

## **Unit 4: Identifications and Study Questions**

### **Section A: Prophets of a Scientific Civilization**

Leonardo da Vinci, Montaigne, witchcraft, Bacon, *Instauratio Magna*, *Novum Organum*, induction, deduction, empiricism, *The Advancement of Learning*, *The New Atlantis*, Descartes, *Discourse on Method*, *cogito ergo sum*, "Cartesian dualism"

1. Why is the history of science an important part of the history of the modern world?
2. In what sense did science become "modern" in the 17th Century?
3. How did Francis Bacon and Rene Descartes attack earlier methods of seeking knowledge? What did they expect to be the results of the scientific method?
4. Explain the nature of Bacon's "inductive" method. What is his major weakness as a scientist?
5. Describe Descartes' contributions to mathematics. What is meant by Descartes' method of "systematic doubt"? by "Cartesian dualism"?

### **Section B: The Road to Newton: The Law of Universal Gravitation**

Vesalius, William Harvey, Leeuwenhoek, the Ptolemaic system, Nicholas Copernicus, *On the Revolutions of Heavenly Orbs*, Johannes Kepler, Kepler's laws of planetary motion, Galileo, heliocentric theory, Galileo's laws of moving bodies, Isaac Newton, *Mathematical Principles of Natural Philosophy*, the Newtonian system

1. Compare the Ptolemaic conception of the universe with that of Copernicus. How was the Copernican theory further developed by Kepler?
2. What did Galileo's observations tell him about the nature of the heavenly bodies? Why were these views controversial and upsetting?
3. How did Newton build upon the work of his predecessors? What is described as his supreme achievement?
4. What advances were made in the practical and applied sciences in the 17th and 18th Centuries? In what sense was the study of science becoming institutionalized?
5. Discuss the impact of the scientific revolution on the "world of thought." What were the implications of the scientific discoveries for traditional religious beliefs? for political theory and society?

### **Section C: New Knowledge of Human Beings and Society**

relativism and skepticism, Pierre Bayle, Edmond Halley, the use of evidence, paleography, Richard Simon, Baruch Spinoza, John Locke, *Letter on Toleration*, *Reasonableness of Christianity*, *Essay Concerning the Human Understanding*

1. What impact did knowledge of other parts of the world have on Europe and on European thought? How did this knowledge contribute to skepticism?
2. Describe the new sense of evidence that appeared in this age. How did it reveal itself in law? How did it help end the witchcraft persecutions?
3. How was the new sense of evidence reflected (a) in historical scholarship (b) in religious scholarship?
4. Explain the contributions of John Locke (a) on religion and religious toleration, and (b) on the nature of learning and knowledge. What were the implications of his views for social action?

#### **Section D: Political Theory: The School of Natural Law**

Machiavelli, *The Prince*, the idea of natural law, Hugo Grotius, *Law of War and Peace*, Thomas Hobbes, *Leviathan*, John Locke, *Two Treatises of Government*

1. In what sense did Machiavelli attempt to adopt a scientific view in *The Prince*? In what ways was his analysis not scientific?
2. What is meant by "natural law"? "natural right"? How, according to natural law philosophy, was natural law to be "discovered"?
3. Explain how the philosophy of natural law was used to justify both absolutist and constitutional government? Compare and contrast the political theories of Hobbes and Locke.
4. How did Locke justify the English Revolution of 1688? How did he make it seem modern and forward looking?

#### **Section E: The Enlightened Philosophers and Others**

Ancients and Moderns, pietism, John Wesley and George Whitfield, freemasonry, philosophes, concept of public opinion and censorship, Madame de Geoffrin, salons, Denis Diderot and the *Encyclopedia*, Montesquieu, *The Spirit of the Laws*, Voltaire, "Ecrasez l' infame", *Essai sur les moeurs*, Rousseau, *Origin of Inequality Among Men*, *Social Contract*, *Emile*, Physiocrats, Adam Smith, *Wealth of Nations*, laissez-faire, Condorcet, *Sketch of the Progress of the Human Mind*

1. From what earlier sources was the thought of the Enlightenment drawn? What elements are suggested as basic to the spirit of the enlightenment? Of what significance was the idea of progress?
2. What currents of thought and practice contradictory to enlightenment attitudes were also prevalent in this age? How did these differences reflect the gap between popular and elite culture?
3. What general observations may be made about the philosophes and the audience for who they wrote? What effect did censorship have upon the writings of the day?
4. What contributions to the enlightenment were made by the *Encyclopedia*? the physiocrats? Adam Smith?
5. Discuss and compare the contributions made to the thought of the enlightenment by (a) Montesquieu, (b) Voltaire, (c) Rousseau?
6. Explain the attitudes held by enlightened thinkers toward (a) religion and the churches, (b) the function of the state, (c) the problem of liberty.

