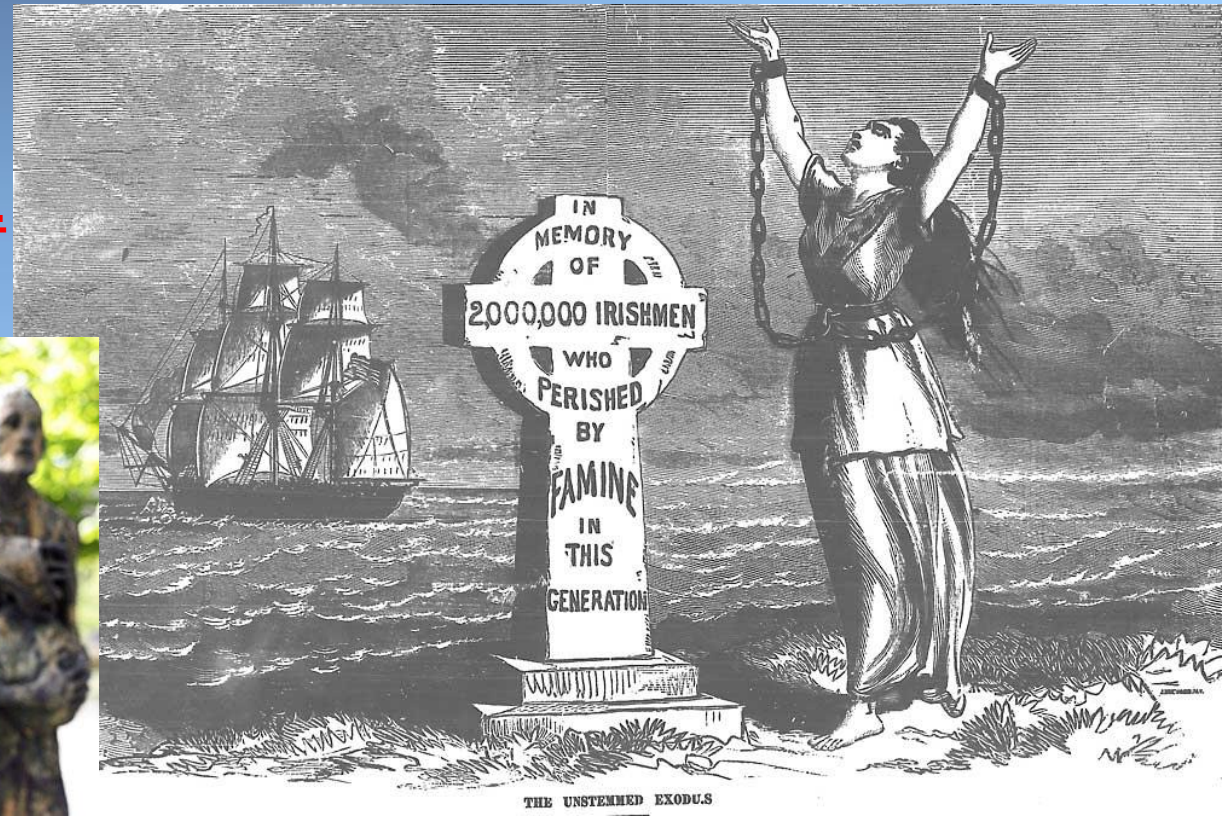
## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

# The Irish Famine 1845-1852

1 million deaths

2 million emigrate

English landlords export  
30-50 shiploads of food/day.



