

Chapter 22: Enlightenment and Revolution

- I. The Scientific Revolution
 - a. The Roots of Modern Science
 - 1. Scholars determined what was true or false by what the bible said
 - ii. The Medieval View
 - 1. Middle Age scholar believed that the earth was at the center of the Universe, and the sun revolved around earth because of the sun moving east to west
 - 2. Geocentric view placed the earth at the center
 - 3. Aristotle had proposed this idea, Ptolemy expanded the theory
 - 4. God had deliberately placed earth at the center
 - iii. A New Way of Thinking
 - 1. The scientific revolution was the period in time when scholars began publishing books that questioned authority
 - 2. Translations of Muslim works, and new courses at Universities played a role in starting the scientific revolution
 - 3. Exploration led to the belief that there were new truths
 - 4. European exploration fueled a great deal of scientific research
 - b. A Revolutionary Model of the Universe
 - 1. The major challenge to scientific theory was the geocentric theory
 - ii. The Heliocentric Theory
 - 1. Nicolaus Copernicus was troubled by the theory for the movement of the planets and stars
 - 2. Copernicus's heliocentric view did not completely explain the movements of the planets and stars, he published a book during the last year of his life
 - 3. Tycho Brahe further studied Copernicus's view, and made calculations
 - 4. His assistant Johannes Kepler further advanced his ideas
 - iii. Galileo's Discoveries
 - 1. Galileo Galilei had a class in Aristotle's class, and proposed the law of the Pendulum, which stated that an object takes the same amount of time to go up as it takes to go down
 - 2. A falling object falls at a predictable rate
 - 3. Galileo successfully built the first perfected telescope
 - 4. He eventually published articles about his findings
 - iv. Conflict with the Church
 - 1. Galileo's findings made church officials wonder if people would also question the Church's teachings as well
 - 2. The Church ordered Galileo not to let people know about his findings although he continued his studies
 - 3. Eventually he published a book, and stood trial before the inquisition
 - 4. Galileo was no longer a free man, and lived under house arrest
 - c. The Scientific Method
 - 1. The Scientific method is a logical procedure for gathering and testing ideas
 - 2. The scientific method was developed by Francis Bacon, and Rene Descartes
 - 3. Bacon thought that there would be a way to improve people's lives

4. Descartes used algebra and geometry as an important tool for scientific research
5. They both believed you had to reject former assumptions
6. Modern methods are based on the work of these two men
- d. Newton Explains the Law of Gravity
 1. Isaac Newton produced a single theory of motion
 2. He said that all objects moved at the same speed due to forces
 3. He also proposed the law of Gravity
 4. The Book that he published, was the most important scientific book published
- e. The Scientific Revolution
 1. Careful observation and the use of scientific method became important in many different fields
 - ii. Scientific Instruments
 1. New tools were developed to make more specific observations
 2. A mercury barometer was developed to measure the temperature of water
 - iii. Medicine and the Human Body
 1. During the middle ages, drawings were made of Human Anatomy to further benefit the medical practice
 2. Vaccinations were developed in order to help prevent disease
 - iv. Discoveries in Chemistry
 1. Robert Boyle further pioneered the use of the scientific method in chemistry
 2. Other people applied a scientific approach to other areas of life

II. The Enlightenment in Europe

- a. Two Views on Government
 1. The Enlightenment started when some key ideas were put forward by Thomas Hobbes and John Locke
 - ii. Hobbes's Social Contract
 1. Thomas Hobbes expressed his views in a work called Leviathan
 2. He said that without Government, there would be warfare against each other
 3. Hobbes said you needed to elect a strong ruler in exchange for law and order
 4. In Hobbes's view, it was an absolute monarchy
 - iii. Locke's Natural Rights
 1. John Locke believed that people could learn from their mistakes
 2. He also believed that they could govern their own affairs
 3. Locke believed you had *Natural Rights*- life, liberty, and property
 4. The purpose of the government was to protect these rights, he published his views in the book *Two Treatises on Government*
 5. His views had a big influence on modern political thinking
- b. The Philosophes Advocate Reason
 1. The enlightenment reached its height in France
 2. Social critics were known as philosophes, or philosophers
 3. Five core ideas were at the center of their philosophy
 - a. Reason- truth could be discovered through reason
 - b. Nature- their were natural laws of politics and economics
 - c. Happiness- through nature's laws, one could find happiness

