



# *The Age of Reason & Enlightenment*

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# An Overview of the 18<sup>c</sup>

- ▶ **Political History** →>>> Reform
- ▶ **Intellectual History** → Newtonian Physics  
→ Reason
- ▶ **Cultural History** → Individualism
- ▶ **Social History** → Increased Literacy  
→ “Age of Aristocracy”
- ▶ **Economic History** →> Mercantilism  
to Capitalism

# 18<sup>c</sup> Politics

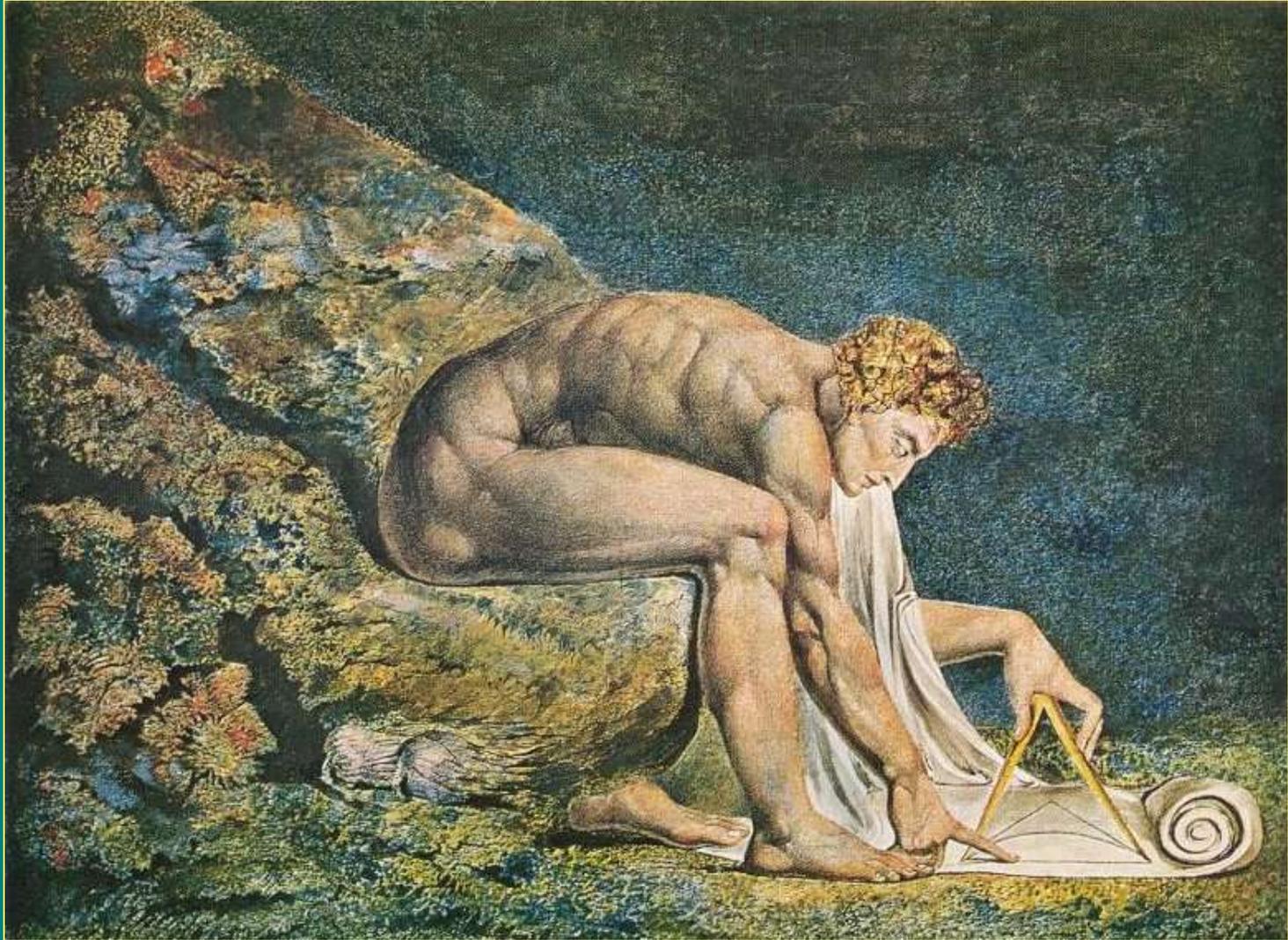
- ▶ BRITAIN → – Constitutional Monarchy
- ▶ FRANCE → Royal Absolutism  
(cultural and religious unity)
- ▶ PRUSSIA, HABSBURG EMPIRE,  
RUSSIA → “Enlightened Despotism”
- ▶ OTTOMAN EMPIRE → traditional  
empire

# The Origins of Enlightenment?

## ▶ SCIENTIFIC:

- Newton's system was synonymous with the empirical and the practical.
- Scientific laws could be expressed as universal mathematical formulas.
- Science allowed alternatives to be imagined in everything from politics to religion.

# William Blake's *Newton*, 1795



# The Royal Academy of Sciences, Paris



## Official Scientific Academies in Europe During the Eighteenth Century

	Official Scientific Societies in all Europe (excluding colonies)	Official Scientific Societies in France
1700	5	2
1789	65	29

# Zoology & Biology



A dissection at the Royal Academy, London.

# Private Collections



The Origins of Modern Museums.

# Women & Science



The German astronomer Hevelius & his wife examine the heavens.

# The Origins of Enlightenment?

## ▶ RELIGIOUS:

- physico-theology – → an attempt (inspired by science) to explain God's Providence by reference to his work in nature & not primarily through his biblical Word.
- support of a “rational” religion, free from mysteries, miracles, and superstitions.

# The Origins of Enlightenment?

## ▶ RELIGIOUS:

### ■ Deism

✦ The belief in the existence of a God or supreme being but a denial of revealed religion, basing one's belief on the light of nature and reason.

■ Deists saw no point in any particular religion; they recognized only a distant God, uninvolved in the daily life of man.

