

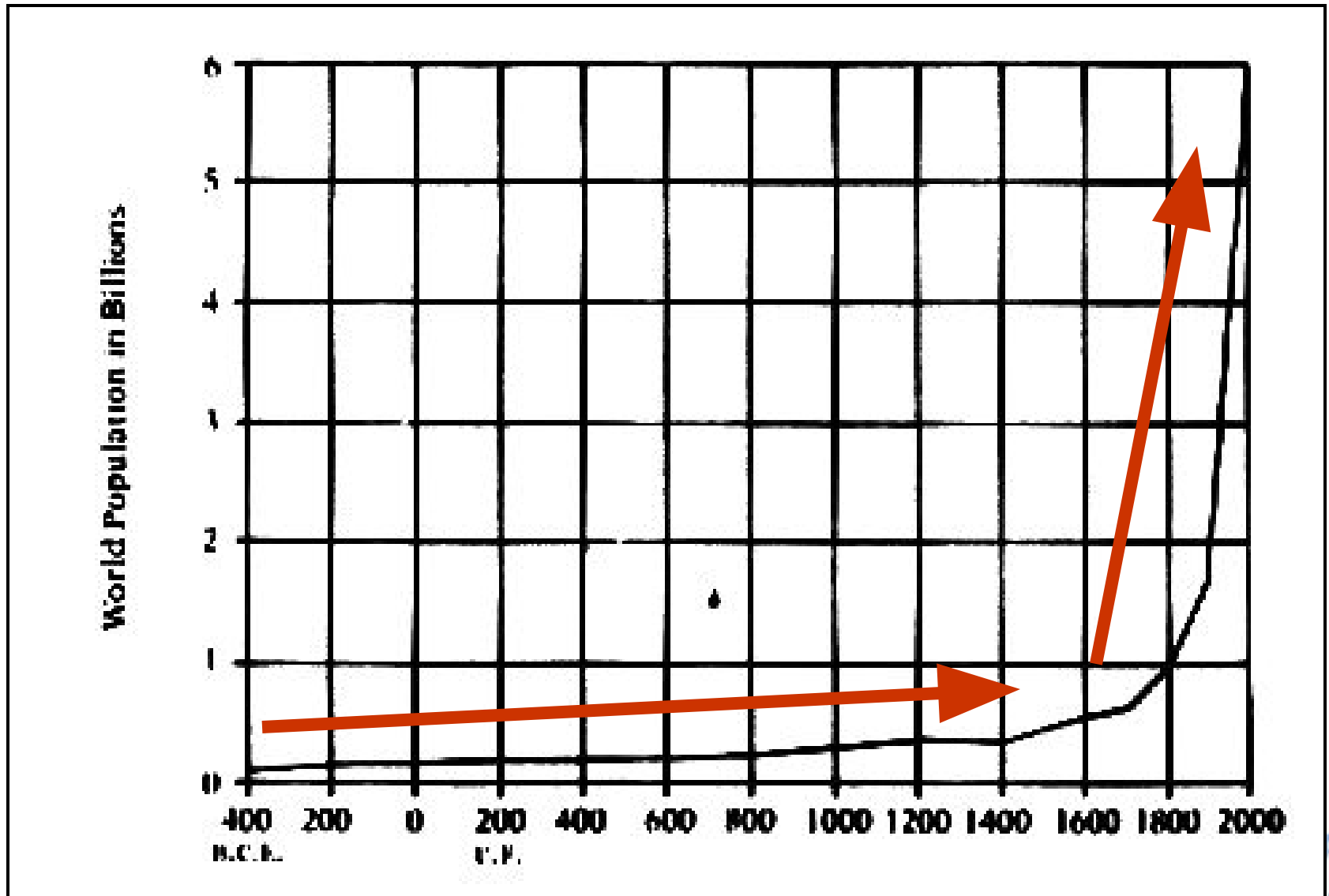
Industry, Revolution, and and Imperialism: Creating the Modern World, 1750-1914 CE

6 Major Changes

- **Population Growth**
- **Energy**
- **Communication and Transportation**
- **Industry**
- **Liberalism**
- **Imperialism**

1: Population Growth

World Population, 400 BCE - 2000 CE

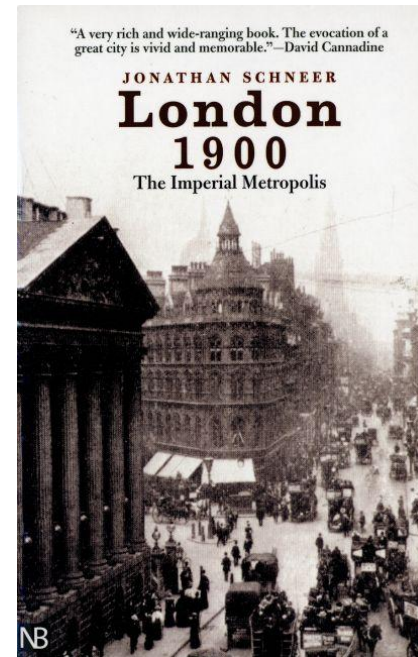


More examples of population growth

- # of cities over 1 million people
 - 1800: 9
 - 1900: 27
- % of people living in cities
 - 1800: 2%
 - 1900: 10%



Beijing



A growing population meant that human needs for resources—for energy—was growing, too.

And humans dealt with this need by using fossil fuels which allowed for the industrial revolution!



2: Energy

The Old Ways

- Wood
- Human
- Animal



The Fossil Fuel Revolution


The biological old regime ends
when vast new sources of
energy come into use:

Coal
Petroleum
Gas

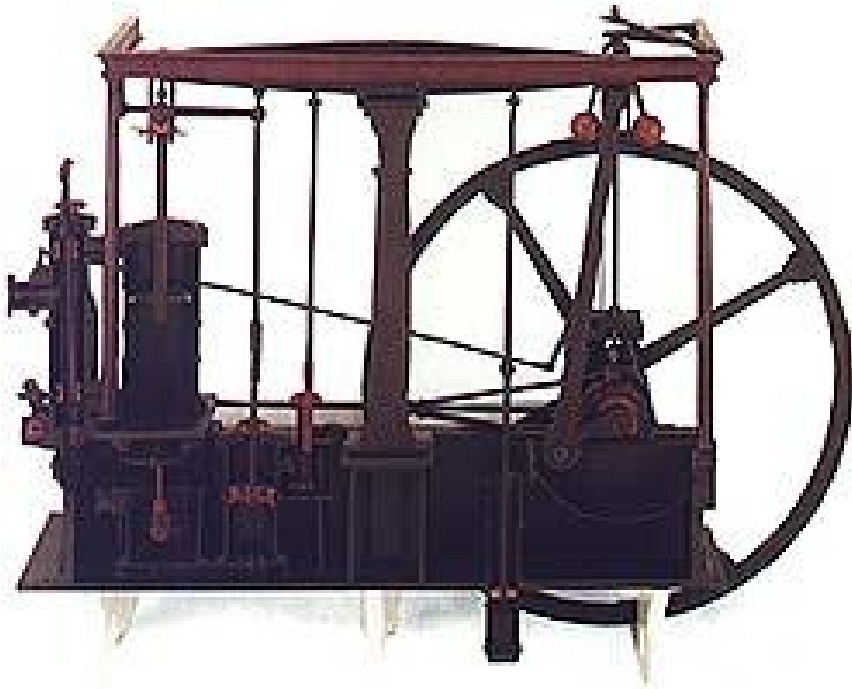
Steam Power

- Steam powered pump engine allows humans to pump water out of coal mines which leads to increased coal production
- By 1900, 90% of world's energy consumption is coal

