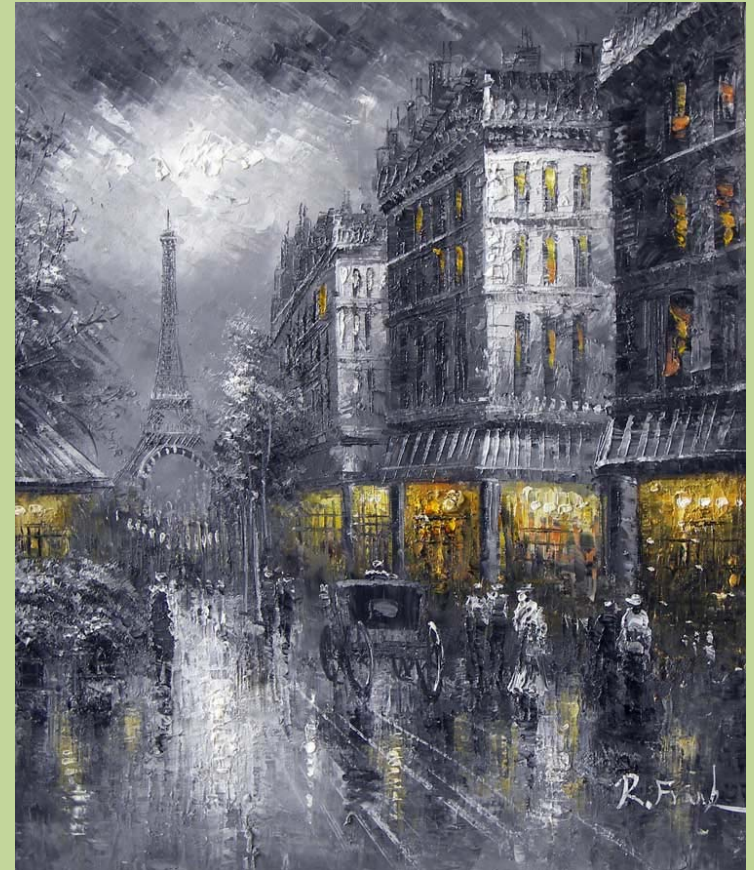


New Technologies & Social Changes

THE EUROPEAN MOMENT (1750 – 1900)



- The Industrial Revolution will not only allow “industrialized” countries to become powerful and hungry to imperialize weaker nations abroad for their natural resources, it will also bring about social, communication, & technological changes at home.



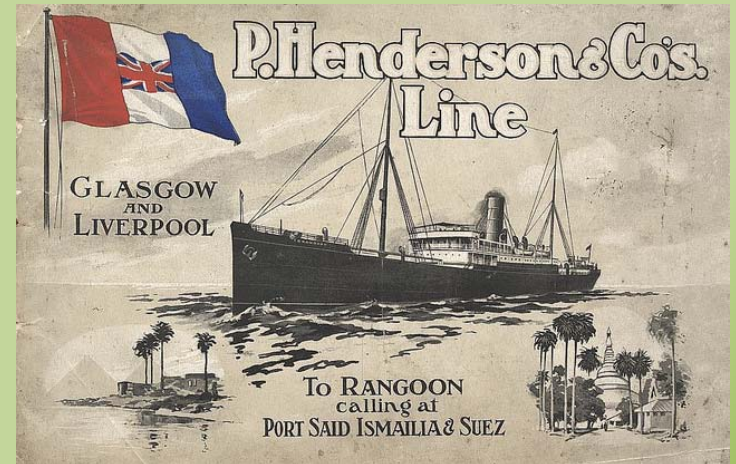
- Railroads greatly expanded within the industrialized world (Germany, France, Canada, etc.).
- The U.S. had the largest rail network in the world
By 1915, they had more mileage than the next 7 largest networks combined. When Japan begins to industrialize & build its own railway network in the 1870s they enlisted American engineers to help.