# The Origins of Enlightenment?

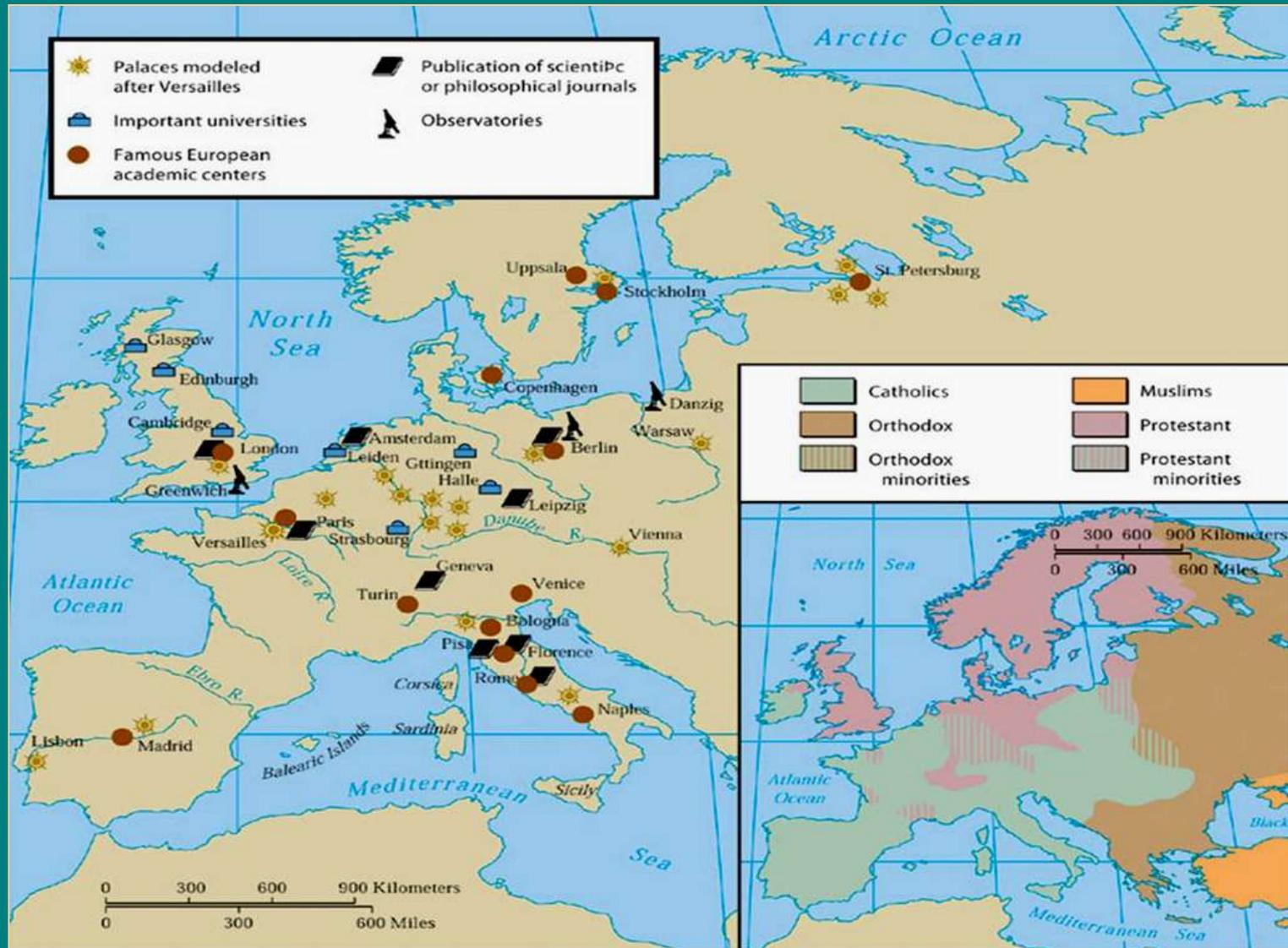
## ▶ RELIGIOUS:

### ■ Pantheism

✿ The belief that God and nature are one and the same.

- Gradually, highly educated Protestants & Catholics thought more about God's work as revealed through science, rather than through the Scriptures.

# Centers of the Enlightenment



# The Characteristics of the Enlightenment

1. Rationalism → reason is the arbiter of all things.
2. Cosmology → a new concept of man, his existence on earth, & the place of the earth in the universe.
3. Secularism → application of the methods of science to religion & philosophy.

# The Characteristics of the Enlightenment

## 4. Scientific Method

- Mathematical analysis
- Experimentation
- Inductive reasoning.

5. Utilitarianism → the greatest good for  
the greatest number.

6. Tolerance → *No opinion is worth  
burning your neighbor for.*

# The Characteristics of the Enlightenment

## 7. Optimism & Self-Confidence

- The belief that man is intrinsically good.
- The belief in social progress.

## 8. Freedom

- Of thought and expression.
- Bring liberty to all men (modern battle against absolutism).

## 9. Education of the Masses

# The Characteristics of the Enlightenment

## 10. Legal Reforms

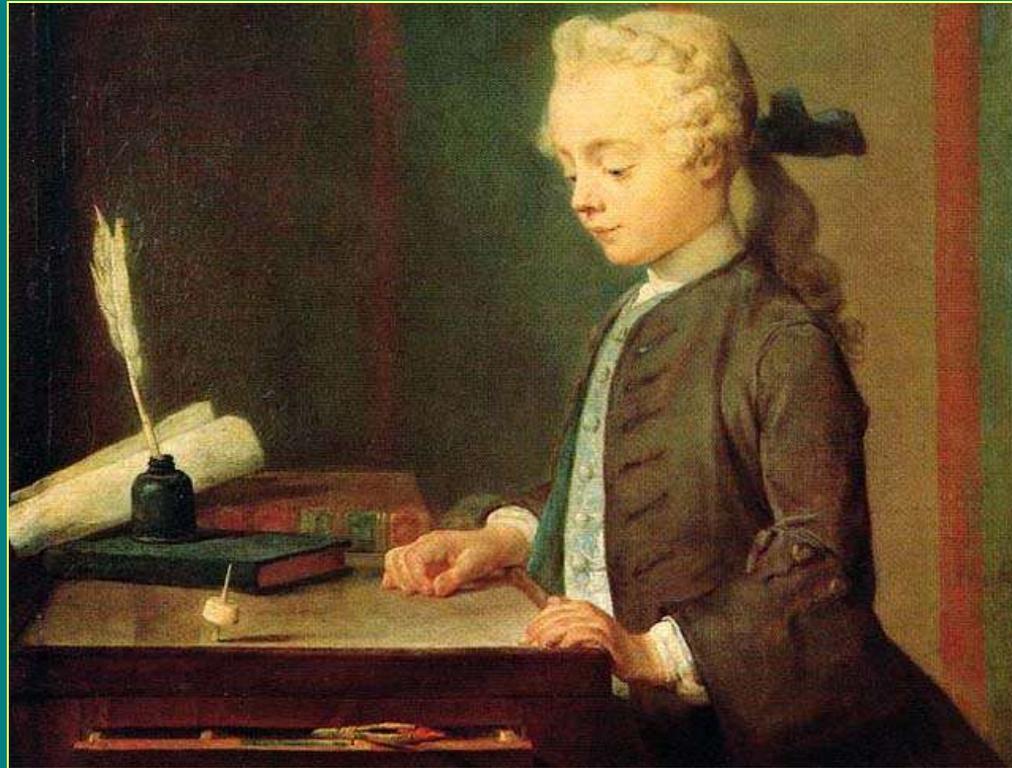
- Justice, kindness, and charity → no torture or indiscriminant incarceration.
- Due process of law.

## 11. Constitutionalism

- Written constitutions → listing citizens, rights.

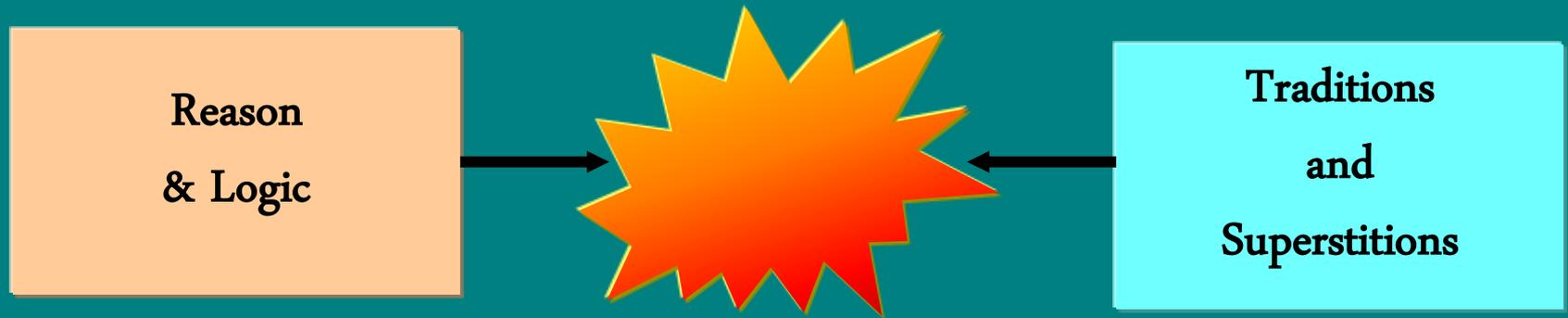
## 12. Cosmopolitanism.

# The “Enlightened” Individual → The *Philosophe*



- ▶ Not really original thinkers as a whole, but were great publicists of the new thinking  
→ CHANGE & PROGRESS!
- ▶ They were students of society who analyzed its evils and advanced reforms.