1750	10 million metric tons
1860	130 million metric tons
1900	1 billion metric tons



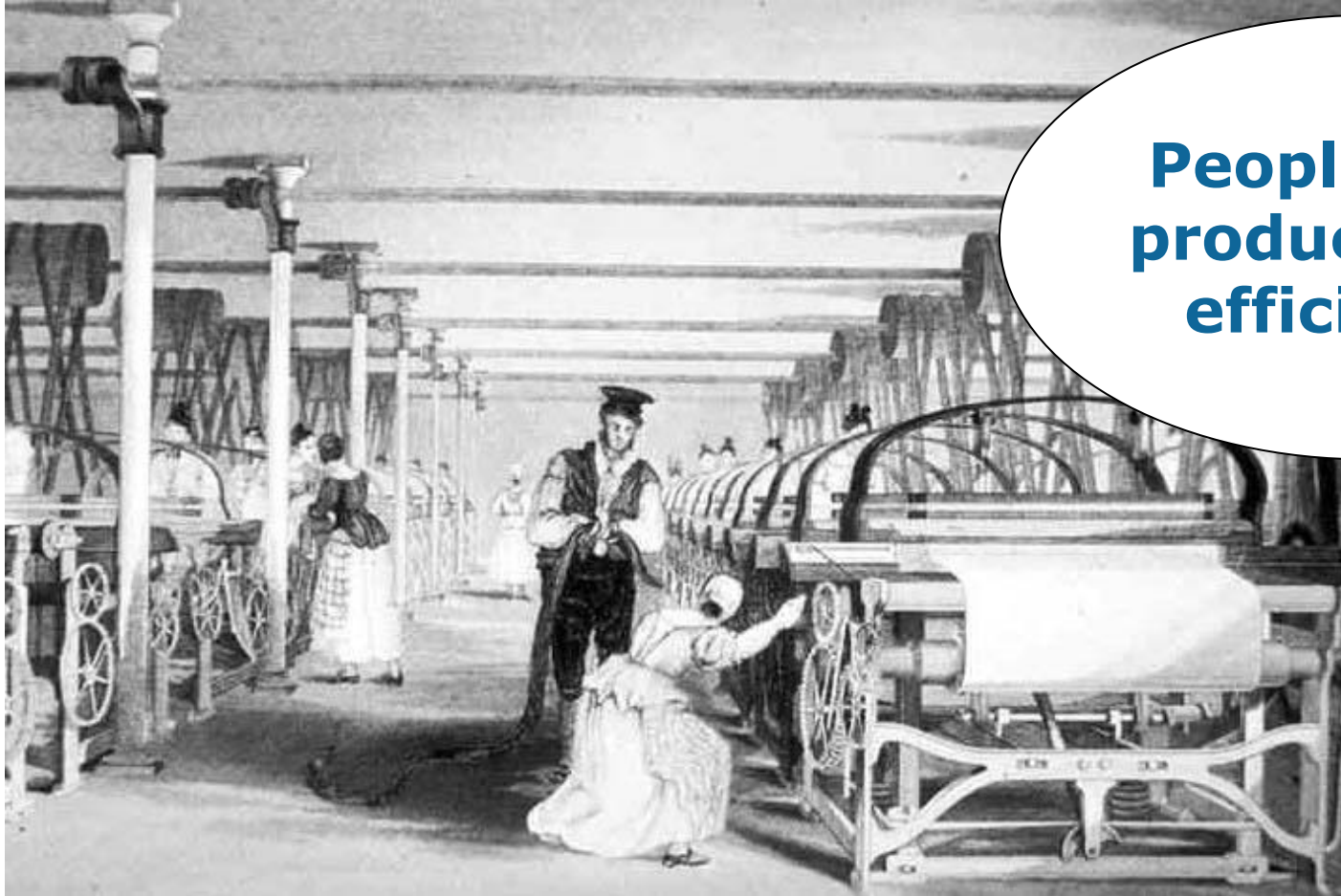
WORLD HISTORY FOR US ALL



**and with
better and
better steam
engines to
harness coal's
energy...**



3. Industrial Revolution



People could
produce more
efficiently.

**Power loom weaving
Lancashire, 1835**



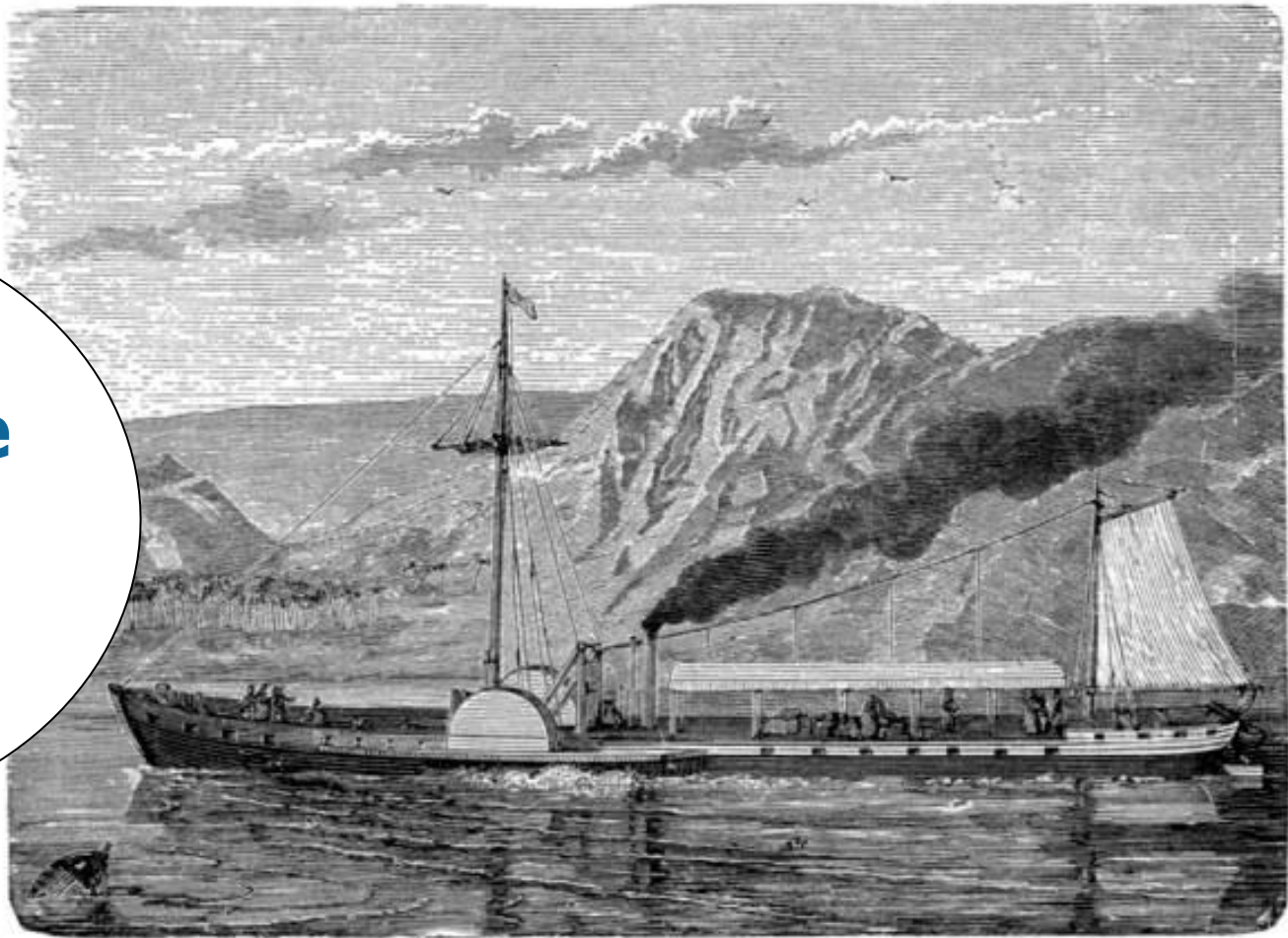
In Britain coal mines were close to factories and cities.