#### **Section F: Enlightened Despotism: France, Austria, Prussia, and Russia**

Louis XV, taille, free gift, Maupeou parlements, Turgot, Maria Theresa, Pragmatic Sanction, cameralism, Joseph II, Febronianism, the "revolutionary emperor", Frederick the Great, social stratification, hereditary subjects, Catherine the Great, Legislative Commission, Pugachev's Rebellion, Catherine's "Greek Project", "Potemkin Villages"

1. What characteristics distinguished the enlightened despots from earlier monarchs? How did the wars of the mid-18th Century contribute to enlightened despotism?
2. Assess the successes and failures of enlightened despotism in France. How did the attempted abolition of the parlements illustrate the nature of enlightened despotism?
3. Compare the changes introduced by Maria Theresa and by Joseph II in the Austrian empire. Would you characterize both as enlightened despots?
4. Discuss the nature and results of enlightened despotism in Prussia under Frederick the Great. Of what special importance was the stratification of Prussian society?

5. How did the intellectual currents of the Enlightenment affect Russia?
6. Describe the personality and personal qualities of Catherine. Assess her reform program. What seems to have gotten in the way of this program?
7. Describe Catherine's foreign policy and the territorial growth of Russia during her reign. What did Russia gain in the partitions of Poland? (See pages 220-224)
8. What general observations may be made about the accomplishments, shortcomings, and limitations of enlightened despotism in Europe?

### **Section G: An Age of Democratic Revolution: the American Revolution**

age of "Atlantic Revolution", age of "Democratic Revolution", Declaration of Independence, "democratization", federalism, Articles of Confederation

1. What observations may be made about political developments in Europe beginning about 1760? Was this a time period of "one great revolutionary wave"? Yes or no?
2. What common demands were raised by the revolutionary movements of the age? Which could be characterized as "democratic" and which as not?
3. How did the principles announced in the Declaration of Independence reflect the thought of the enlightenment?
4. What advances toward democratic equality were made in connection with the American Revolution? What limitations on these advances can be identified?
5. Discuss the political consequences of the American Revolution for Europe and the world. What effect did it have on older European political attitudes?

# The Discourse on Method

René Descartes

*Seventeenth-century science needed new philosophical and methodological standards for truth to replace those traditionally used to support scientific assumptions. These were forcefully provided by René Descartes (1596-1650) in his Discourse on Method (1637). Born and educated in France, but spending his most productive years in Holland, Descartes gained fame as a mathematician, physicist, and metaphysical philosopher. The following excerpt from his Discourse contains the best-known statement of his approach to discovering truth.*

*Consider: The ways in which Descartes' approach constitutes a break with traditional ways of ascertaining the truth; the weaknesses of this approach and how a modern scientist might criticize this method; how this approach reflects Descartes' background as a mathematician.*

In place of the multitude of precepts of which logic is composed, I believed I should find the four following rules quite sufficient, provided I should firmly and steadfastly resolve not to fail of observing them in a single instance.

The first rule was never to receive anything as a truth which I did not clearly know to be such; that is, to avoid haste and prejudice, and not to comprehend anything more in my judgments than that which should present itself so clearly and so distinctly to my mind that I should have no occasion to entertain a doubt of it.

The second rule was to divide every difficulty which I should examine into as many parts as possible, or as might be required for resolving it.

The third rule was to conduct my thoughts in an orderly manner, beginning with objects the most simple and the easiest to understand, in order to ascend as it were by steps to the knowledge of the most composite, assuming some order to exist even in things which did not appear to be naturally connected.

The last rule was to make enumerations so complete, and reviews so comprehensive, that I should be certain of omitting nothing.

Those long chains of reasoning, quite simple and easy, which geometers are wont to employ in the accomplishment of their most difficult demonstrations, led me to think that everything which might fall under the cognizance of the human mind might be connected together in a similar manner, and that, provided only one should take care not to receive anything as true which was not so, and if one were always careful to preserve the order necessary for deducing one truth from another, there would be none so remote at which he might not at last arrive, nor so concealed which he might not discover. And I had no great difficulty in finding those with which to make a beginning, for I knew already that these must be the simplest and easiest to apprehend; and considering that, among all those who had up to this time made discoveries in the sciences, it was the mathematicians alone who had been able to arrive at demonstrations—that is to say, at proofs certain and evident—I did not doubt that I should begin with the same truths which they investigated.