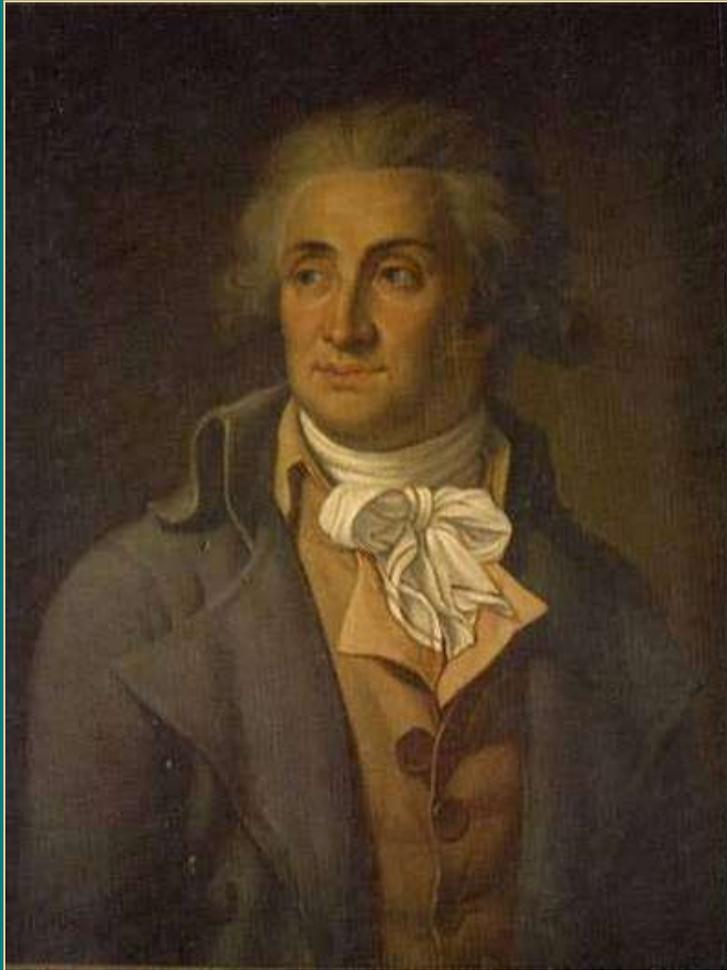
# The “Great Debate”



- rationalism
- empiricism
- tolerance
- skepticism
- Deism

- nostalgia for the past
- organized religions
- irrationalism
- emotionalism

# Marquis de Condorcet (1743-1794)

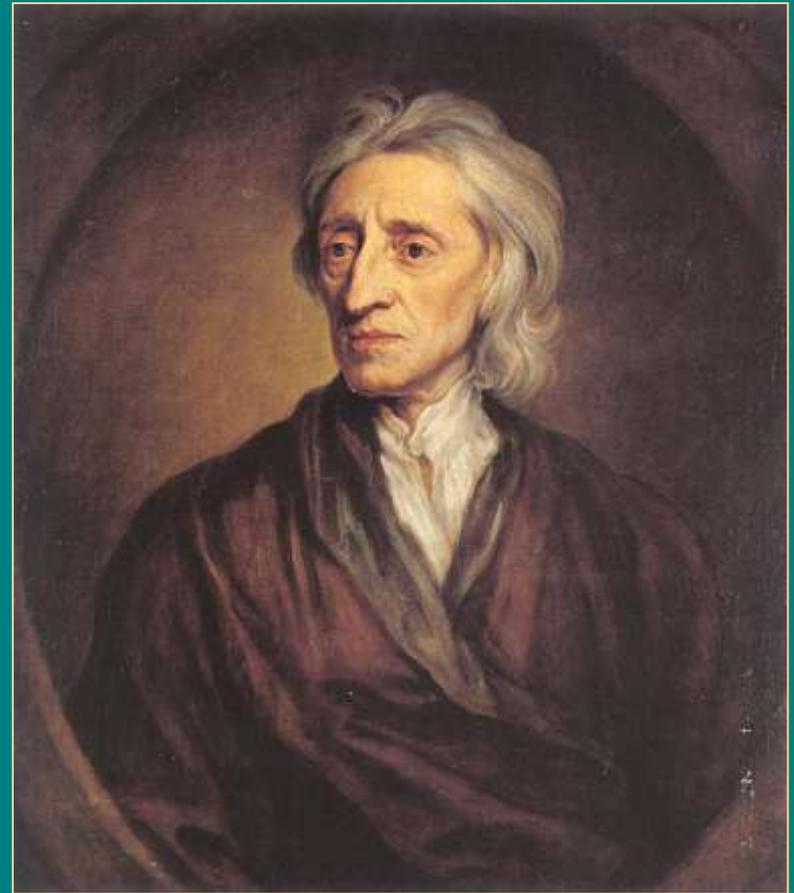


## ► *Progress of the Human Mind, 1794*

- An expectation of universal happiness.
- Every individual guided by reason could enjoy true independence.
- He advocated a free and equal education, constitutionalism, and equal rights for women.

# John Locke (1632-1704)

- ▶ *Letter on Toleration,*  
1689
- ▶ *Two Treatises of*  
*Government,* 1690
- ▶ *Some Thoughts*  
*Concerning*  
*Education,* 1693
- ▶ *The Reasonableness*  
*of Christianity,* 1695



# John Locke's Philosophy (I)

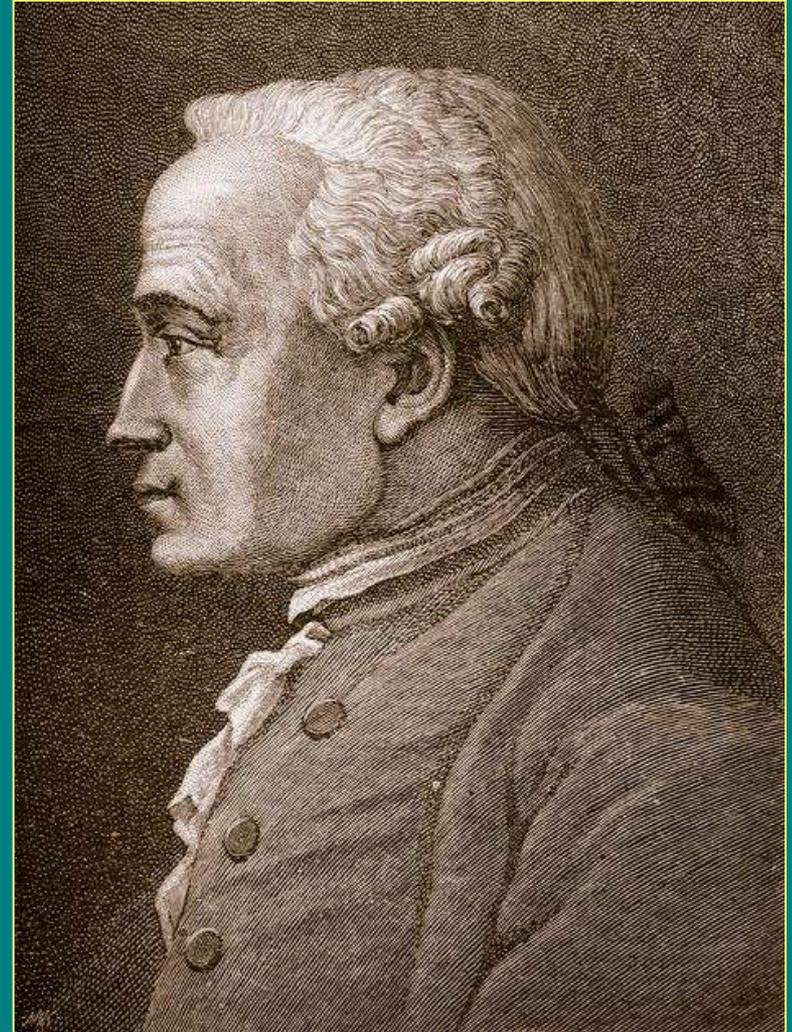
- ▶ The individual must become a “rational creature.”
- ▶ Virtue can be learned and practiced.
- ▶ Human beings possess free will.
  - they should be prepared for freedom.
  - obedience should be out of conviction, not out of fear.
- ▶ Legislators owe their power to a contract with the people.
- ▶ Neither kings nor wealth are divinely ordained.