In China coal mines were far from factories and cities.

How might history have been different if the closest sources of coal available to Britain were, say, in the Carpathian Mountains of southeastern Europe?



**Steam and
coal create
faster
modes of
transport.**



Fultons erstes Dampfsschiff.



Robert Fulton's Clermont steamship 1807

Railroads!

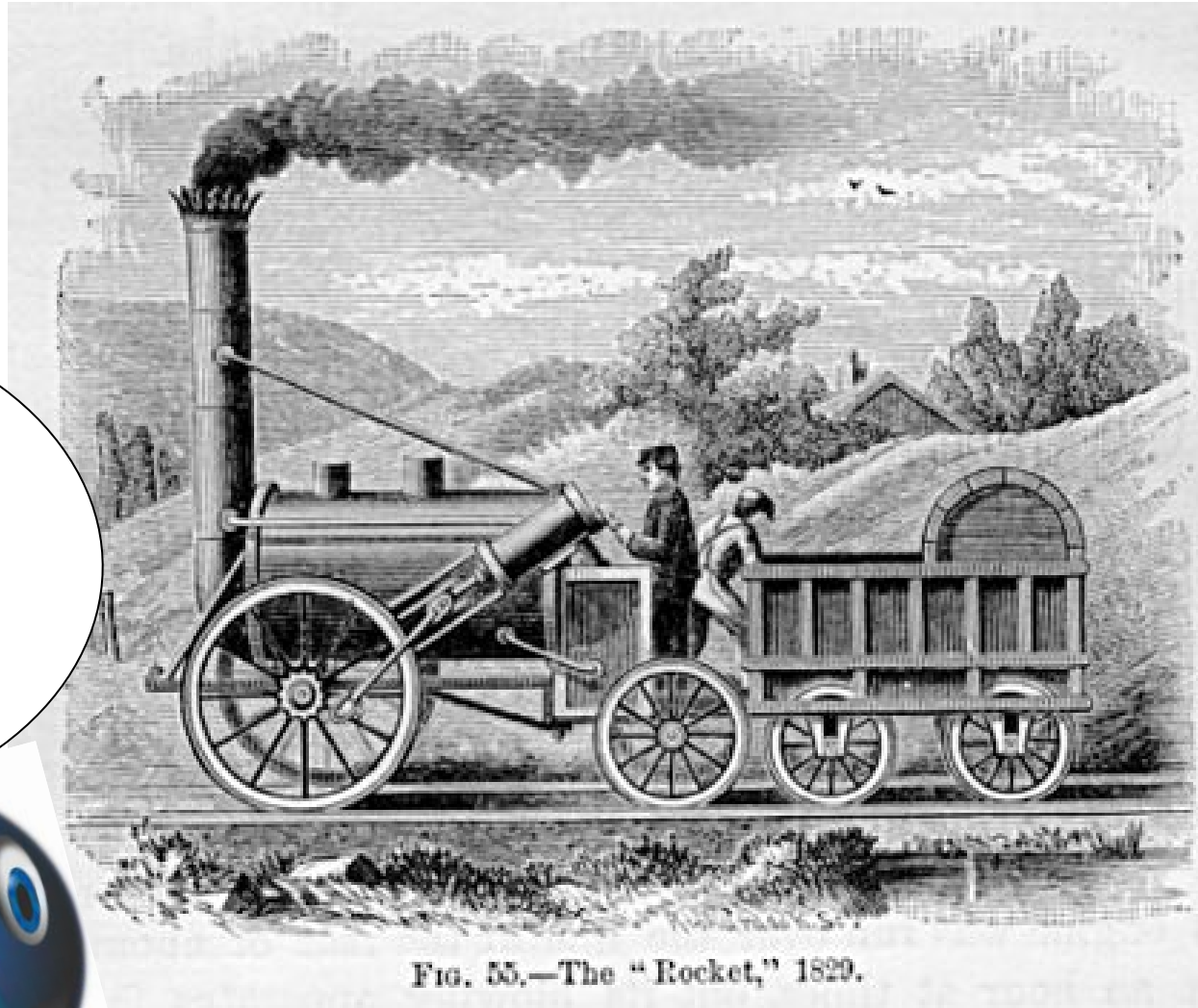
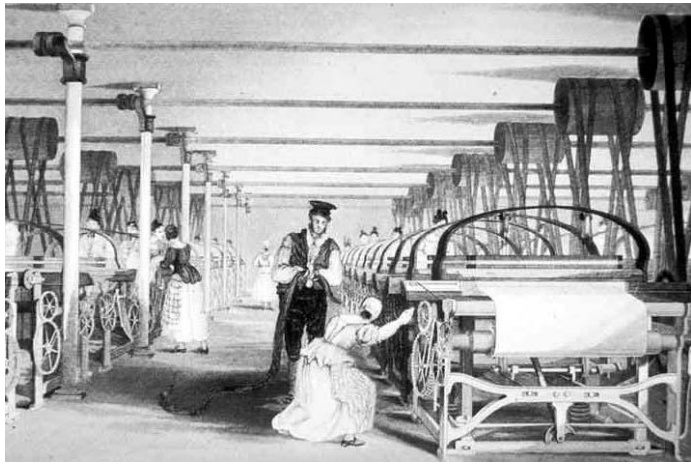