Unit 4  
Supplemental  
Readings

Section A

# Why Was Science Backward in the Middle Ages?

Michael Postan

The scientific advances of the seventeenth century are commonly considered revolutionary because of their contrast with the previous state of science. One way to gain insight into the origins of the seventeenth-century developments is to look at earlier periods to see whether something was missing then that explains this contrast. In the following selection Michael Postan takes this approach, focusing specifically on the lack of scientific incentives in the Middle Ages.

Consider: Why scientific incentives were lacking in the Middle Ages; the typically medieval traits that discouraged the men of the Middle Ages from scientific exploration; how the concerns and problems faced by Galileo relate to this argument.

It is generally agreed that the Middle Ages preserved for the use of later times the science of the ancients. Therein lies both the scientific achievement and the scientific failure of the medieval civilization. . . . What the Middle Ages took over they did not very much enrich. Indeed so small was their own contribution that historians of science are apt to regard the Middle Ages as something of a pause. . . .

Thus some advance on planes both purely intellectual and technical there was; yet taken together and placed against the vast panorama of medieval life, or indeed against the achievements of Greek and Hellenistic science in the fourth century B.C., or with the scientific activity of the seventeenth century, all these achievements are bound to appear very poor. Why then this poverty?

To this question many answers can be and have been given. But what most of them boil down to is the absence in medieval life of what I should be inclined to call scientific incentives. Students of science sometimes differ about the true inspiration of scientific progress. Some seek and find it in man's intellectual curiosity, in his desire to understand the workings of nature. Others believe that scientific knowledge grew and still grows out of man's attempts to improve his tools and his methods of production; that, in short, scientific truth is a by-product of technical progress. I do not want here to take sides in this particular controversy; what I want to suggest is that the Middle Ages were doubly unfortunate in that both the inspirations, the intellectual as well as the practical, failed more or less.

The easiest to account for is the intellectual. The Middle Ages were the age of faith, and to that extent they were unfavourable to scientific speculation. It is not that scientists as such were proscribed. For on the whole the persecution of men for their scientific ideas was very rare: rare because men with dangerous ideas, or indeed with any scientific ideas at all, were themselves very rare; and it is indeed surprising that there were any at all. This does not mean that there were no intellectual giants. All it means is that in an age which was one of faith, men of intellect and spirit found the calls of faith itself — its elucidation, its controversies, and its conquests — a task sufficient to absorb them. To put it simply, they had no time for occupations like science.

In fact they had neither the time nor the inclination. For even if there had been enough men to engage in activities as mundane as science, there would still be very little reason for them to do so. In times when medieval religious dogma stood whole and unshaken the intellectual objects and the methods of science were, to say the least, superfluous. The purpose of scientific inquiry is to build up piecemeal a unified theory of the universe, of its origin and of its working. But in the Middle Ages was that process really necessary? Did not medieval man already possess in God, in the story of Creation and in the doctrine of Omnipotent Will, a complete explanation of how the world came about and of how, by what means and to what purpose, it was being conducted? Why build up in laborious and painstaking mosaic a design, which was already there from the outset, clear and visible to all? So much for intellectual incentive. The practical incentive was almost equally feeble. Greater understanding of nature could not come from technical improvements, chiefly because technical improvements were so few. . . .

Medieval occupations continued for centuries without appreciable change of method. After the great period of initial development, i.e., after the late eleventh century, the routine of medieval farming in the greater part of Europe became as fixed as the landscape itself. In the history of the smithies, the weaving shops, or the potteries, there were occasional periods of innovation, but taking the Middle Ages as a whole technical improvement was very rare and very slow. For this medieval economic policy was largely to blame. In the course of centuries economic activities got surrounded with a vast structure of by-laws and regulations. . . . For by-laws were as a rule based on the technical methods in existence when they were framed; and once framed they were to stand in the way of all subsequent change.

What is more, so deeply ingrained was the spirit of protection that in every local trade the technical methods were treated as a secret. . . . The men of the Middle Ages were unable to do more than they did because they were lacking in scientific incentive. What they achieved in advancing the practical arts of humanity or in preserving and transmitting ancient learning, they did in so far and as long as they were not typically medieval.