# John Locke's Philosophy (II)

- ▶ There are certain natural rights that are endowed by God to all human beings.
  - *life, liberty, property!*
- ▶ The doctrine of the Divine Right of Kings was nonsense.
- ▶ He favored a republic as the best form of government.

# Immanuel Kant (1724-1804)

- ▶ *Critique of Pure Reason*, 1781
- ▶ “What is Enlightenment?”, 1784
- ▶ *Metaphysical Foundations of Natural Science*, 1786



# Kant's Philosophy

▶ *Dare to Know!*

▶ He introduced the concept of **transcendentalism** → some things are known by methods other than empirically.

- The belief in the existence of a non-rational way to understand things.

▶ The existence of neither time nor space is determined by empirical understanding.

- These type of things are *a priori*.

- ✦ They transcend sensory experience.

- ✦ They are pure, not empirical [[concepts like faith, pre-existence, life after death]].

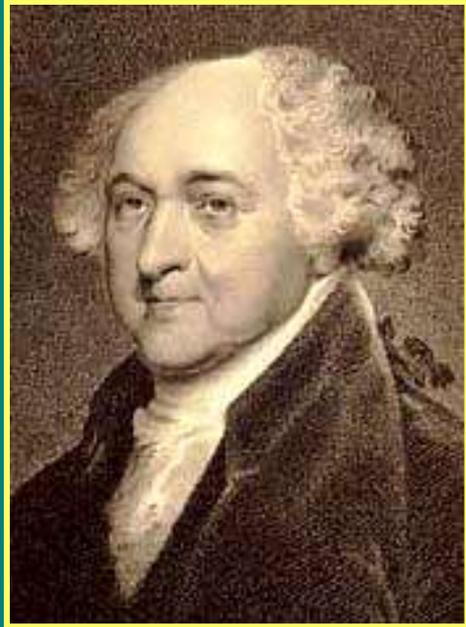
# Thomas Paine (1737-1809)



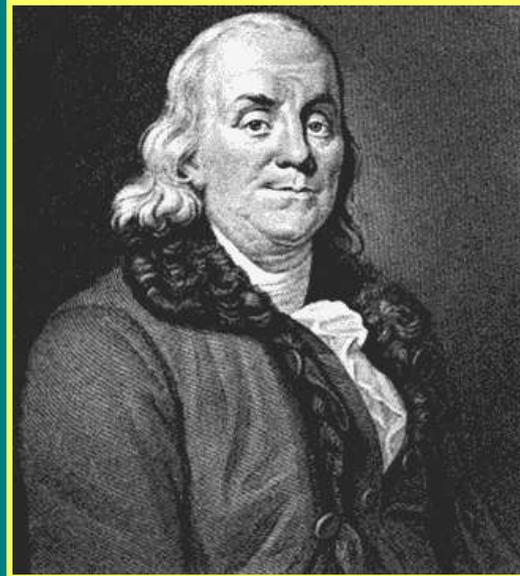
▶ *Common Sense*, 1776

▶ *The Rights of Man*,  
1791

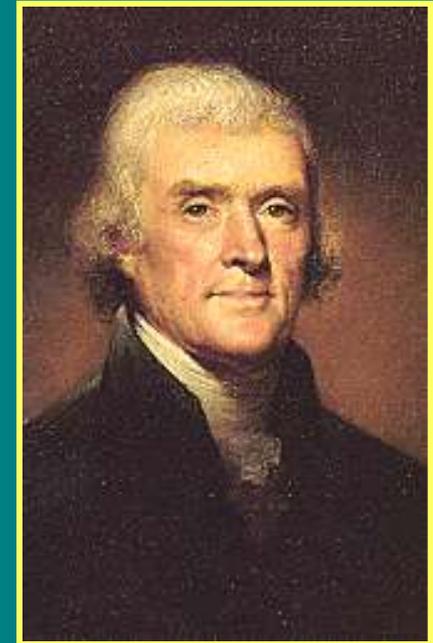
# The American “*Philosophes*”



John Adams  
(1745-1826)



Ben Franklin  
(1706-1790)



Thomas  
Jefferson  
(1743-1826)

.....life, liberty, and the pursuit of happiness.....

# Voltaire (1712-1778)

▶ AKA → Francois Marie Arouet.

▶ *Essay on the Customs  
and Spirit of Nations,*  
1756

▶ *Candide,* 1759

▶ *Philosophical  
Dictionary,* 1764



# Voltaire's "Wisdom" (I)

- ▶ *Every man is guilty of all the good he didn't do.*
- ▶ *God is a comedian playing to an audience too afraid to laugh.*
- ▶ *If God did not exist, it would be necessary to invent him.*
- ▶ *It is dangerous to be right when the government is wrong.*
- ▶ *Love truth and pardon error.*

## Voltaire's "Wisdom" (II)

- ▶ *Judge of a man by his questions rather than by his answers.*
- ▶ *Men are equal; it is not birth, but virtue that makes the difference.*
- ▶ *Prejudice is opinion without judgment.*
- ▶ *The way to become boring is to say everything.*
- ▶ *I may not agree with what you have to say, but I will defend to the death your right to say it.*

# David Hume (1711-1776)



- ▶ *The Natural History of Religion* [(1755)].
- ▶ Belief in God rested on superstition and fear rather than on reason.

# Edward Gibbon (1737-1794)

- ▶ *The Decline and Fall of the Roman Empire* (6 volumes), 1787.

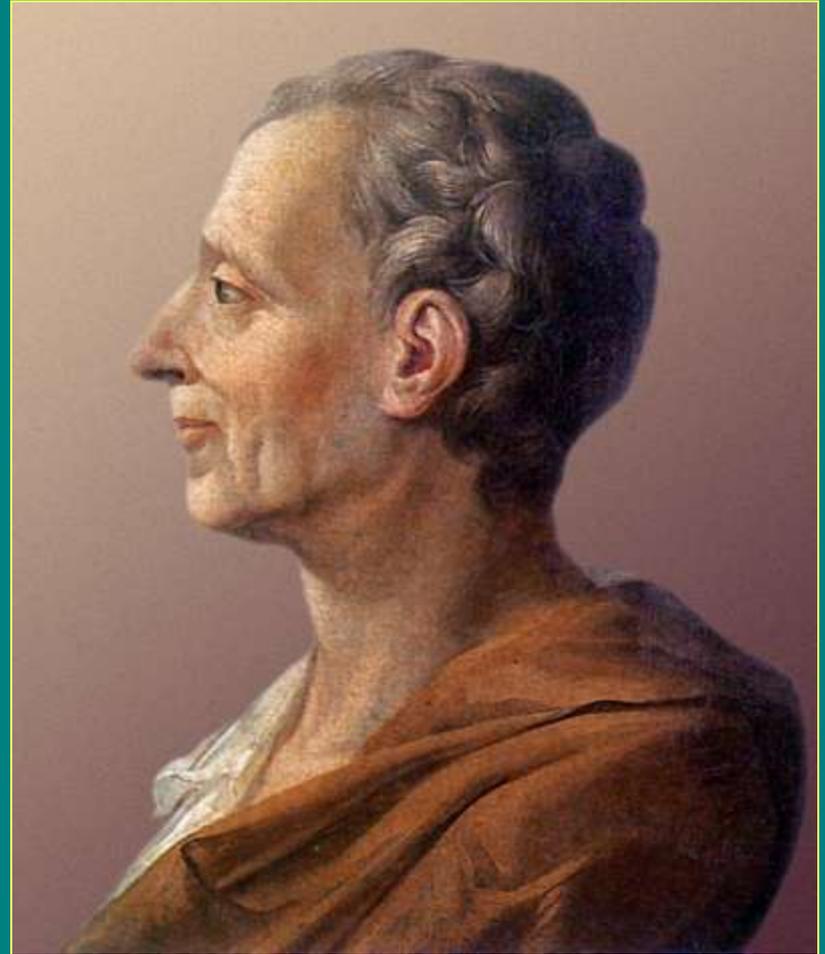


- He pointed out problems with contemporary England and tried to urge reform.