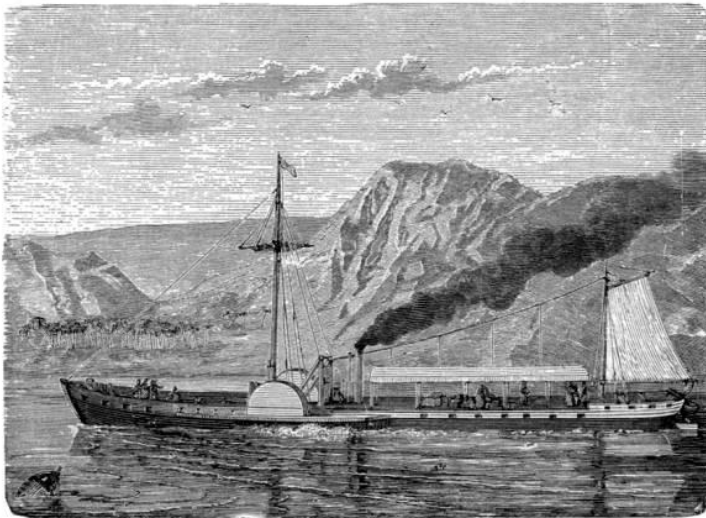
FIG. 55.—The "Rocket," 1829.

**George Stephenson's
"Rocket" steam
locomotive
1829**



The Industrial Revolution

Fossil fuel energy in production and transportation



Fultons erstes Dampfschiff.

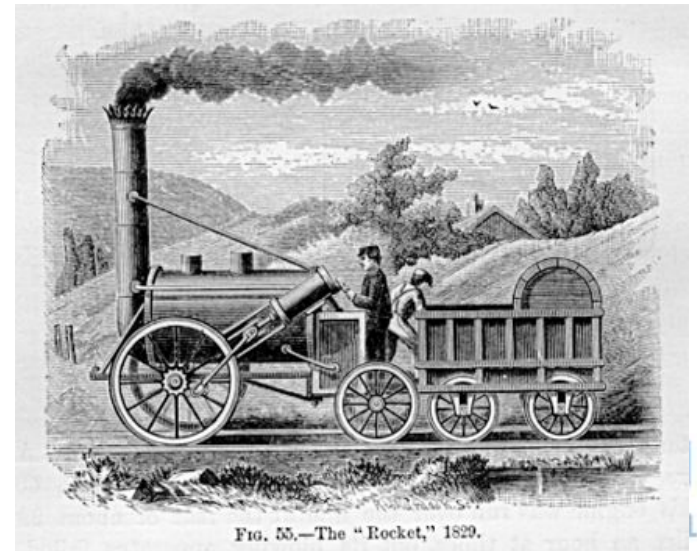


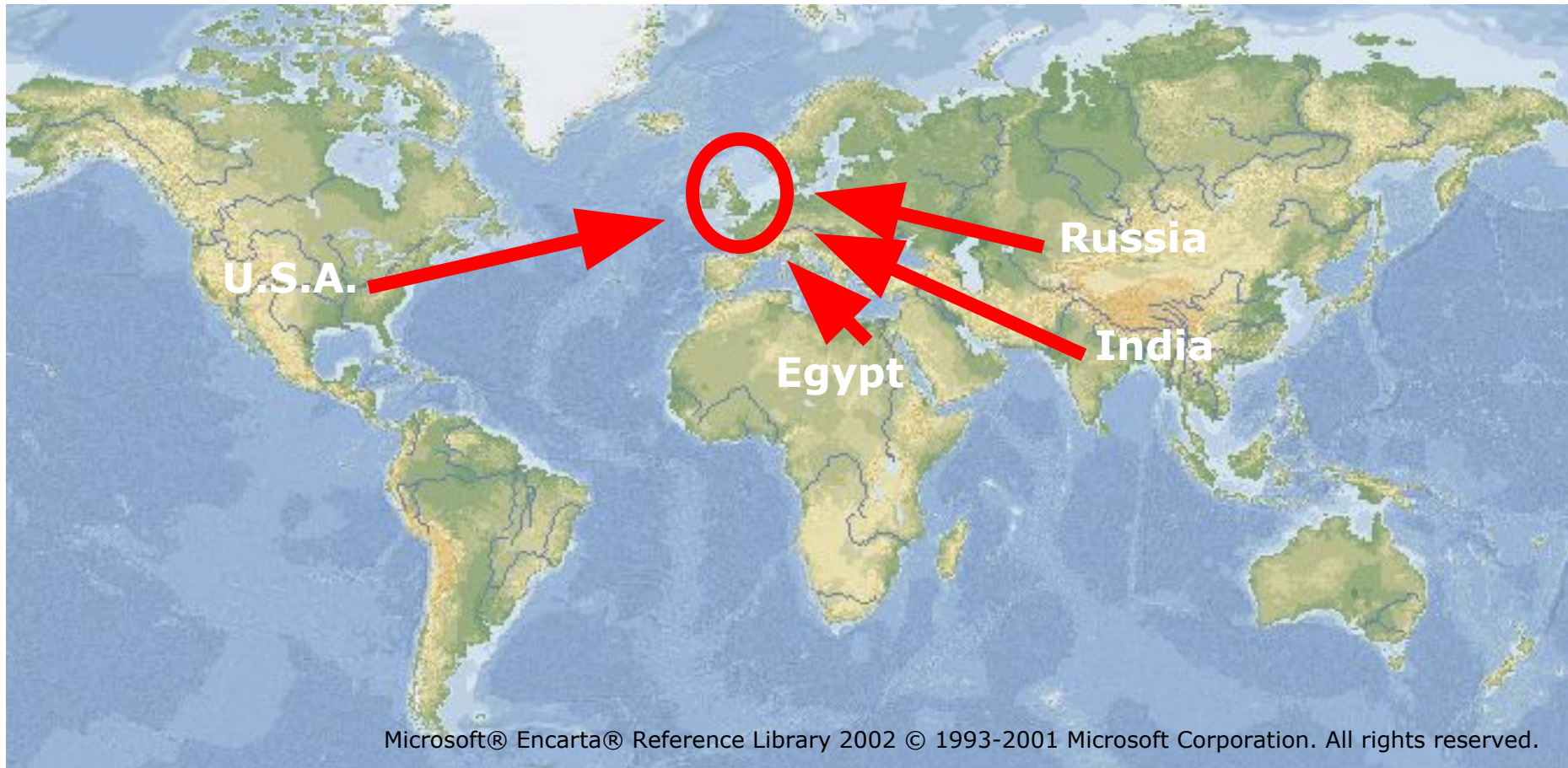
FIG. 55.—The "Rocket," 1829.