# Early Modern Europe: Motives for the Scientific Revolution

Sir George Clark

*By the seventeenth century, certain broad historical developments had set the stage for individuals to make the discoveries we associate with the scientific revolution. In addition, these individuals were motivated in ways that medieval people were not and used the new and growing body of techniques, materials, and knowledge to make their discoveries. In the following selection, British historian Sir George Clark, a recognized authority on the seventeenth century, examines some of the motives that led people to engage in scientific work.*

*Consider: The distinctions Clark makes among different people engaged in scientific work; why, more than thirteenth- or fourteenth-century people, these seventeenth-century people had a "disinterested desire to know."*

There were an infinite number of motives which led men to engage in scientific work and to clear the scientific point of view from encumbrances; but we may group together some of the most important under general headings, always remembering that in actual life each of them was compounded with the others. There were economic motives. The Portuguese explorers wanted their new instrument for navigation; the German mine-owners asked questions about metallurgy and about machines for lifting and carrying heavy loads; Italian engineers improved their canals and locks and harbours by applying the principles of hydrostatics; English trading companies employed experts who used new methods of drawing charts. Not far removed from the economic motives were those of the physicians and surgeons, who revolutionized anatomy and physiology, and did much more good than harm with their new medicines and new operations, though some of them now seem absurd. Like the doctors, the soldiers called science to their aid in designing and aiming artillery or in planning fortifications. But there were other motives far removed from the economic sphere. Jewellers learnt much about precious and semi-precious stones, but so did magicians. Musicians learnt the mathematics of harmony; painters and architects studied light and colour, substances and proportions, not only as craftsmen but as artists. For a number of reasons religion impelled men to scientific study. The most definite and old-established was the desire to reach absolute correctness in calculating the dates for the annual fixed and movable festivals of the Church: it was a pope who presided over the astronomical researches by which the calendar was reformed in the sixteenth century. Deeper and stronger was the desire to study the wonders of science, and the order which it unravelled in the universe, as manifestations of the Creator's will. This was closer than any of the other motives to the central impulse which actuated them all, the disinterested desire to know.

# The Scientific Intellectual: A Psychological Interpretation of the Scientific Revolution

Lewis Feuer

*The traditional approach to the scientific revolution has been to view it from a technological perspective, tracing the discovery and use of scientific techniques before and during the seventeenth century. Postan and Clark in the preceding selections deal with the motives that did or did not impel people to engage in scientific work. In both cases a "common sense" view of humans was assumed. In recent years scholars have become more sophisticated in applying the social sciences to the scientific revolution. In the following selection Lewis Feuer uses insights from modern psychology and social psychology to explain what turned seventeenth-century men to science.*

## Section C

Consider: *The spirit common to the scientific revolution and how this spirit was manifested in what the scientists were doing; why Postan or Clark might be unwilling to accept Feuer's interpretation.*

That the scientific revolution was the outcome of a liberation of curiosity all would agree. The question, however, remains unsettled: What was the emotional revolution in seventeenth-century thinkers which turned them into men of science? What was the psychological revolution upon which the scientific revolution was founded? Modern science, writes Lynn White, Jr., as it first appeared in the later Middle Ages, "was one result of a deep-seated mutation in the general attitude toward nature." The new science, he continues, was an aspect "of an unprecedented yearning for immediate experience of concrete facts which appears to have been characteristic of the waxing third estate." What, then, was the character of this deep-seated emotional mutation? What changes in attitude and feeling toward human thought, sensation, and knowledge made possible the emergence of scientific intellectuals? . . .

The scientific intellectual was born from the hedonist-libertarian spirit which, spreading through Europe in the sixteenth and seventeenth centuries, directly nurtured the liberation of human curiosity. Not asceticism, but satisfaction; not guilt, but joy in the human status; not self-abnegation, but self-affirmation; not original sin, but original merit and worth; not gloom, but merriment; not contempt for one's body and one's senses, but the hymn of pleasure — this was the emotional basis of the scientific movement of the seventeenth century. Herbert Butterfield has spoken of "a certain dynamic quality" which entered into Europe's "secularization of thought" in the seventeenth century. . . .

The hedonist-libertarian ethic provided the momentum for the scientific revolution, and was in fact the creed of the emerging movements of scientific intellectuals everywhere. . . .

The scientists of the seventeenth century swept away the miserable universe of death, famine, and the torture of human beings in the name of God. They took a world that had been peopled with demons and devils, and that superstition had thronged with unseen terror at every side. They cleansed it with clear words and plain experiment. They found an ethic that advised people to renounce their desires, and to cultivate in a hostile universe the humility which befitted their impotence, and they taught men instead to take pride in their human status, and to dare to change the world into one which would answer more fully to their desires. . . .