# The Baron de Montesquieu (1689-1755)

▶ *Persian Letters,*  
1721

▶ *On the Spirit of*  
*Laws,* 1758



# Montesquieu's Philosophy

- ▶ Three types of government:
  - Monarchy.
  - Republic.
  - Despotism.
  
- ▶ A separation of political powers ensured freedom and liberty.

# Jean Jacques Rousseau (1712-1778)



- ▶ *A Discourse on the Sciences and Arts, 1750*
- ▶ *Emile, 1762.*
- ▶ *The Social Contract, 1762.*

# Rousseau's Philosophy (I)

- ▶ Question → Does progress in the arts and sciences correspond with progress in morality?
- As civilizations **NO!**ess, they move away from morality.
  - Science & art raised artificial barriers between people and their natural state.
  - Therefore, the revival of science and the arts had corrupted social morals, not improved them!

# Rousseau's Philosophy (II)

- ▶ Virtue exists in the "state of nature," but lost in "society."
- ▶ Government must preserve "virtue" and "liberty."
- ▶ *Man is born free, yet everywhere he is in chains.*
  - The concept of the "Noble Savage."
- ▶ *Liberty, Equality, Fraternity.*
  - Civil liberty → invest ALL rights and liberties into a society.

# Rousseau's Philosophy (III)

## ► In *The Social Contract*:

- The right kind of political order could make people truly moral and free.
- Individual moral freedom could be achieved only by learning to subject one's individual interests to the "General Will."
- Individuals did this by entering into a social contract not with their rulers, but with each other.
  - ✦ This social contract was derived from human nature, not from history, tradition, or the Bible.

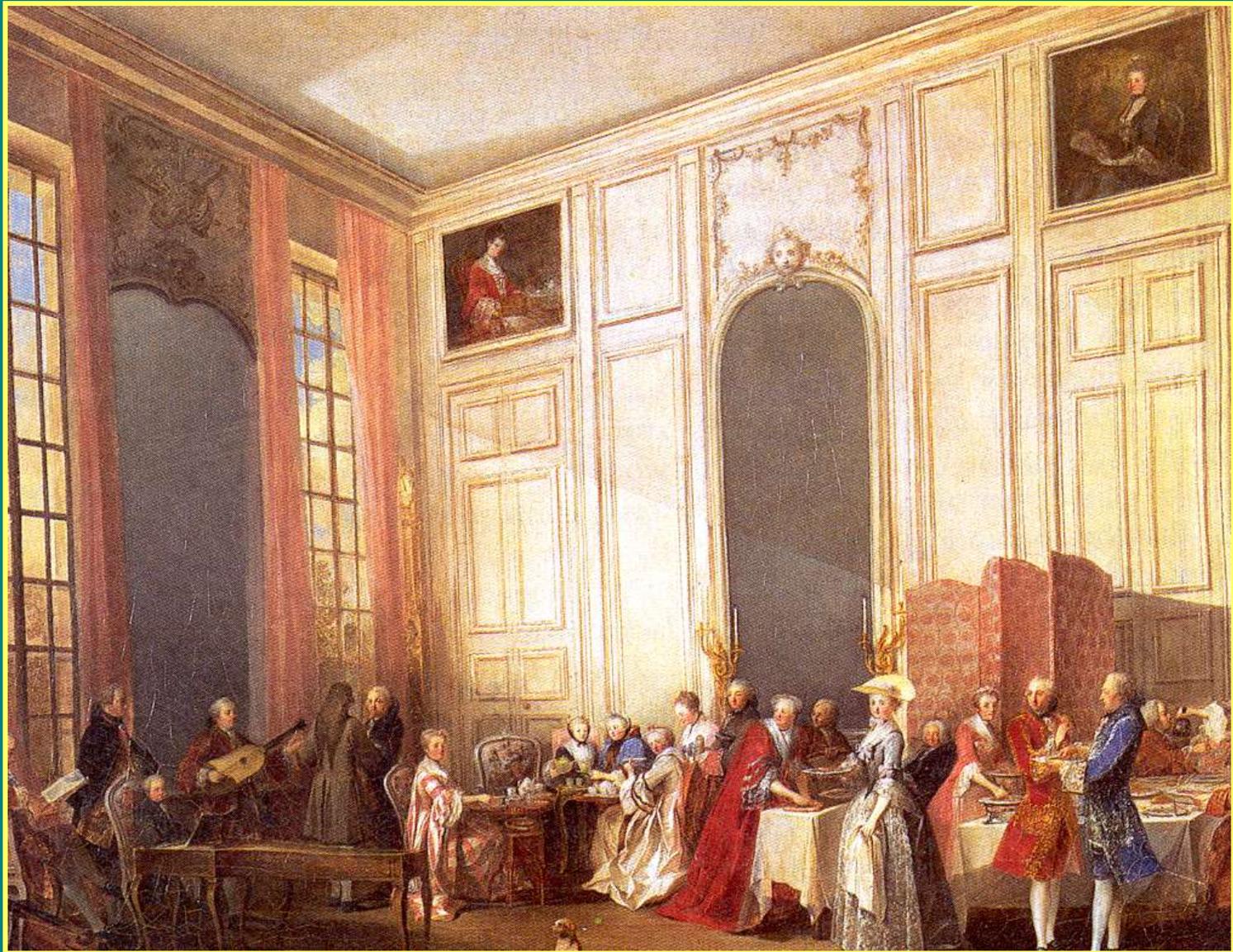
# Rousseau's Philosophy (IV)

- ▶ People would be most free and moral under a republican form of government with direct democracy.
- ▶ However, the individual could be “forced to be free” by the terms of the social contract.
  - He provided no legal protections for individual rights.
- ▶ Rousseau's thinking:
  - Had a great influence on the French revolutionaries of 1789.
  - His attacks on private property inspired the communists of the 19<sup>c</sup> such as Karl Marx.



*Popularizing  
the  
Enlightenment*

# A Parisian Salon



# Madame Geoffrin's Salon



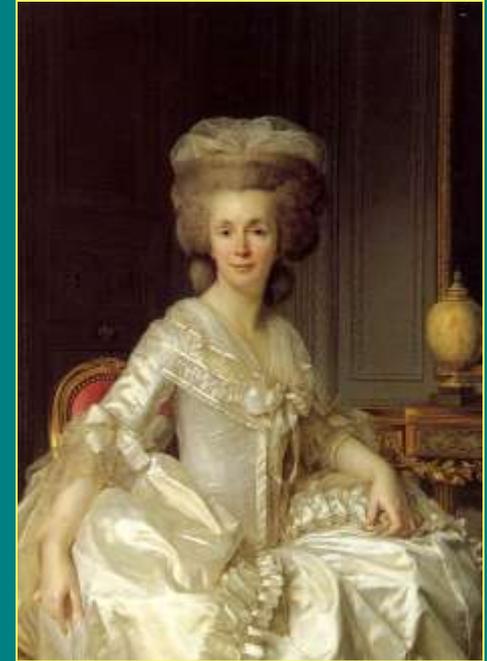
# The *Salonnières*



Madame Geoffrin  
(1699-1777)



Mademoiselle  
Julie de Lespinasse  
(1732\*-1776)



Madame  
Suzanne Necker  
(1739-1794)

# Other Female Salons

- ▶ Wealthy Jewish women created nine of the fourteen salons in Berlin.
- ▶ In Warsaw, Princess Zofia Czartoryska gathered around her the reform leaders of Poland-Lithuania.
- ▶ Middle-class women in London used their salons to raise money to publish women's writings.