- Railroads were also built in South Africa, Mexico, Argentina, India, & Egypt mainly for the purpose of aiding the greater industrialized countries obtain raw materials in an easier fashion (ex: Prior to the opening of the Panama Canal in 1915 railways carried freight from the Pacific to the Atlantic).
- The environmental effects of the flood of more railway lines fueled deforestation (in both the industrialized & non-industrialized worlds), and hence opened up more land for agriculture too.



- More efficient steam engines along with new ship designs (iron & steel hulls instead of wood; and propellers instead of paddle wheels) benefited steamships.
- The size of ships, number of voyages, coaling stations, and ports able to handle them all increased through the second half of 1800s (The network of submarine telegraph cables also increased).
- “Shipping lines” became an organized way to ship freight on a reliable schedule.

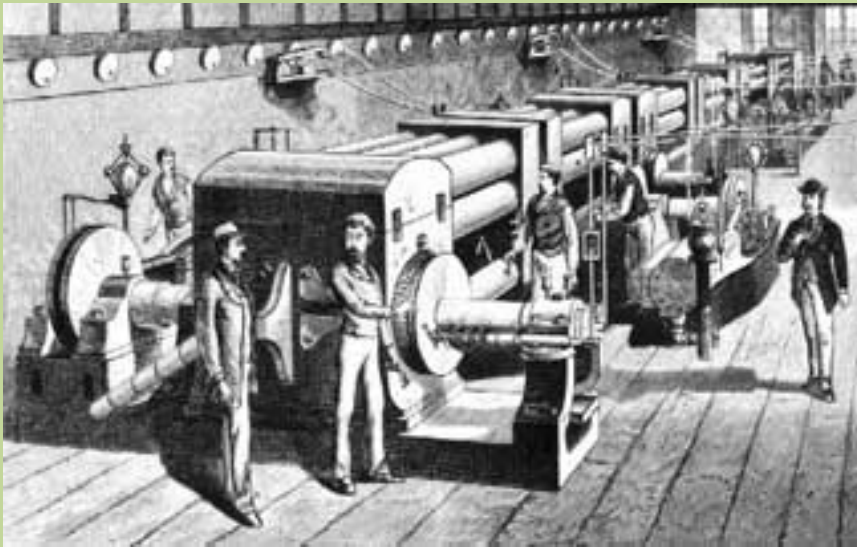




- World trade expanded tenfold between 1850 & 1913 as the cost of freight dropped; the world was becoming increasingly interconnected.
- Economies continued to grow worldwide, however a lack of government interference into the “free market” permitted wild swings in the economy to take place. Thus times of boom & depression occurred. Toward the end of the 1800s the U.S. & Germany raised tariffs, taxes on imports, as a way of protecting their “infant” industries from the already advanced British, but in general little government action was taken to affect the world economy.

- The use of steel increased as new methods ([Bessemer Process](#)) found easier & cheaper ways to produce it.
- Advances in chemistry led to synthetic dyes ([primarily used for clothing](#)) and the manufacturing of explosives ([Alfred Nobel invented dynamite in 1866](#)), which helped with the construction of canals & mining.
- Germany had the world's most advanced engineering schools; therefore led the way in the industrial chemistry field.





- The use of electricity blossomed as individuals devised efficient generators, ultimately leading to the construction of hydroelectric plants.
- Light bulbs (Thomas Edison), electric streetcars and subways changed the appearance of cities.

Quick Video 1



Second Industrial Revolution

- Many of these technological changes were looked upon as a new or second industrial revolution. This video clip is a nice little summary of the industrial advancements that took place at this time and in the early part of the 20th century.
- *Be careful here!* Don't get confused about these inventions. Take note that "airplanes" and "automobiles" are really advancements of the 20th century and not part of the **GREEN** unit.
- <http://www.youtube.com/watch?v=SLGDM5dJvAw>

- The populations of countries with predominately “white people” (U.S., Canada, Australia, Argentina, & Europe) grew dramatically in some cases doubling between 1850 and 1914.
 - *Why?*
 - Food surpluses
 - Less epidemics
- Increases in population to these non-European places were also caused by immigration.