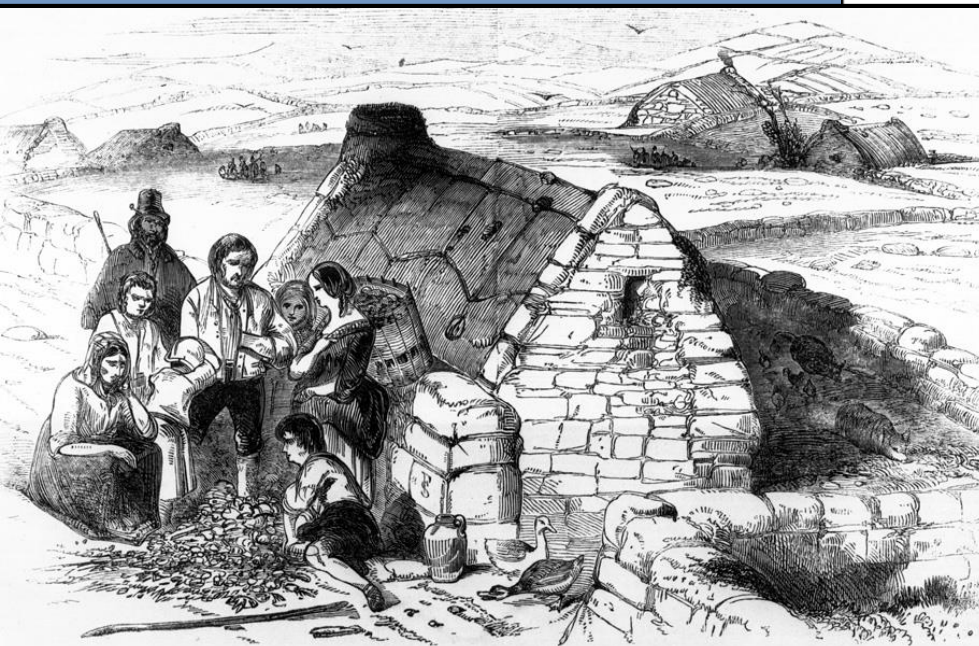


# Chapter 19 – Industrialization and Nationalism in 19<sup>th</sup> C.

## The Irish Famine

1 million deaths

2 million emigrate



DESTITUTION IN IRELAND.—FAILURE OF THE POTATO CROP.

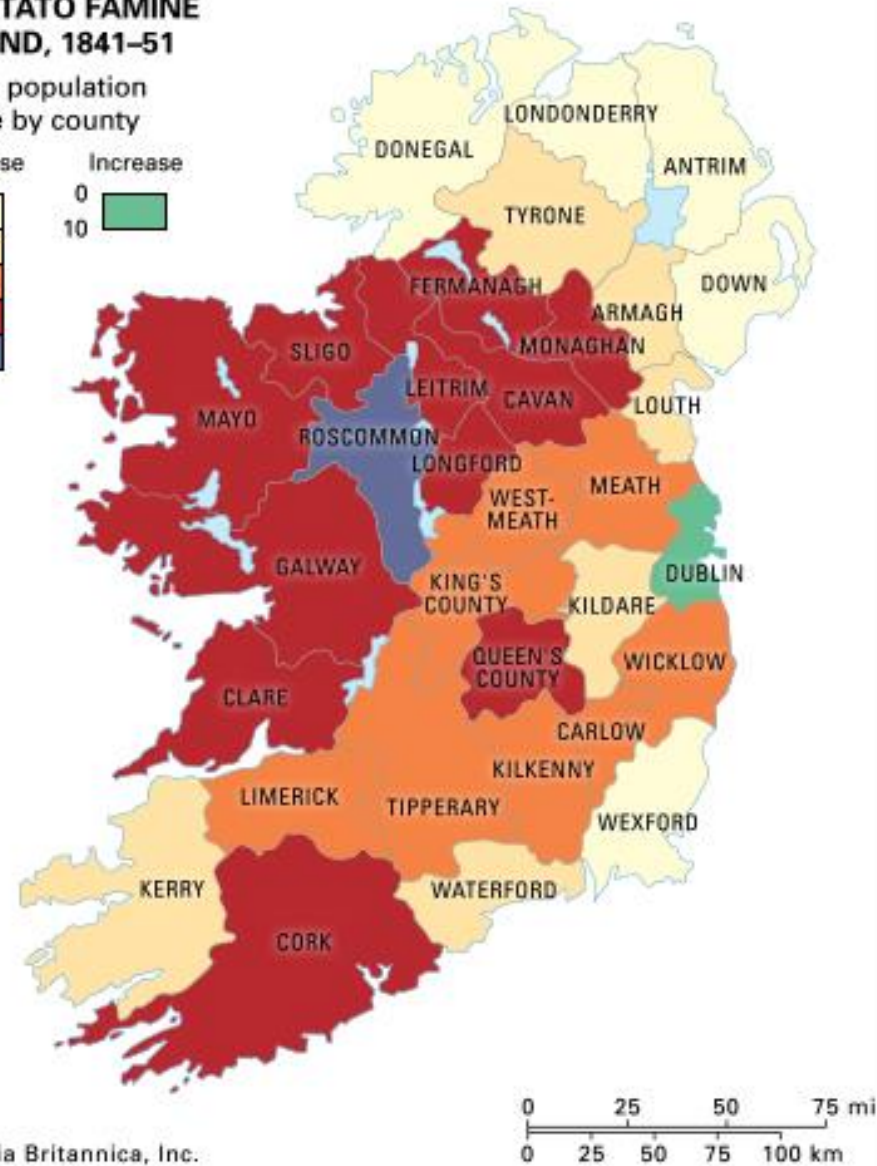
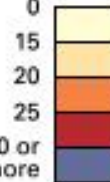
*Illustrated Times 22 Aug. 1846.*