# Female *Philosophes*

- ▶ Emilie du Chatalet, a French noblewoman (1706-1749).
- ▶ Wrote extensively about the mathematics and physics of Gottfried Wilhelm von Leibnitz and Isaac Newton.
- ▶ Her lover, Voltaire, learned much of his science from her.



# Denis Diderot (1713-1784)



- ▶ *All things must be examined, debated, investigated without exception and without regard for anyone's feelings.*
- ▶ *We will speak against senseless laws until they are reformed; and, while we wait, we will abide by them.*

# Diderot's *Encyclopédie*

*ENCYCLOPÉDIE,*  
OU  
DICTIONNAIRE RAISONNÉ  
DES SCIENCES,  
DES ARTS ET DES MÉTIERS,  
PAR UNE SOCIÉTÉ DE GENS DE LETTRES.

Mis en ordre & pollié par M. *DIDEROT*, de l'Académie Royale des Sciences & des Belles-Lettres de Prusse; & quant à la PARTIE MATHÉMATIQUE, par M. *D'ALEMBERT*, de l'Académie Royale des Sciences de Paris, de celle de Prusse, & de la Société Royale de Londres.

*Tantum series juncturaque pollet,  
Tantum de medio sumptis accedit honoris!* HORAT.

TOME PREMIER.



A PARIS.

Chez { *BRIASSON, rue Saint Jacques, à la Science.*  
*DAVID l'aîné, rue Saint Jacques, à la Plume d'Or.*  
*LE BRETON, Imprimeur ordinaire du Roy, rue de la Harpe.*  
*DURAND, rue Saint Jacques, à Saint Landy, & au Griffon.*

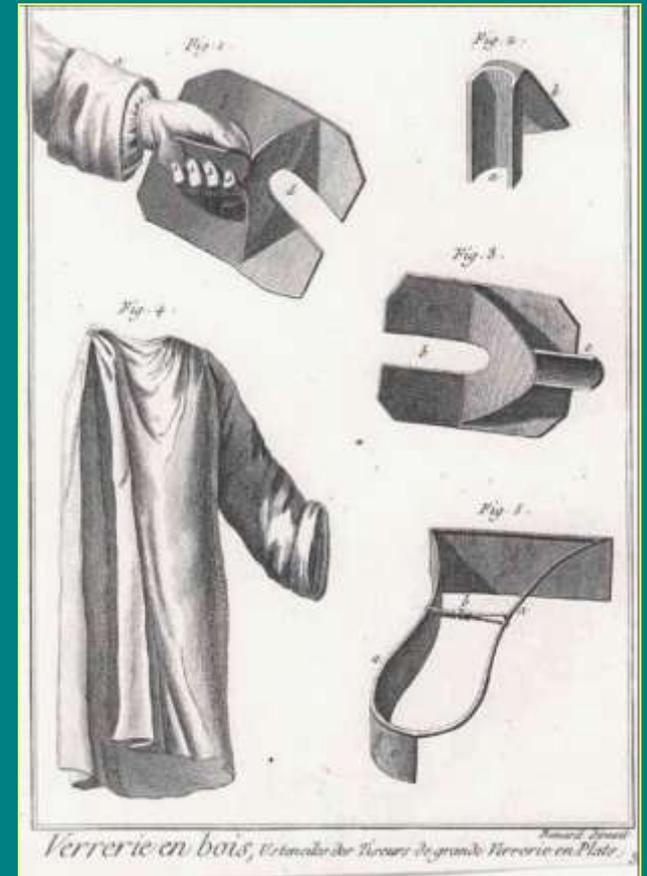
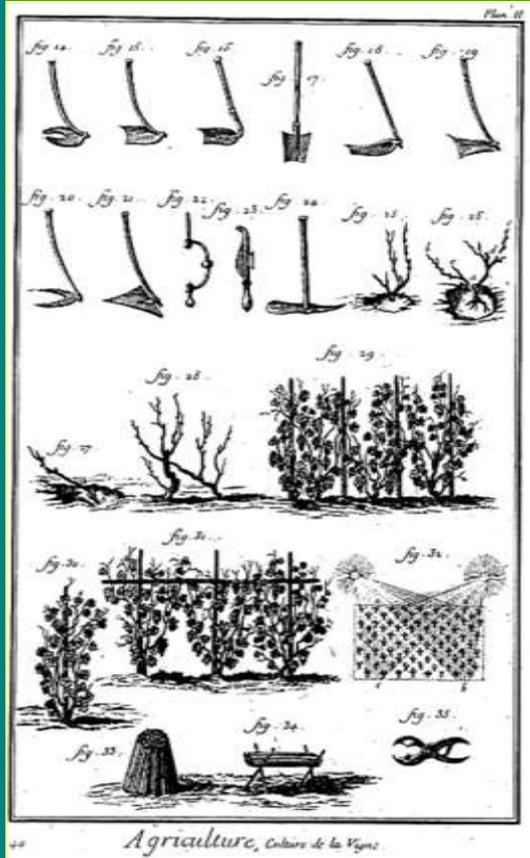
M. DCC. LI

AVEC APPROBATION ET PRIVILEGE DU ROY.

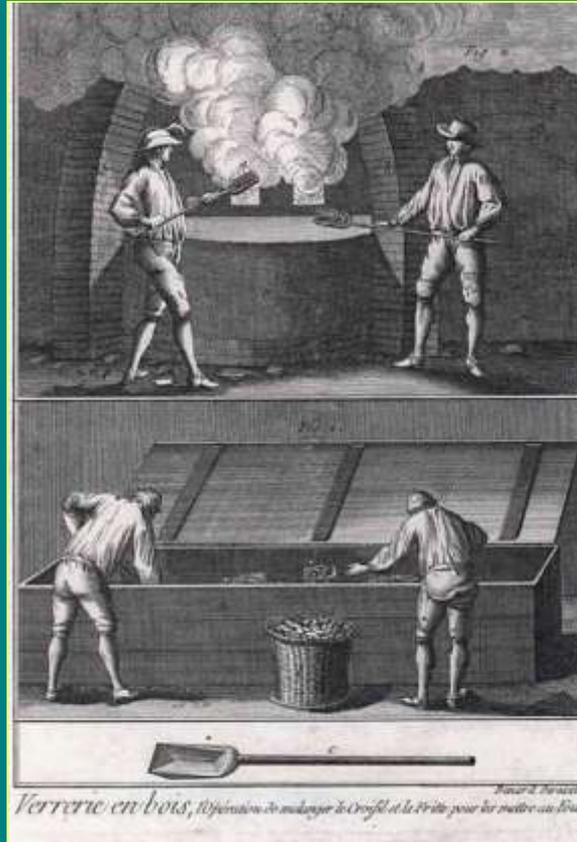
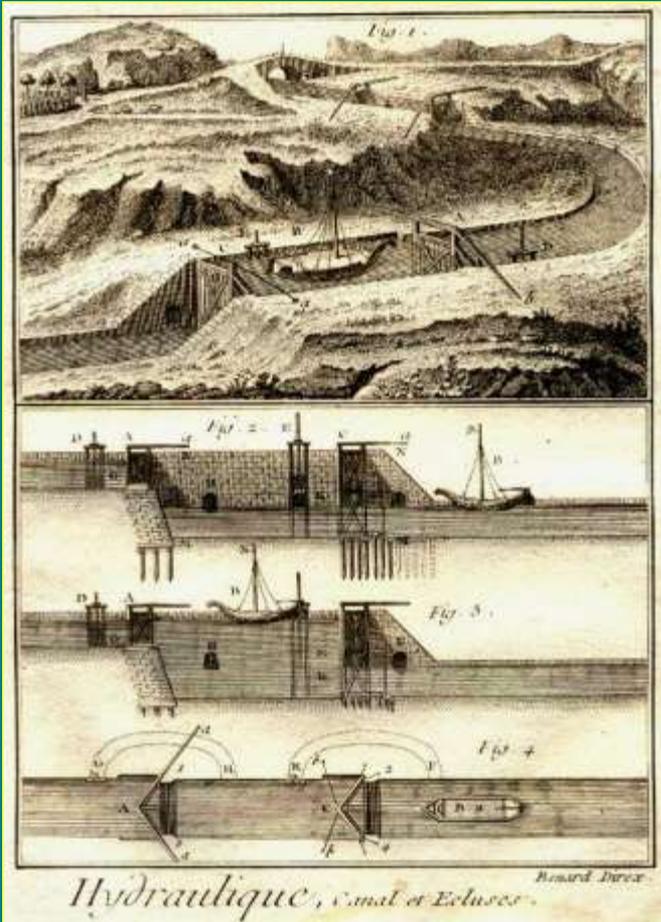
# The *Encyclopédie*

- ▶ *Complete cycle of knowledge.....  
change the general way of thinking.*
- ▶ 28 volumes.
- ▶ Alphabetical, cross-referenced,  
illustrated.
- ▶ First published in 1751.
- ▶ 1500 *livres* a set.