- d. Progress- progress for a society
- e. Liberty- through reason, society could be set free, and gain liberty
- ii. Voltaire Combats Intolerance
 1. Francois Marie Arouet used the pen name Voltaire, and published books on philosophy
 2. He used satire against his opponents
 3. Twice he was sent to prison, and the second time, was exiled to England, where he liked the government much more than his own
 4. When he returned to France, he mocked their laws and customs
 5. He made violent enemies, but never stopped fighting for violence
- iii. Montesquieu and the separation of Powers
 1. Montesquieu devoted himself to the study of Political Liberties
 2. He also believed that Britain was the best governed country
 3. He proposed a separation of powers, which divided power among the different branches of the government
 4. He oversimplified British laws, and wrote a book called *On the Spirit of Laws*
 5. His idea of checks and balances became the basis of the constitution
- iv. Rousseau: Champion of Freedom
 1. Jean Jacques Rousseau was committed to individual freedom
 2. He won numerous essay contests while in Paris, and met other philosophers
 3. He felt uncomfortable in the high class society
 4. He believed civilization corrupted people's goodness
 5. The only good government was the one formed by the people
 6. He differed greatly from Hobbes's view
 7. Like Locke, he argued that legitimate government came from the consent of the people
 8. He inspired leaders of the French Revolution which overthrew monarchy
- v. Beccaria Promotes Criminal Justice
 1. An Italian Philosopher named Cesare Bonesana Beccaria turned his thoughts to the justice system
 2. He believed that laws existed to promote social order, not to avenge crimes
 3. He believed an accused should have a speedy trial with no torture
 4. He believed capital punishment should be abolished
 5. He influenced criminal law reformers in Europe and North America
- c. Women and the Enlightenment
 1. Rousseau argued that women should gain an education about being a good wife at home
 2. Women writers tried to improve the status of women
 3. Mary Wollstonecraft wrote a book *A Vindication of the Rights of Woman*, and she argued that women need an education to become more virtuous
 4. Women spread ideas through social gatherings called salons
 5. One woman, Emilie Du Chatelet was an aristocrat who was fortunate to receive an education in the sciences and mathematics
- d. Impact of the Enlightenment
 1. Over a few decades, enlightenment writers challenged long-held ideas about society

2. These philosophers lived in a world of ideas, and formed new theories
- ii. Belief in Progress
 1. Newton and Galileo believed in progress, and opening doors in nature
 2. They opened the growth to scientific knowledge
 3. They argued for more social equality and improvements in education
- iii. A More Secular Outlook
 1. During the enlightenment, people began to openly question church teachings
 2. Newton was deeply religious and wanted to reveal God's majesty through his work
 3. They wanted to promote tolerance of all religious beliefs
- iv. Importance of the Individual
 1. Faith in science and progress produced individualism
 2. Philosophers encouraged others to reason what was right or wrong with their own knowledge
 3. During the Enlightenment, reason took center stage

III. The Spread of Enlightenment Ideas

- a. A World of Ideas
 1. In the 1700s, Paris was the cultural and intellectual capital of Europe
 2. The brightest minds gathered there
- ii. The Paris Salons
 1. The buzz of enlightenment could also be found in women who lived in large mansions. They had parties called salons where great philosophers met
 2. The most influential salon hostess during Voltaire was Marie Therese, she had friends with high political status
- iii. Diderot's Encyclopedia
 1. Denis Diderot, a friend of Madame Geoffrin, imagined a large set of articles all in one book. He later called it the Encyclopedia
 2. The enlightenment views found in the book soon angered both the French government and the Catholic Church. So the censors banned the work
 3. Many philosophers quit, and urged Diderot to quit as well, but he continued and eventually won permission to continue publishing the book
- iv. New Ideas Circulate
 1. Salons and the encyclopedia helped spread enlightenment ideas
 2. Enlightenment thinkers of Europe considered themselves part of an intellectual community. They shared their different forms of communication
 3. Enlightenment ideas eventually reached the middle class through newspapers, pamphlets, and political songs
 4. Eventually middle class people could buy books, which gave the enlightenment thinkers an influence over European culture
- b. Art and Literature in the Age of Reason
 1. Enlightenment ideals were reflected in the arts, their style was called Baroque
 2. Under the influence of the Enlightenment, the style began to change into a more simple style called neoclassical, (new classical)
- ii. Classical Music