The scientific movement in the seventeenth century was not the by-product of an increase of repression or asceticism. It was the outcome of a liberation of energies; it derived from a lightening of the burden of guilt. With the growing awareness that happiness and joy are his aims, man could take frank pleasure in the world around him. Libidinal interest in external objects could develop unthwarted; the world was found interesting to live in — an unending stage for fresh experience. Energies were no longer consumed in inner conflicts. With an awakened respect for his own biological nature, self-hatred was cast off. Empiricism was the expression of a confidence in one's senses: the eyes and ears were no longer evidences of human corruption but trusted avenues to a knowledge of nature. The body was not the tainted seat of ignorance, but the source of pleasures and the means for knowledge. Human energies, hitherto turned against themselves, could reach out beyond concern for exclusive self.

## Second Treatise of Civil Government: Legislative Power

*John Locke*

*Section D*

*In England royal absolutism had been under attack throughout the seventeenth century and finally was defeated by the Glorious Revolution of 1688-1689. At that point there was a definitive shift in power to Parliament, which was controlled by the upper classes. John Locke (1632-1704), in his Two Treatises of Civil Government (1690), justified the revolution and the new political constitution of England and expounded political ideas that became influential during the eighteenth and nineteenth centuries. This work and other writings established Locke as a first-rate empirical philosopher and political theorist. In the following selection from his Second Treatise of Civil Government, Locke analyzes legislative power.*

*Consider: The purposes for entering into society; the extent of and limitations on legislative power; how Locke justifies his argument; how these ideas are contrary to monarchical absolutism.*

134. The great end of men's entering into society being the enjoyment of their properties in peace and safety, and the great instrument and means of that being the laws established in that society, the first and fundamental positive law of all commonwealths is the establishing of the legislative power, as the first and fundamental natural law which is to govern even the legislative. Itself is the preservation of the society and (as far as will consist with the public good) of every person in it. This legislative is not only the supreme power of the commonwealth, but sacred and unalterable in the hands where the community have once placed it. Nor can any edict of anybody else, in what form soever conceived, or by what power soever backed, have the force and obligation of a law which has not its sanction from that legislative which the public has chosen and appointed; for without this the law could not have that which is absolutely necessary to its being a law, the consent of the society, over whom nobody can have a power to make laws but by their own consent and by authority received from them; and therefore all the obedience, which by the most solemn ties any one can be obliged to pay, ultimately terminates in this supreme power, and is directed by those laws which it enacts. Nor can any oaths to any foreign power whatsoever, or any domestic subordinate power, discharge any member of the society from his obedience to the legislative, acting pursuant to their trust, nor oblige him to any obedience contrary to the laws so enacted or farther than they do allow, it being ridiculous to imagine one can be tied ultimately to obey any power in the society which is not the supreme.



142. These are the bounds which the trust that is put in them by the society and the law of God and Nature have set to the legislative power of every commonwealth, in all forms of government. First: They are to govern by promulgated established laws, not to be varied in particular cases, but to have one rule for rich and poor, for the favourite at Court, and the countryman at plough. Secondly: These laws also ought to be designed for no other end ultimately but the good of the people. Thirdly: They must not raise taxes on the property of the people without the consent of the people given by themselves or their deputies. And this properly concerns only such governments where the legislative is always in being, or at least where the people have not reserved any part of the legislative to deputies, to be from time to time chosen by themselves. Fourthly: Legislative neither must nor can transfer the power of making laws to anybody else, or place it anywhere but where the people have.



# The Inalienable Rights of Man

John Locke was the apostle of liberty and constitutional government against tyranny and arbitrary rule.

After spending years in exile, Locke came back to England during the Glorious Revolution. It is not surprising, therefore, that he upheld the principles of the Revolution in his writings. By imagining primitive man in a happy state of nature, Locke argued that the right of life, liberty, and property preceded any government whatsoever. According to Locke, government came into existence by means of a social contract which was made by men of their own free will to protect these rights. The rulers of society received their authority solely from the people and thus could not exercise unlimited power. In the event that a ruler failed in his trust or infringed upon the basic inalienable rights of man, he could legitimately be overthrown. Locke inspired revolutionary thinking in both America and France in the eighteenth century.

Locke published his Two Treatises of Government in 1690. The following selection is from the Second Treatise.