People arrived because of . . .

- Irish potato famine (1847-1848)
- Jewish persecution in Russia
- Poverty in Italy & Scandinavia
- Steam liners
- Cultural ties



- Population increases were coupled with urbanization and the territorial expansion of cities (For example, by 1914, 80% of English & 60% of German citizens lived in cities. New York covered 3 square miles in 1800, but by 1900 covered 150 sq. miles). Electric streetcars & trains made it possible for people to live and work in different parts of a city.
- Effects of urbanization:
 - Crowded tenements for the poor
 - Poor sanitation
 - City planning (grid like streets, sewers, electricity etc.)
 - Taller buildings (use of steel, elevators)



Quick Video 2



The splendour and misery of urban life

- This very short video is an excellent summary of late 19th century urbanization and even some of the reforms that came about in response to it. It focuses on Canada, but these same characteristics were present in New York, London, and other growing cities of the time.
- <http://www.youtube.com/watch?v=6Mt2CZGnmXM>

- While the gap in power & technology of industrialized nations and non-industrialized was clearly growing, a division of society was also present within industrialized countries during this “Victorian Age.”

The Victorian Age refers to the second half of the 19th century and is named after Queen Victoria. Although it predominately refers to culture in Britain it has been used to refer to this period of world history as a whole.



- This social division was evident with European women.
- In upper classes, women were in charge of child rearing & running the household usually with the aid of servants. Education was limited and was usually for the sole purpose of increasing a woman's marriage prospects.
- Professional careers were discouraged
(However, teaching did become acceptable, usually for single women only).



- Lower class women were compelled to earn a living (such as working in a textile mill or becoming a house servant where sexual abuse occasionally occurred) all awhile raising a family too.
- Married women with families were pressured to stay home and earn money by working in the home (sewing, weaving baskets, etc.)



Quick Video 3



'History of Britain' clip, Victorian era; industrialization

- This clip discusses the hardships of the working poor during the reign of Queen Victoria. While a quick glance at world history at this time clearly shows a growing and powerful Great Britain on the world stage, at home a closer inspection reveals social divisions within British society.
- <http://www.youtube.com/watch?v=MllrnSZxTkY>

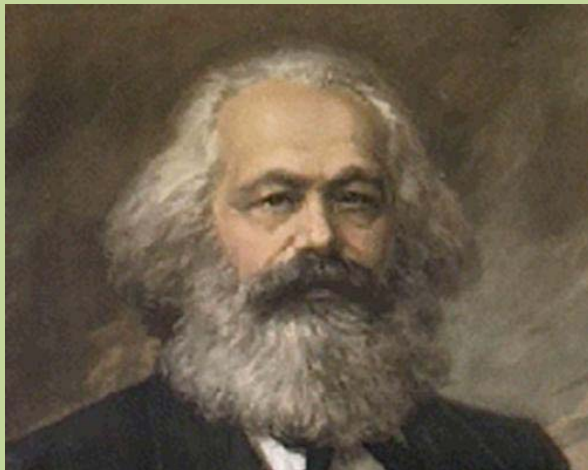
Quick Game!!!



Are you a 'civilized' person, suited to the Victorian period?

- Ok, time to take a break and play a game. This interactive game will allow you to test your skills in old Victorian times. Have fun – and learn something.
- http://www.mccord-museum.qc.ca/en/keys/games/game_0/

- The greatest division in the industrial world was between workers & business owners, whom Karl Marx referred to as the **proletariat** and the **bourgeoisie**, respectively.
- The plight of workers led to the intellectual movement of socialism (government intervention into the economy to provide economic justice to members of society) for which Marx developed into communism.