1. Franz Joseph Haydn, Wolfgang Amadeus Mozart, and Ludwig van Beethoven were considered the greatest composers of the classical period in music
 - a. Haydn developed new music forms such as sonata and symphony
 - b. Mozart started composing at the age of 5 and is known for his great operas. He set a standard for elegance and originality
 - c. Beethoven had an enormous range in his work. He had some styles that were the same as Mozart, but he later set new trends
- iii. Popularity of the Novel
 1. Writers started to write long works of literature, and with an audience of the middle class, novels were very popular
 2. English novelists such as Henry Fielding (Tom Jones) and Samuel Richardson (wrote Pamela) developed many of the features of the modern novel
 3. A third English novelist, Daniel Defoe, wrote Robinson Crusoe
- c. Enlightenment and Monarchy
 1. Many philosophers, including Voltaire, believed that the best form of government was a monarchy where the ruler respected the peoples rights
 2. Enlightened Despots were rulers who followed philosophers ideas
 3. The rulers supported the philosophers ideas, but did not want to give up power, they only wanted a more effective rule
- ii. Frederick the Great
 1. Frederick committed himself to reforming Prussia
 2. He granted many religious freedoms, reduced censorship, and improved education
 3. He thought serfdom was wrong, but did nothing to prevent it, as a result, he never challenged or tried to change social order
 4. His greatest contribution was his attitude toward being king
- iii. Joseph II
 1. Joseph II of Austria was the most radical reformer. He introduced legal reforms and freedom of press
 2. He also supported freedom of worship, and abolished serfdom, requiring peasants to be paid for their labor in cash
 3. The Nobles firmly resisted this change, and like many of his changes, they were all undone after his death
- iv. Catherine the Great
 1. Catherine the Great was the ruler most respected by philosophers
 2. She ruled with absolute authority and took steps to modernize Russia
 3. She formed a commission, and based on philosophers requests, she reformed the laws
 4. She put in place limited reforms, and did little to improve the life of Russian servant peasants
 5. There was a massive uprising of serfs that she crushed with her army
 6. She thought about abolishing serfdom, but realized the only way she could remain in power was to please the nobles, giving them absolute power over the serfs, removing all traces of freedom
- v. Catherine Expands Russia

1. Catherine gained control of the Black Sea, which gave her power to straits from the Black to Mediterranean seas
2. She expanded to Poland, and when neighboring countries partitioned Poland, it was erased from the map
3. Poland did not become independent until after World War I
4. Catherine vastly expanded the empire through her rule

IV. American Revolution: The Birth of a Republic

a. Britain and Its American Colonies

1. When George III became king of Great Britain, the economy and population thrived
2. A new sense of identity was growing, colonists felt less British
3. The Navigation Act was passed by parliament allowing colonist goods to only be sold to the British, and they were charged high taxes
4. At first Britain did not keep a close eye on the colonies, later they did

b. Americans Win Independence

1. Many Americans were willing to risk their lives to break free of Britain
2. They were outraged by paying taxes directly to the British government

ii. Growing Hostility Leads to War

1. Samuel Adams was another man who wanted to break free, and encouraged people to voice their opinions to Britain
2. All the colonies except Georgia gathered to discuss their problems at hand
3. April 19, 1775 British soldiers and American militiamen exchanged fire starting the American Revolution

iii. Enlightenment Ideas Influence American Colonists

1. A growing number of people wanted to separate which persuaded others
2. July of 1776, the Declaration of Independence written by Thomas Jefferson was issued
 - a. The ideas were based on those of John Locke

iv. Success for the Colonists

1. Odds were against the Americans, but Washington's trained forces were the most powerful in the world
2. The Americans won for a few reasons:
 - a. American motivation was greater
 - b. British mistakes
 - c. Time was on the Americans side, an overseas war was expensive
3. France was more interested in weakening their British rivals, and were less interested in the American Revolution

c. Americans Create a Republic

1. Shortly after their win, the Americans ratified a constitution, and chose a government where citizens rule through elected representatives

ii. The Articles Create a Create a Weak National

1. The articles of confederation gave a lot of power to each individual state creating an unorganized and weak national government
2. This caused a problem because of limited power on taxing to run the government

3. Some states issued their own currency and veterans demanded back pay
 4. The financial problems sparked a rebellion in Massachusetts, and courthouses were attacked
- iii. A New Constitution
1. Washington and Madison believed that Shay's rebellion underscored the need for a strong national government
 2. May 25, 1787 was the first session of the Constitutional Convention
 3. Different delegates argued their points for 4 months and finally developed a new constitution
- iv. The Federal System
1. A form of checks and balances was started with three branches of government
 - a. The Executive, Legislative, and Judicial Branch
 2. The constitution did not eliminate local government, but instead created a federal government separating the national and local
- v. The Bill of Rights
1. Constitution signed on September 17, 1785
 2. In order to become law it had to be approved by 9 of the 13 states
 3. In order to gain popularity, the Bill of Rights was promised which protected basic rights: speech, press, assembly, and religion
 4. These documents marked a turning point in ideas, and had enlightenment ideas throughout