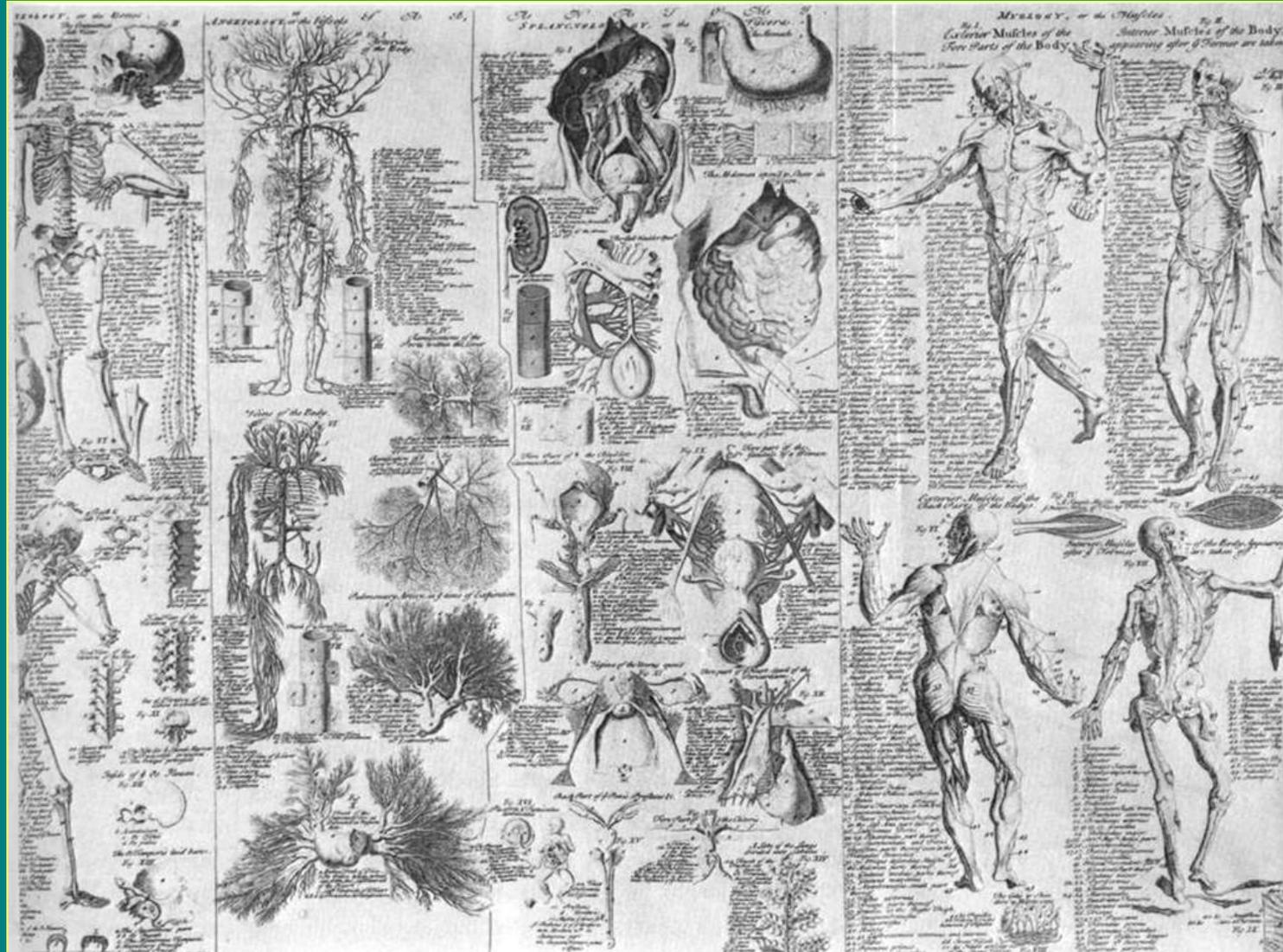
# Pages from Diderot's *Encyclopedie*



# Pages from Diderot's *Encyclopedie*



# Pages from Diderot's *Encyclopedie*



# Subscriptions to Diderot's *Encyclopedie*



# The “Republic of Letters”

- ▶ **URBAN** → gathering of elites in the cities. (salons)
- ▶ **URBANE** → – cosmopolitan, worldly
  - music, art, literature, politics
  - read newspapers & the latest books.
- ▶ **POLITENESS** → proper behavior [  
[self-governed]

# Reading During the Enlightenment

## ▶ Literacy:

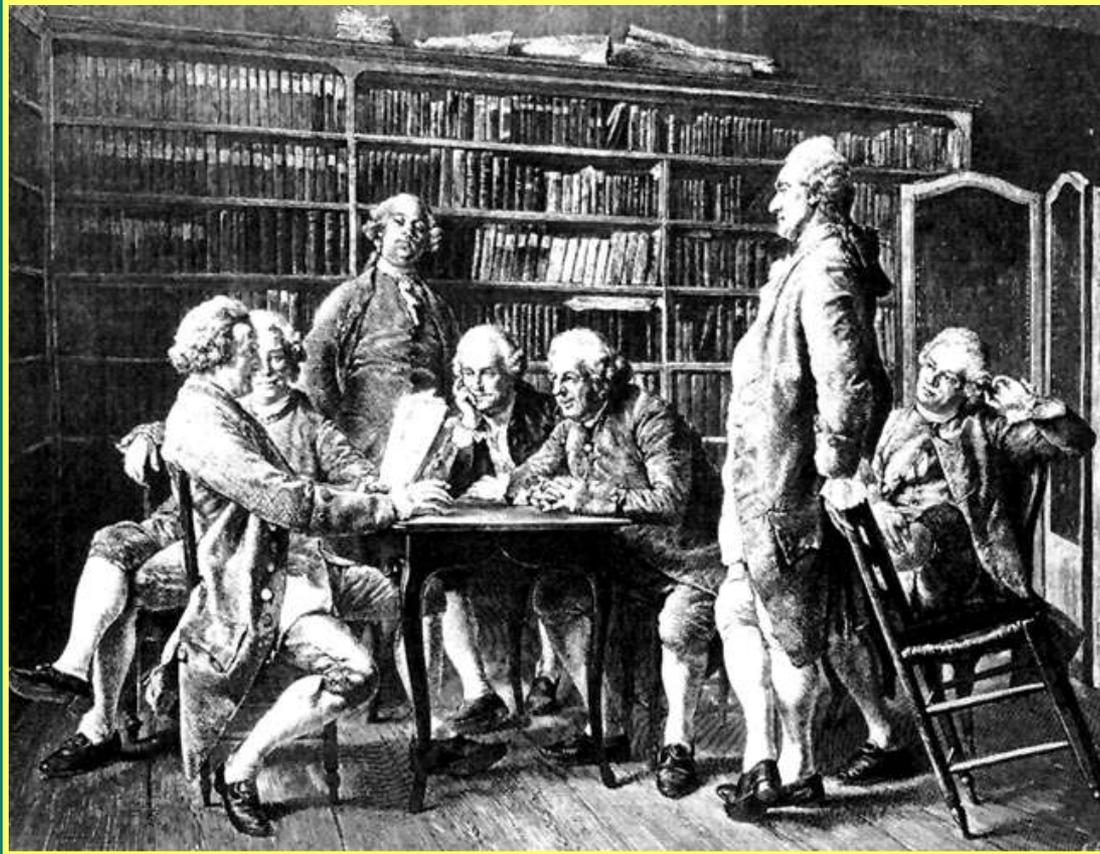
- 80% o/o for men; 60 o/o women.