## The State of Nature

To understand political power aright, and derive it from its original, we must consider what state all men are naturally in, and that is a state of perfect freedom to order their actions and dispose of their possessions and persons as they think fit, within the bounds of the law of nature, without asking leave or depending upon the will of any other man. . . .

The state of nature has a law of nature to govern it, which obliges everyone; and reason which is that law, teaches all mankind who will but consult it that, being all equal and independent, no one ought to harm another in his life, health, liberty, or possessions. . . .

And that all men may be restrained from invading others' rights, and from doing hurt to one another, and the law of nature be observed, which willett the peace and preservation of all mankind, the execution of the law of nature is in that state put into every man's hand, whereby everyone has a right to punish the transgressors of that law to such a degree as may hinder its violation. . . .

To this strange doctrine — viz., That in the state of nature every one has the executive power of the law of nature — I doubt not but it will be objected that it is unreasonable for men to be judges in their own cases, that self-love will make men partial to themselves and their friends And on the other side, that ill nature, passion, and revenge will carry them too far in punishing others; and hence nothing but confusion and disorder will follow; and that therefore God hath certainly appointed government to restrain the partiality and violence of men. I easily grant that civil government is the proper remedy for the inconveniences of the state of nature, which must certainly be great where men may be judges in their own case, since 'tis easy to be imagined that he who was so unjust as to do his brother an injury, will scarce be so just as to condemn himself for it. But I shall desire those who make this objection to remember that absolute monarchs are but men, and if government is to be the remedy of those evils which necessarily follow from men's being judges in their own cases, and the state of nature is therefore not to be endured, I desire to know what kind of government that is, and how much better it is than the state of nature.

natural state

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# Political Order and Political Theory

*Although England avoided the Thirty Years' War, she had her own experiences with passionate war and disruption of authority. Between 1640 and 1660 England endured the civil war, the trial and execution of her king, Charles I, the rise to power of Oliver Cromwell, and the return to power of the Stuart king, Charles II. These events stimulated Thomas Hobbes (1588-1679) to formulate one of the most important statements of political theory in history.*

*Hobbes supported the royalist cause during the civil war and served as tutor to the future Charles II. Applying some of the new philosophical and scientific concepts being developed during the seventeenth century, he presented a theory for the origins and proper functioning of the state and political authority. His main ideas appear in *Leviathan* (1651), the title page of which appears here. It shows a giant monarchical figure, with symbols of power and authority, presiding over a well-ordered city and surrounding lands. On close examination one can see that the monarch's body is composed of the citizens of this commonwealth who, according to Hobbes's theory, have mutually agreed to give up their independence to an all-powerful sovereign who will keep order. This is explained in the following selection from Hobbes's book, in which he relates the reasons for the formation of a commonwealth to the nature of authority in that commonwealth.*

*Consider: Why men form such a commonwealth and why they give such power to the sovereign; how Hobbes's argument compares with that of James I; why both those favoring more power for the House of Commons and those favoring increased monarchical power might criticize this argument.*

The final cause, end, or design of men who naturally love liberty, and dominion over others, in the introduction of that restraint upon themselves, in which we see them live in commonwealths, is the foresight of their own preservation, and of a more contented life thereby; that is to say, of getting themselves out from that miserable condition of war, which is necessarily consequent, as hath been shown in chapter XIII, to the natural passions of men, when there is no visible power to keep them in awe, and tie them by fear of punishment to the performance of their covenants, and observation of those laws of nature set down. . . .

For the laws of nature, as *justice, equity, modesty, mercy*, and, in sum, doing to others, as we would be done to, of themselves, without the terror of some power, to cause them to be observed, are contrary to our natural passions, that carry us to partiality, pride, revenge, and the like. And covenants, without the sword, are but words, and of no strength to secure a man at all. . . .