Industrial Products

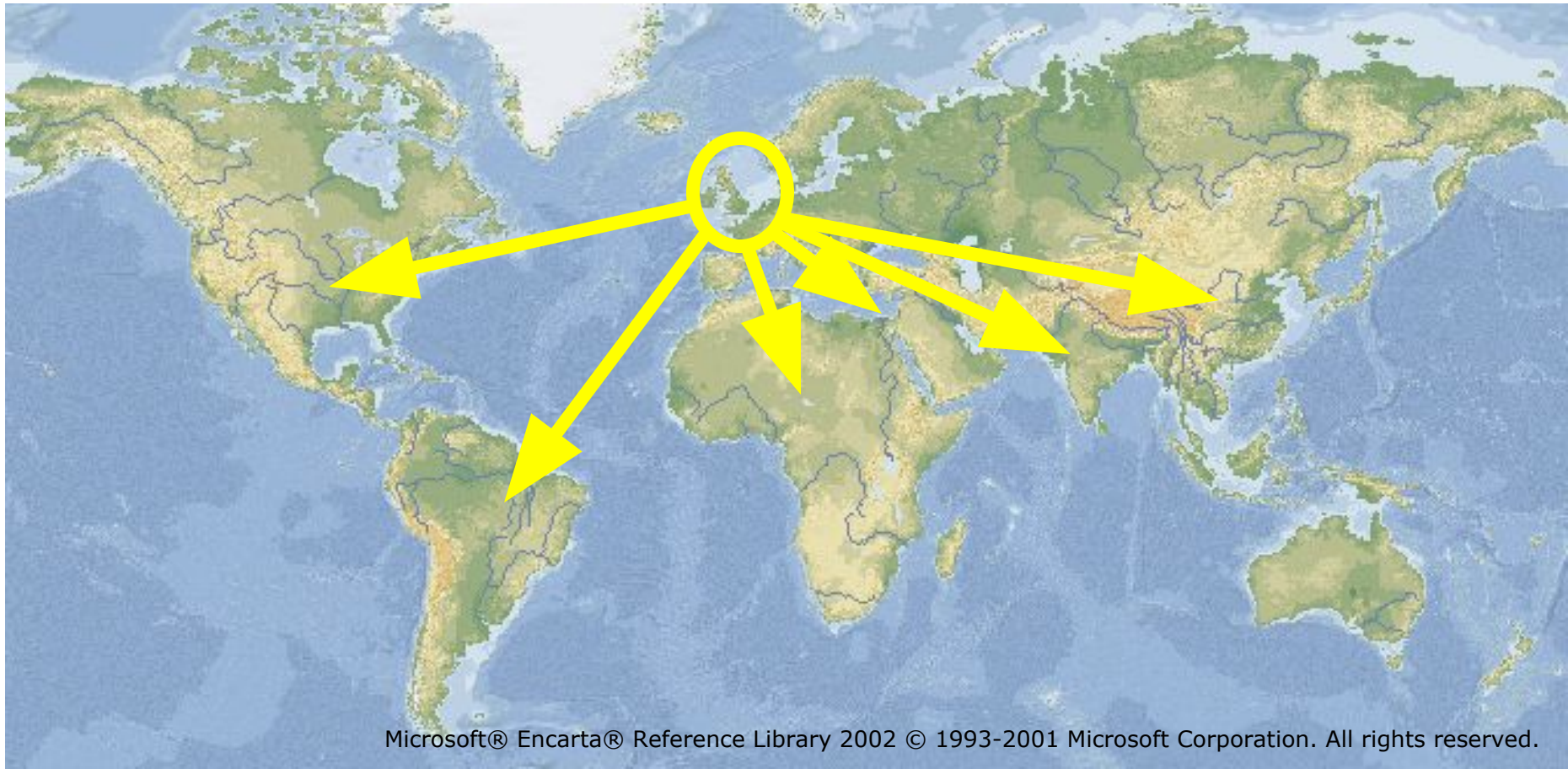
- **Textiles**
- **Manufacturing**
- **Farming and Food**
- **Steel**
- **Transportation: trains and steamships**
- **Communications: telegraph and telephone**
- **Automobiles and skyscrapers**

**The Industrial
Revolution allowed
for new global
economic
relationships.**





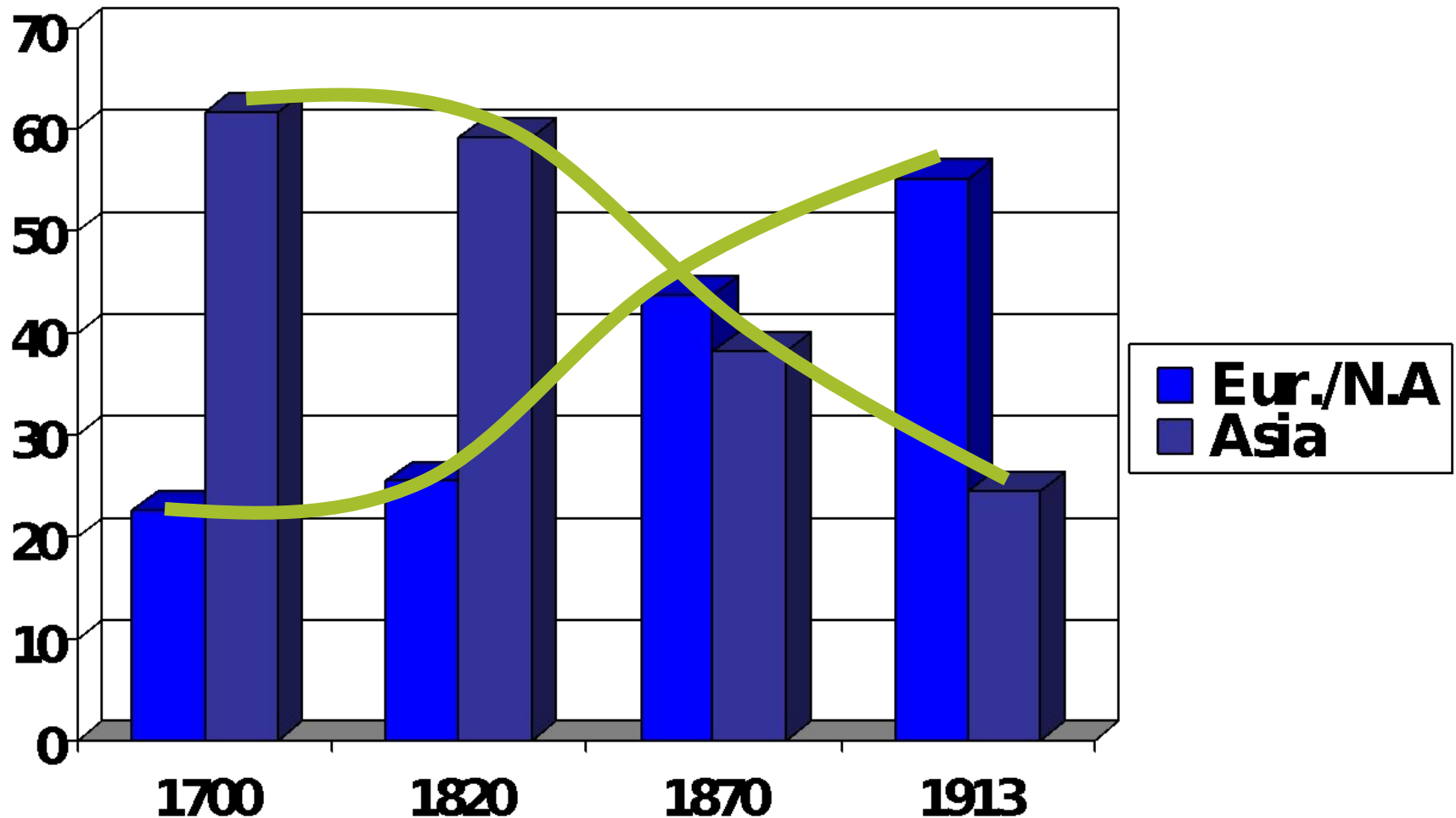
**Cotton exports from agrarian
economies to industrial
economies** →



Textile exports from industrial to agrarian economies



The Modern Revolution shifted the world's economic center.