Communist Manifesto, 1848 written with
Friedrich Engels

Das Kapital, 1867

- Marx saw world history as a long series of conflicts between classes, and now it would be between the proletariat (the people making the Industrial Revolution possible) and the bourgeoisie (the people profiting off the backs of workers).
- Marx believed the workers would eventually rise up, take over the means of production, share the fruit of their labor, and live in a utopian society without classes – “communism.”



Quick Video 4



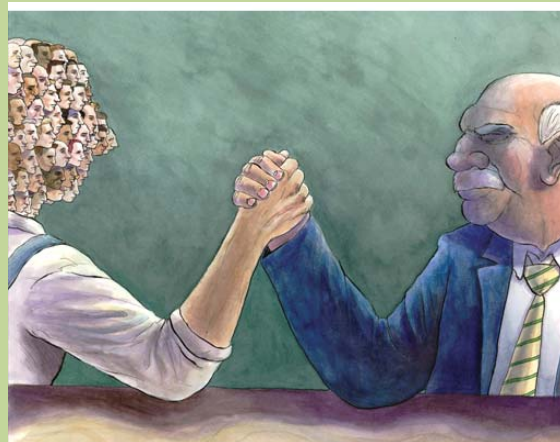
Mini Bio: Karl Marx

- Karl Marx is a controversial figure in world history. This short video biography will give you some insight to his philosophy, inspiration, and later day effects on politics.
- <http://www.youtube.com/watch?v=16IMc5mhbZk>

Side note -

- **Many intellectuals' ideas are born because of the conditions of their time period:**
 - Karl Marx (SOCIALISM): Industrial Revolution, poor factory workers
 - Adam Smith (CAPITALISM): late 1700s, benefits of trade and free markets are helping Europe
 - Thomas Hobbes (MONARCHY not divine right though!): The English Civil War
 - John Locke (DEMOCRACY): Glorious Revolution, Parliament exerting itself

- Marx's communism did not develop, however labor unions did form as a way of giving a voice to the working man in regards to his concerns for better pay & working conditions (i.e. strength in numbers, women were not usually welcomed in the normally male dominated trade unions).
- Not until around 1850 did it even become lawful for workers to unite, as a result by 1900 union membership grew into the millions.



- Democracy was also expanding during the later half of the 1800s in Europe & North America (more & more men were being allowed to vote).
- Socialist political parties came into existence (mainly in Europe) as a way of creating legislation in favor of the working class (By 1912, the Social Democratic Party of Germany had won a majority of the electoral seats in the Reichstag).
- Due to labor unions and expanded suffrage men had an outlet for their political & economic gripes, as a result Marx's predicted revolution won't take place. *(This is important! In societies where people don't have an outlet – they will revolt. Think of the French Revolution).*

Worlds Apart?

Non - industrialized Countries

Industrialized Countries

Workers
(proletariat)

Business &
landowners
(bourgeoisie)

Working
class
men
(heavy
machinery,
foremen,
paid better,
unions)

Poor women
(textile mills)

Rich men
(men's only clubs)

Women
(raise children,
work is
discouraged)

“Just as the male worker is subjected by the capitalist, so is the woman by the man, and she will always remain in subjugation until she is economically independent. . .”



Clara Zetkin (German socialist)

New Technologies & Social Changes

THE EUROPEAN MOMENT (1750–1900)



in a . . .



- The Industrial Revolution will bring a change in the relationship between what will be called the “industrialized” and “non-industrialized” worlds, but also changes within in the industrialized world.
- Technological Changes: Expanding railroad networks, steel production, electricity, synthetic dyes, etc.
- Social Changes: increased immigration to non-European “white” countries, urbanization, upper class versus lower class women in Victorian England, proletariat versus the bourgeoisie.
- Economic: rise of labor unions, socialism, communism, increased world trade, shipping lines, proletariat versus the bourgeoisie.
- Environmental: increased mining, deforestation, urbanization, more land is opened up for agriculture.