### GREAT POTATO FAMINE IN IRELAND, 1841–51

Percent population  
change by county

Decrease

Increase



edia Britannica, Inc.

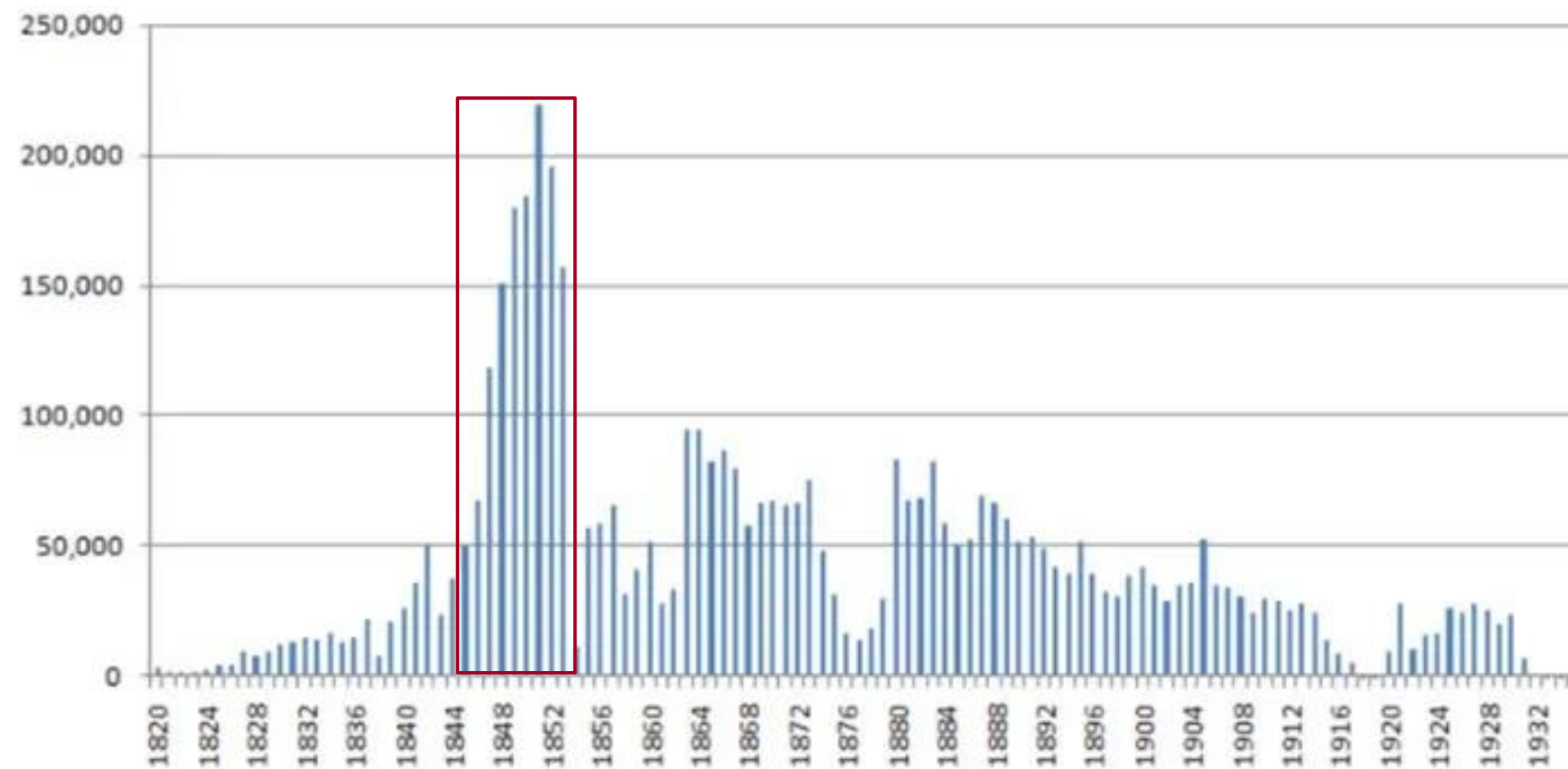


## Chapter 19 – Industrialization and Nationalism in 19<sup>th</sup> C.

# Irish Immigration to the US

*Between 1820 and 1975, 4.7 million Irish settled in America.*