Percentage of World GDP
Western Europe and North America vs. Asia

Industrialism leads to changes

- **Unequal distribution of wealth.**
 - **Wealth is concentrated in industrial countries among a small group of people**
- **Environmental impacts**
 - **Deforestation, water pollution, air pollution, invasive species**
- **Famines- Irish potato famine**

**So much
was
changing
so fast...**

**How could
people
keep up?**



4. Communication and Transportation Revolution



Fultons erstes Dampfsschiff.

Steamboat

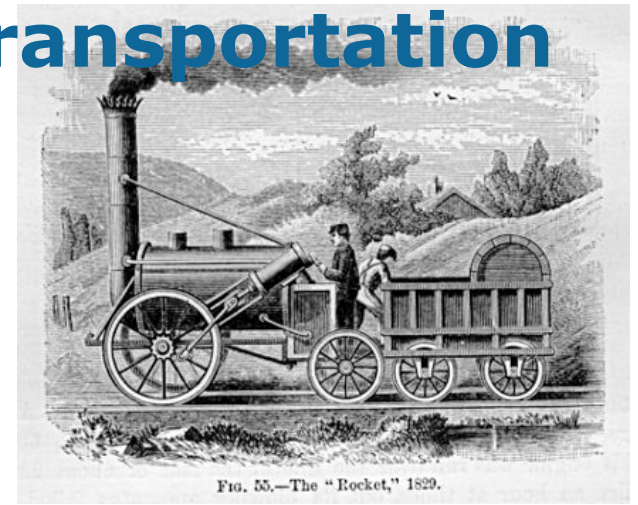


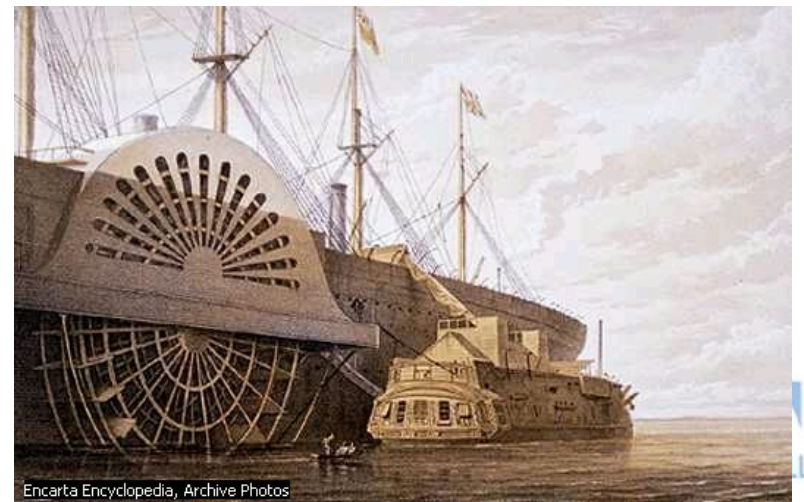
FIG. 55.—The "Rocket," 1829.