The only way to erect such a common power, as may be able to defend them from the invasion of foreigners, and the injuries of one another, and thereby to secure them in such sort, as that by their own industry, and by the fruits of the earth, they may nourish themselves and live contentedly; is, to confer all their power and strength upon one man, or upon one assembly of men, that may reduce all their wills, by plurality of voices, unto one will: which is as much as to say, to appoint one man, or assembly of men, to bear their person; and every one to own, and acknowledge himself to be author of whatsoever he that so beareth their person, shall act, or cause to be acted, in those things which concern the common peace and safety; and therein to submit their wills, every one to his will, and their judgments, to his judgment. This is more than consent, or concord; it is a real unity of them all, in one and the same person, made by covenant of every man with every man, in such manner, as if every man should say to every man, *I authorise and give up my right of governing myself, to this man, or to this assembly of men, on this condition, that thou give up thy right to him, and authorise all his actions in like manner.* This done, the multitude so united in one person, is called a COMMONWEALTH. . . . This is the generation of that great LEVIATHAN, or rather, to speak more reverently, of that *mortal god*, to which we owe under the *immortal God*, our peace and defence. For by this authority, given him by every particular man in the commonwealth, he hath the use of so much power and strength conferred on him, that by terror thereof, he is enabled to perform the wills of them all, to peace at home, and mutual aid against their enemies abroad. And in him consisteth the essence of the commonwealth; which to define it, is *one person, of whose acts a great multitude, by mutual covenants one with another, have made themselves every one the author, to the end he may use the strength and means of them all, as he shall think expedient, for their peace and common defence.*

And he that carrieth this person, is called SOVEREIGN, and said to have *sovereign power*; and every one besides, his SUBJECT.

# What Is Enlightenment?

Immanuel Kant

THE ENLIGHTENMENT 63

One of the most persuasive thinkers among Enlightenment thinkers was a self-conscious enquirer of a spirit of enlightenment. This is illustrated in the following excerpt from a short essay by Immanuel Kant (1724-1804) of Königsberg in East Prussia. Kant, one of the world's most profound philosophers, is particularly known for his analysis of the human mind and how it relates to nature, as set forth in his Critique of Pure Reason (1781). In the following essay, written in 1784, Kant defines the spirit of the Enlightenment and describes some of its implications.

Consider: What Kant means by "freedom" and why he feels freedom is so central to the Enlightenment; how people can become enlightened and the appropriate environment to facilitate this enlightenment; what Kant would consider "nature"; how Kant relates enlightenment and politics.

Enlightenment is man's leaving his self-caused immaturity. Immaturity is the incapacity to use one's intelligence without the guidance of another. Such immaturity is self-caused if it is not caused by lack of intelligence, but by lack of determination and courage to use one's intelligence without being guided by another. *Sapere Aude!* Have the courage to use your own intelligence! is therefore the motto of the enlightenment.

Through laziness and cowardice a large part of mankind, even after nature has freed them from alien guidance, gladly remain immature. It

Source: Immanuel Kant, "What Is Enlightenment?" in *The Philosophy of Kant*, Carl J. Friedrich, ed. Reprinted by permission of Random House, Inc. (New York, 1949), pp. 132-134, 138-139. Copyright © 1949 by Random House, Inc.

is because of laziness and cowardice that it is so easy for others to usurp the role of guardians. It is so comfortable to be a minor! If I have a book which provides meaning for me, a pastor who has conscience for me, a doctor who will judge my diet for me and so on, then I do not need to exert myself. I do not have any need to think; if I can pay, others will take over the tedious job for me. The guardians who have kindly undertaken the supervision will see to it that by far the largest part of mankind, including the entire "beautiful sex," should consider the step into maturity, not only as difficult but as very dangerous....

But it is more nearly possible for a public to enlighten itself: this is even inescapable if only the public is given its freedom....

All that is required for this enlightenment is freedom, and particularly the least harmful of all that may be called freedom, namely, the freedom for man to make public use of his reason in all matters....

The question may now be put: Do we live at present in an enlightened age? The answer is: No, but in an age of enlightenment. Much still prevents men from being placed in a position or even being placed into a position to use their own minds securely and well in matters of religion. But we do have very definite indications that this field of endeavor is being opened up for men to work freely and reduce gradually the hindrances preventing a general enlightenment and an escape from self-caused immaturity. In this sense, this age is the age of enlightenment and the age of Frederick (The Great)....

I have emphasized the main point of enlightenment, that is of man's release from his self-caused immaturity, primarily in matters of religion. I have done this because our rulers have no interest in playing the guardian of their subjects in matters of arts and sciences. Furthermore immaturity in matters of religion is not only most noxious but also most dishonorable. But the point of view of a head of state who favors freedom in the arts and sciences goes even farther; for he understands that there is no danger in legislation permitting his subjects to make public use of their own reason and to submit publicly their thoughts regarding a better framing of such laws together with a frank criticism of existing legislation. We have a shining example of this; no prince excels him whom we admire. Only he who is himself enlightened does not fear spectacles when he at the same time has a well-disciplined army at his disposal as a guarantee of public peace. Only he can say what (the ruler of a) free state dare not say: *Argue as much as you want and about whatever you want but obey!*