*Between 1845 and 1855 1.5 million Irish arrived in the US.*



## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

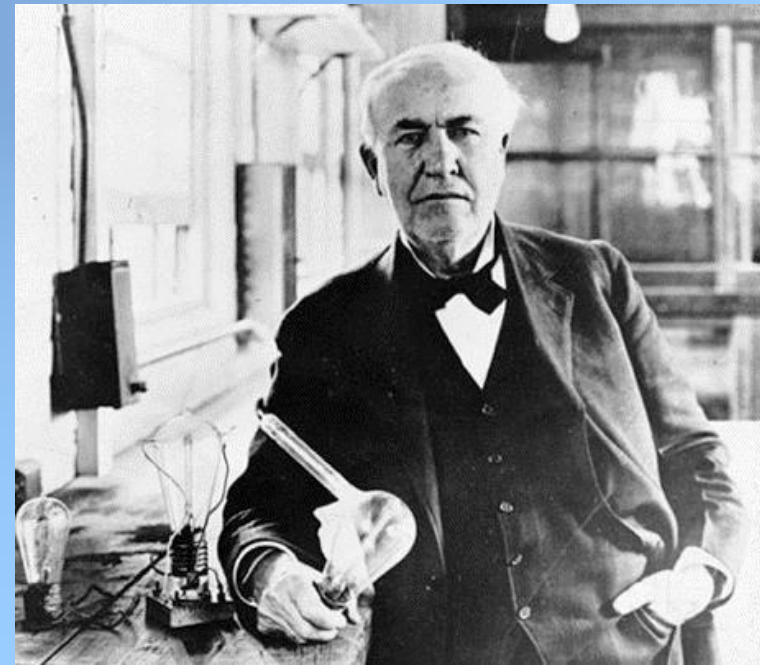
# A Second Industrial Revolution driven by electricity

“Better living ...  
though Chemistry”