Railroad

Newspaper

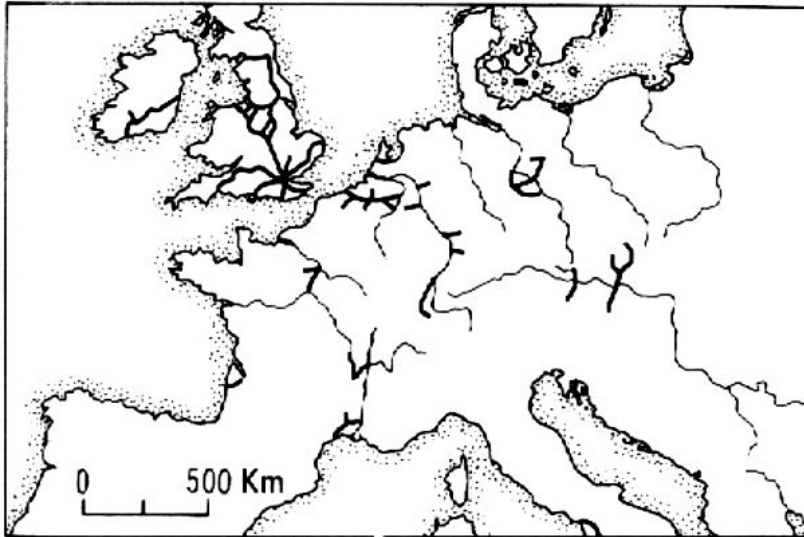


Transatlantic cable

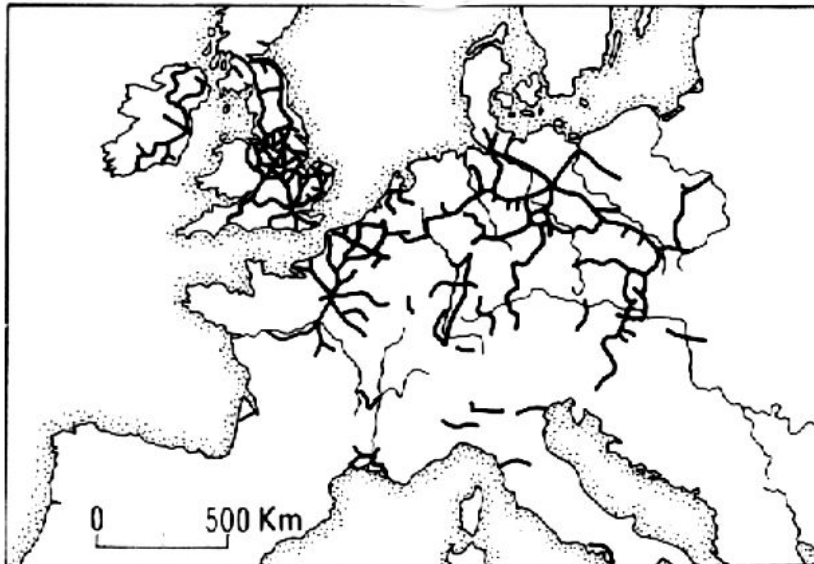


Encarta Encyclopedia, Archive Photos

Railway Development in Europe

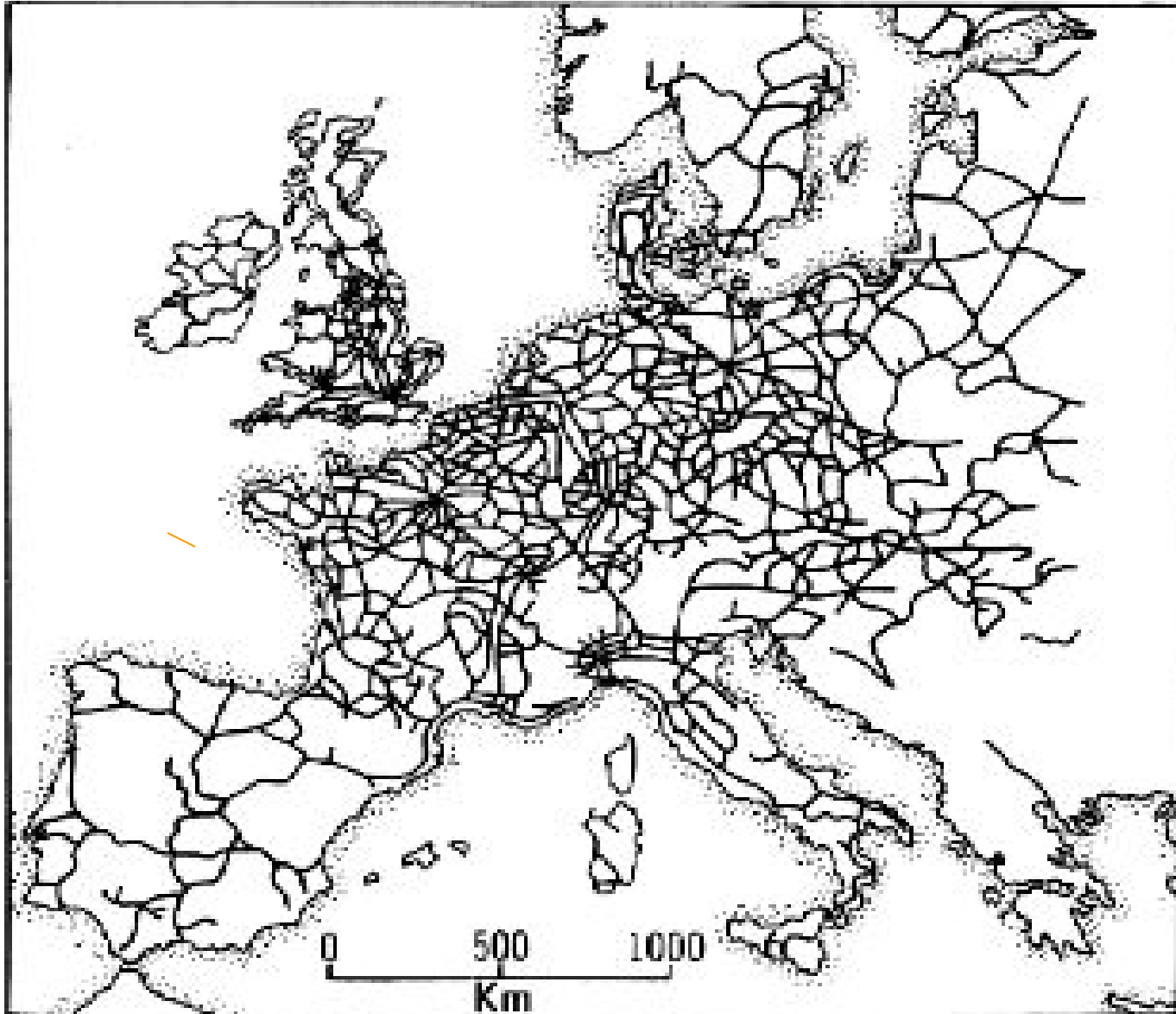


⇐1840



⇐1850

Railway Development in Europe



1880

5. Liberalism (revolution, democracy, and capitalism)

Old limits on how much energy people could use were gone!

**People tore down other limits too...
Revolution was in the air**

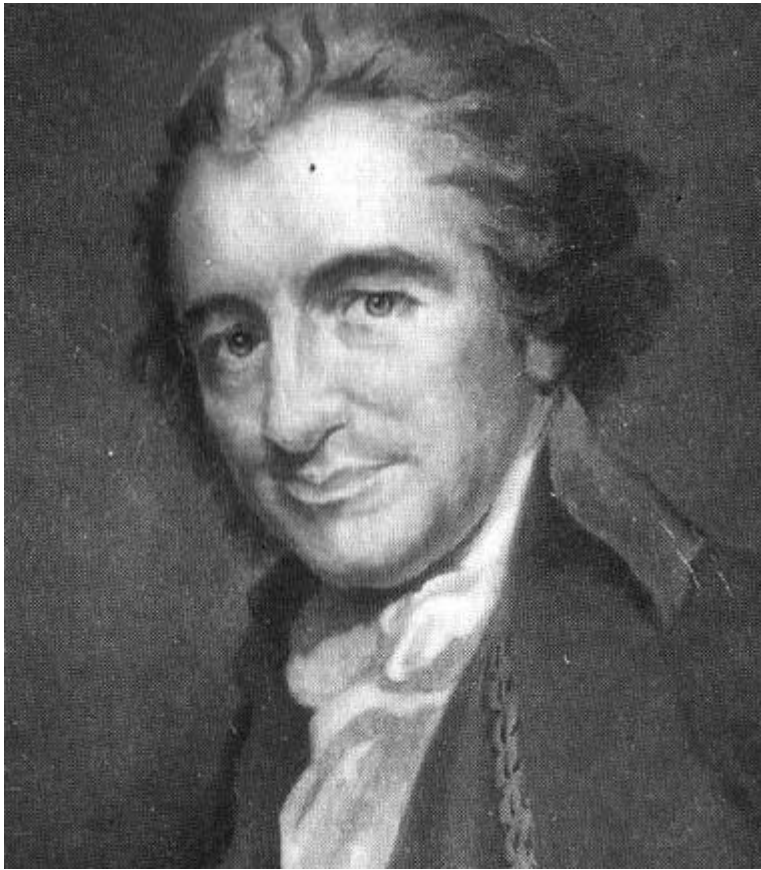


New economic ideas

- People should be able to buy and sell land freely.
- People should be able to buy and sell labor freely.
- People should be able to buy and sell goods freely.



Adam Smith argued for ideas like these in his book *The Wealth of Nations* (1776).