## ▶ Books were expensive (one day's wages).

## ▶ Many readers for each book (20 : 1)

- novels, plays & other literature.
- journals, memoirs, “private lives.”
- philosophy, history, theology.
- newspapers, political pamphlets.

# An Increase in Reading



# An Increase in Reading

## Literacy Rates: France and the German States

Literacy in Urban France	
1683	51%
1770	60%

Source: E. Le Roy Ladurie, *The Ancien Regime: A History of France 1610–1774* (Cambridge, MA: Basil Blackwell, 1996), p. 309.

Literacy in Rural Normandy	Literacy Rates	
	Males	Females
Late 17th Century	37%	7%
Late 18th Century	73%	46%

Source: F. Furet and M. Ozouf, *Reading and Writing: Literacy in France from Calvin to Jules Ferry* (New York: Cambridge University Press, 1982), p. 160.

Literacy in the German States	
c. 1500	3–4%
c. 1800	50% (Males 50–66%; Females 33–50%)

Source: J. Merriman, *A History of Modern Europe: From the Renaissance to the Age of Napoleon* (New York: W. W. Norton, 1996), pp. 38, 417.

*The eighteenth century was a time when great numbers of Europeans learned to read and write for the first time. Though measures of literacy are notoriously inaccurate (partly because of problems defining specifically what level of ability constitutes literacy), the figures above provide a good guide to overall trends.*

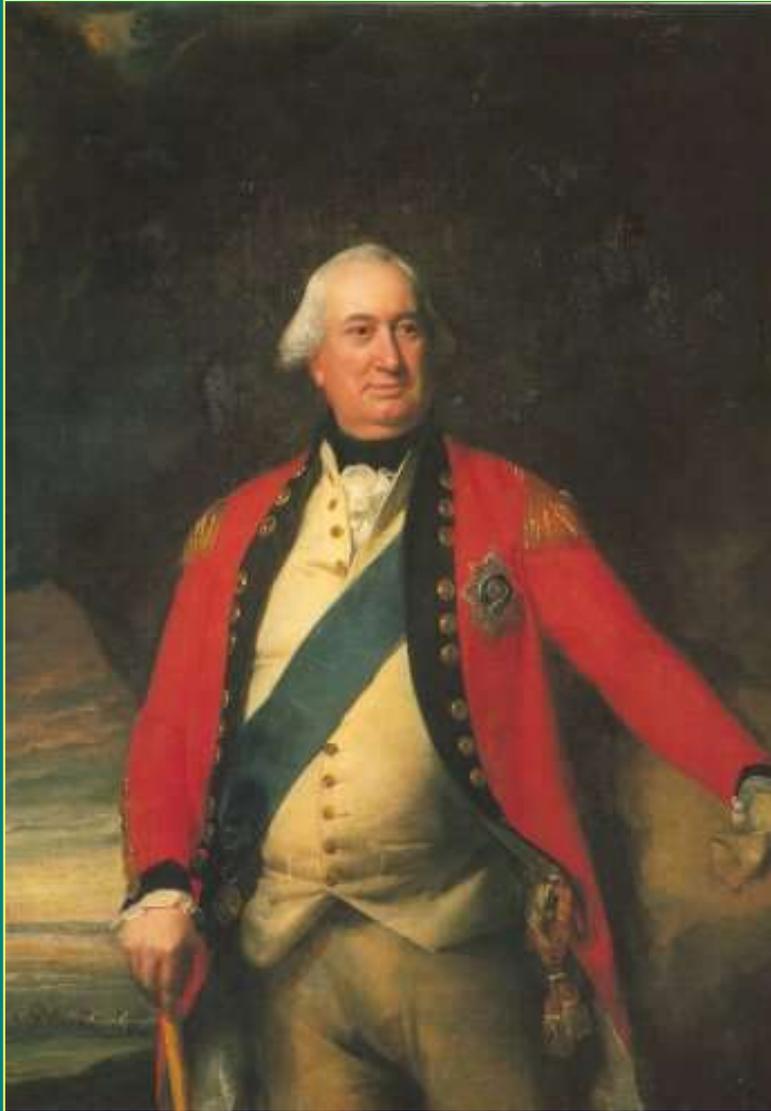
# “Must Read” Books of the Time

<b>Isaac Newton</b>	<i>Mathematical Principles of Natural Philosophy</i> (1687)
<b>John Locke</b>	<i>Essay Concerning Human Understanding</i> (1690)
<b>John Locke</b>	<i>Two Treatises of Civil Government</i> (1690)
<b>Voltaire</b>	<i>Philosophical Letters</i> (1734)
<b>Montesquieu</b>	<i>The Spirit of Laws</i> (1748)
<b>Jean-Jacques Rousseau</b>	<i>The Social Contract</i> (1762)
<b>Jean-Jacques Rousseau</b>	<i>Émile: or On Education</i> (1762)
<b>Denis Diderot and Jean d’Alembert</b>	<i>Encyclopedia</i> (1751–81)
<b>Condorcet</b>	<i>Sketch for a Historical Picture of the Progress of the Human Mind</i> (1795)



*“Enlightened  
Despotism”*

# Frederick the Great of Prussia (r. 1740-1786)



- ▶ 1712 -- 1786.
- ▶ Succeeded his father, Frederick William I (the “Soldier King”).
- ▶ He saw himself as the “**First** **Servant of the State.**”

# Catherine the Great (r. 1762-1796)



- ▶ German Princess  
Sophie Friederike  
Auguste of  
Anhalt-Zerbst.
- ▶ 1729 — 1796.



# Reformer? OR Despot?

1767: Catherine summons the Legislative Commission.

1768-1774: Russo-Turkish War.

1771-1775: Pugachev Rebellion is suppressed.

1772: First partition of Poland.

1785: Charter of Nobility.

1793: Second partition of Poland.

1795: Third partition of Poland.

# Reformer? OR Despot?



# The Partitions of Poland



# Russian Expansionism in the Late 18c



# Joseph II of Austria (r. 1765-1790)

- ▶ 1741 — 1790.
- ▶ His mother was  
Maria Theresa.



# Habsburg Family Crest



# Joseph II, Holy Roman Emperor

1772: First partition of Poland.

1778-1779: He failed to annex Bavaria to Austrian lands.

1781: Declared the Toleration Patent.

1781: Abolition of serfdom and feudal dues.

1785: He failed to exchange the Austria  
Netherlands for Bavaria.

1787-1792: Austria joined Russia in the Russo-Turkish  
War, but little was gained.

1795: Third partition of Poland.

# Joseph II of Austria



# The Legacy of the Enlightenment?

1. The democratic revolutions begun in America in 1776 and continued in Amsterdam, Brussels, and especially in Paris in the late 1780s, put every Western government on the defensive.
2. Reform, democracy, and republicanism had been placed irrevocably on the Western agenda.

# The Legacy of the Enlightenment?

3. New forms of civil society arose --- clubs, salons, fraternals, private academies, lending libraries, and professional/scientific organizations.
4. 19<sup>c</sup> conservatives blamed it for the modern “egalitarian disease” (once reformers began to criticize established institutions, they didn’t know where and when to stop!)

# The Legacy of the Enlightenment?

5. It established a materialistic tradition based on an ethical system derived solely from a naturalistic account of the human condition (the “Religion of Nature”).
6. Theoretically endowed with full civil and legal rights, the individual had come into existence as a political and social force to be reckoned with.