*Bessemer (1855) steel*

*Nobel (1867) Dynamite*

*Bell (1876) telephone*





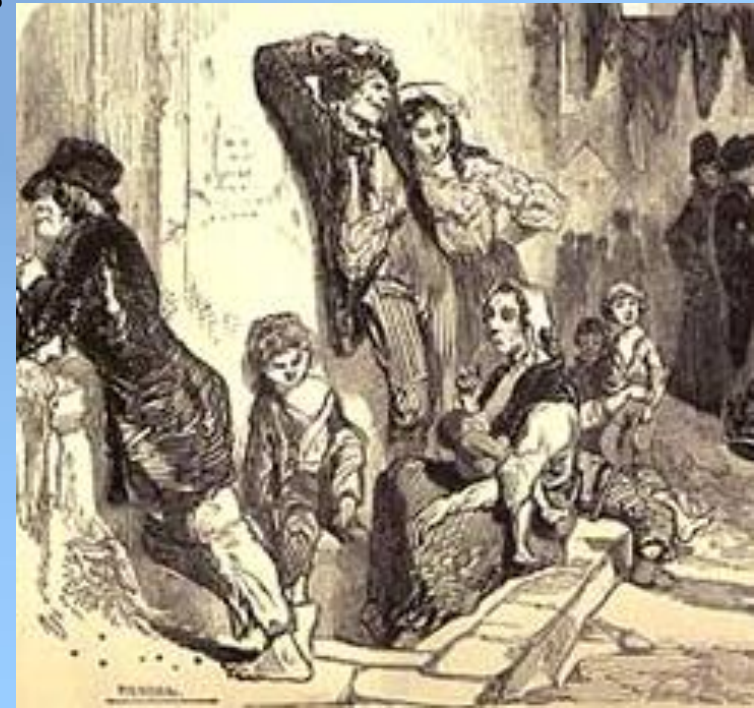
# *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