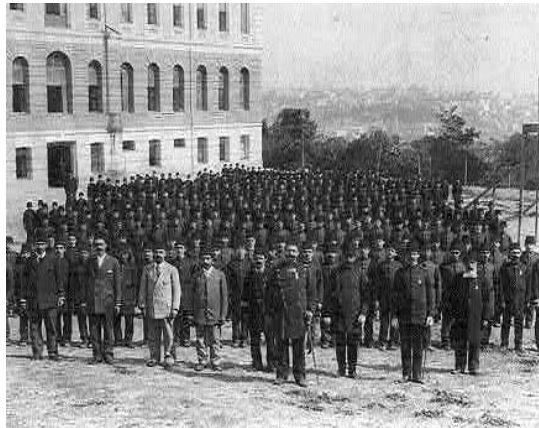
**Tom Paine argued for
these ideas in
Common Sense
(1775)**

New political ideas:

- **People should be free to choose their government.**
- **Government should protect people's liberties.**
- **People should have equal rights.**



**Governments
wrote
constitutions.**



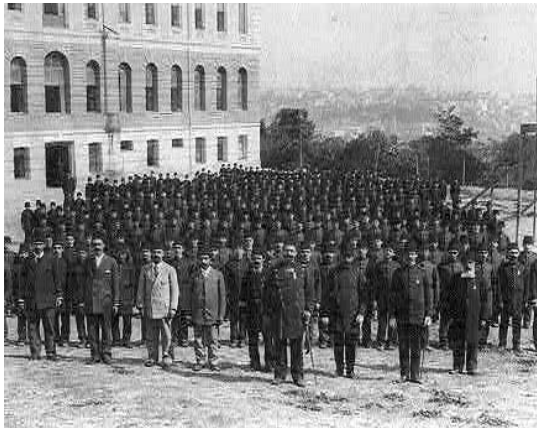
**Governments
promoted
education.**



**Governments
created
representative
institutions.**



United States Constitution 1787



Ottoman Turkish Regulations for Public Education 1869



French National Assembly 1789

Ascendancy of Liberalism

- **Rational thought and behavior**
- **Civil freedoms and legal equality-
Abolition**
- **Rule of law**
- **Constitutional and limited government**
- **The right to vote and be educated-women and poor**

- **Technical and scientific progress**
- **Free market economy**
- **Nationalism that advances the community of nations: self-determination**
- **Worker rights-Socialism**
- **Gender equality**

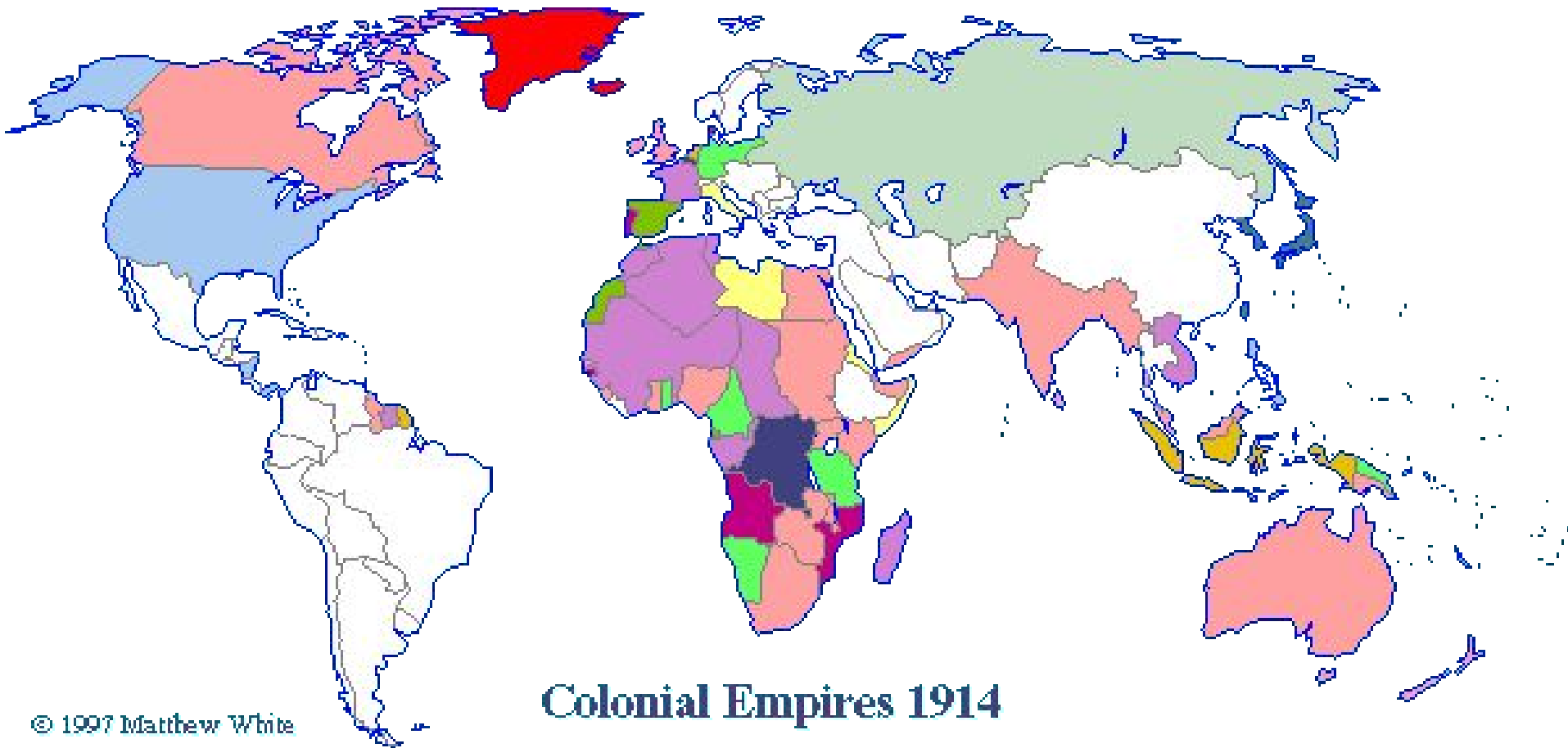
6. Imperialism

- **The industrial revolution and political revolutions led to nationalism and powerful nation-states, particularly in Europe**
- **With increased power and competition, industrial nations raced to create colonies**



**Industrial
technology
could be used
not only to
create, but to
destroy.**

And more of the world was colonized than ever before.



- | | | | | | |
|---------|---------|---------------|-------------|----------|---------------|
| Belgium | France | Great Britain | Japan | Portugal | Spain |
| Denmark | Germany | Italy | Netherlands | Russia | United States |

The European Moment

Land surface of the world
controlled by Europeans:

- 1800 35%
- 1878 67%
- 1914 88%

But . . . duration of European world
domination in the past 2000 years:



80
yrs

The need for resources:

- **Sugar**
- **Cotton**
- **Rubber**
- **Cacao**
- **Peanuts**
- **Oil**
- **Minerals and metals**
- **Gold**
- **Diamonds**

Racial Justification

- **Social Darwinism- The right and duty of superior civilizations to spread democracy, Christianity, and Anglo Saxon culture to inferior people**
- **Rudyard Kipling: “The White Man’s Burden”**
- **“Scientific” theories of race**

Countries that have been under European control