## *The Changing Population*

**Demographic Growth** – more food = more babies

**Urbanization** – more cities = more problems

**Differential Fertility** – more \$ = few babies

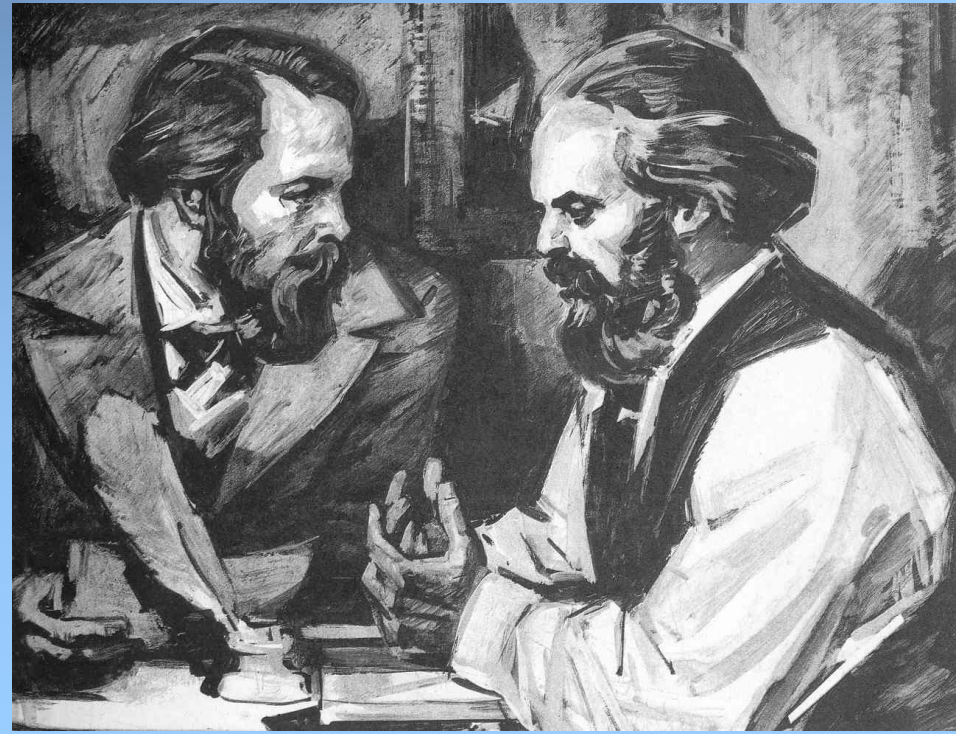


## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### ***Socialism*** (*but not utopian*) ***and Karl Marx***

Karl Marx – lawyer and economist

Friedrich Engels – wealthy industrialist





## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

### **Karl Marx**

*Communist Manifesto (1848)*

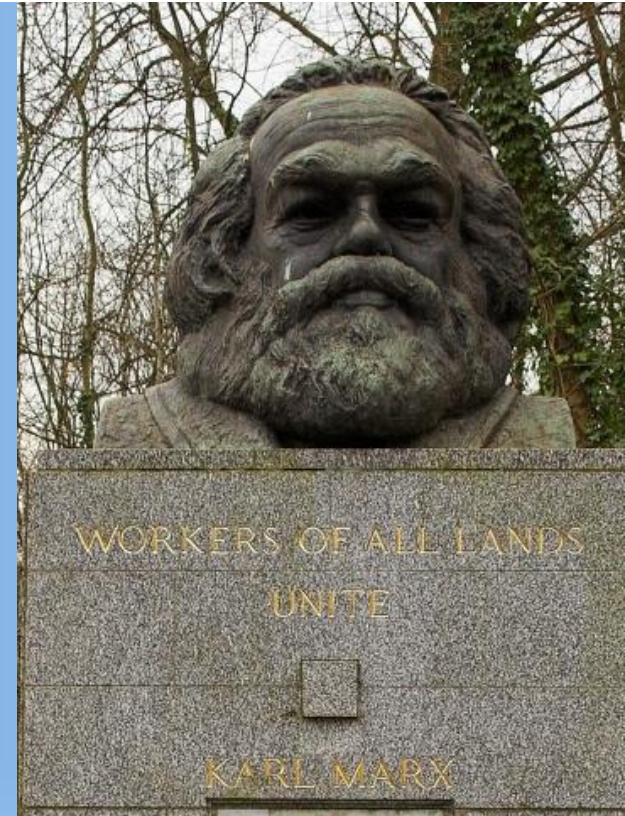
*Das Kapital (1867)*

Religion “opiate of the people”

Labor Theory of Value

**Proletarian Revolution**

To overcome the fetters of private property the working class must seize political power internationally through a social revolution and expropriate the capitalist classes around the world and place the productive capacities of society into collective ownership. Classes would be abolished and the basis for all forms of inequality between humankind would dissolve.



## ***Chapter 19* – Industrialization and Nationalism in 19<sup>th</sup> C.**

### **Revolutions of 1830s**

**France -      July Monarchy 1830  
                    June Rebellion 1832 (*Les Misérables*)**

**Belgium (Aug.)– Catholic, French speaking, liberals**

**Spain – 1833 – 5 years, liberal victory**

**Texas – 1836 -**



## *Chapter 19* – **Industrialization and Nationalism in 19<sup>th</sup> C.**

# **Revolutions of 1848**

## **The Spring of Nations**



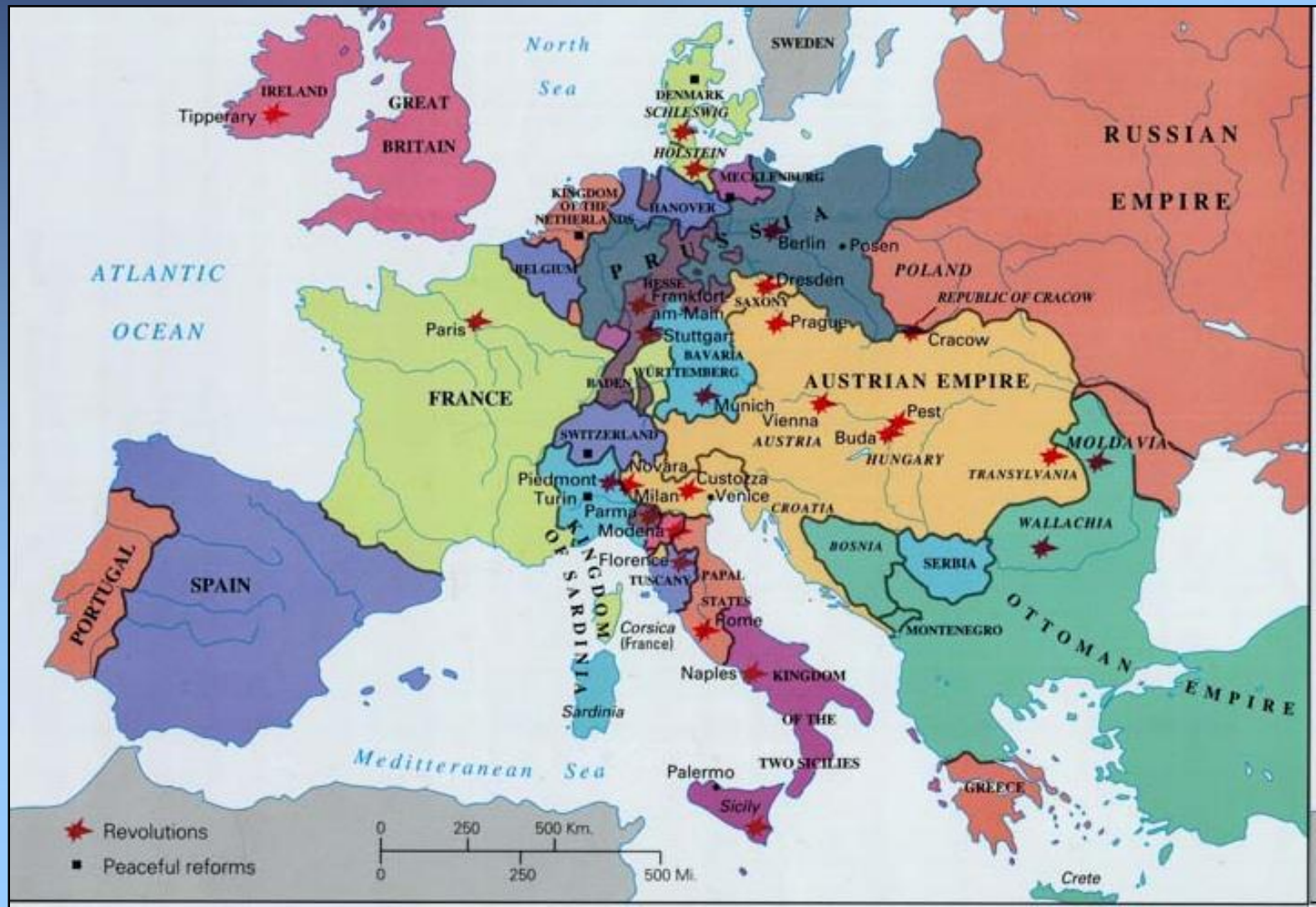
**France – Italy – German States – Austria – Denmark –  
Hungary – Poland - Brazil**

**Reforms w/o revolution: Belgium, Netherlands**

**No revolution in Great Britain and Russia**

## Chapter 19 – Industrialization and Nationalism in 19<sup>th</sup> C.

# Revolutions of 1848





***NEXT...***

# **CH. 19: Crimea then and now**

## **Formation of Italy and Germany**