Section F

## The System of Nature

Baron d'Holbach

*Most Enlightenment thinkers rejected traditional sources of authority such as the Church or custom. Instead, they argued that people should rely on reason, experience, and nature as their guides. Baron d'Holbach (1723-1789) exemplifies this in his varied writings. A German aristocrat and scientist who assumed French citizenship, d'Holbach is best known for his attacks on organized religion and his contributions to Diderot's Encyclopedie. In the following selection from his System of Nature (1770), Holbach focuses on the meaning of enlightenment and what should be done to obtain this enlightenment.*

*Consider: Why enlightenment is so important, whether "nature" has a meaning similar to God for Holbach, the ideas about the nature of enlightenment that Kant and Holbach share.*

The source of man's unhappiness is his ignorance of Nature. The pertynacy with which he clings to blind opinions imbibed in his infancy, which interweave themselves with his existence, the consequent prejudice that warps his mind, that prevents its expansion, that renders him the slave of fiction, appears to doom him to continual error. He resembles a child destitute of experience, full of idle notions: a dangerous heaven mixes itself with all his knowledge: it is of necessity obscure, it is vacillating and false.—He takes the tone of his ideas on the authority of others, who are themselves in error, or else have an interest in deceiving him. To remove this Cimmerian darkness, these barriers to the improvement of his condition; to disentangle him from the clouds of error that envelop him, that obscure the path he ought to tread; to guide him out of this Cretan labyrinth, requires the clue of Ariadne, with all the love she could bestow on Theseus. It exacts more than common exertion; it needs a most determined, a most undaunted courage—it is never effected but by a persevering resolution to act, to think for himself; to examine with rigour and impartiality the opinions he has adopted....

The most important of our duties, then, is to seek means by which we may destroy delusions that can never do more than mislead us. The remedies for these evils must be sought for in Nature herself; it is only in the abundance of her resources, that we can rationally expect to find antidotes to the mischiefs brought upon us by an ill-directed, by an overpowering enthusiasm. It is time these remedies were sought; it is time to look the evil boldly in the face, to examine its foundations, to scrutinize its super-structure: reason, with its faithful guide experience, must attack in their entrenchments those prejudices to which the human race

has but too long been the victim. For this purpose reason must be restored to its proper rank,—it must be rescued from the evil company with which it is associated....

Truth speaks not to these perverse beings—her voice can only be heard by generous minds accustomed to reflection, whose sensibilities make them lament the numberless calamities showered on the earth by political and religious tyranny—whose enlightened minds contemplate with horror the immensity, the ponderosity of that series of misfortunes with which error has in all ages overwhelmed mankind.

The civilized man, is he whom experience and social life have enabled to draw from nature the means of his own happiness; because he has learned to oppose resistance to those impulses he receives from exterior beings, when experience has taught him they would be injurious to his welfare.

The enlightened man, is man in his maturity, in his perfection; who is capable of pursuing his own happiness; because he has learned to examine, to think for himself, and not to take that for truth upon the authority of others, which experience has taught him examination will frequently prove erroneous....

It necessarily results, that man in his researches ought always to fall back on experience, and natural philosophy: These are what he should consult in his religion—in his morals—in his legislation—in his political government—in the arts—in the sciences—in his pleasures—in his misfortunes. Experience teaches that Nature acts by simple, uniform, and invariable laws. It is by his senses man is bound to this universal Nature; it is by his senses he must penetrate her secrets; it is from his senses he must draw experience of her laws. Whenever, therefore, he either fails to acquire experience or quits its path, he stumbles into an abyss, his imagination leads him astray.

# The Social Contract

Jean Jacques Rousseau

More than anyone else, Jean Jacques Rousseau (1712-1778) tested the outer limits of Enlightenment thought and went on to criticize its very foundations. Born in Geneva, he spent much of his life in France (mainly in Paris), where he became one of the philosophers who contributed to the Encyclopaedia. Yet he also undermined Enlightenment thought by holding that social institutions had corrupted people and that human beings in the state of nature were more pure, free, and happy than in modern civilization. This line of thought provided a foundation for the growth of Romanticism in the late eighteenth and early nineteenth centuries. Rousseau's most important political work was *The Social Contract* (1762), in which he argued for popular sovereignty. In the following selection from that work, Rousseau focuses on what he considers the fundamental argument of the book—the passage from the state of nature to the civil state by means of the social contract.

Consider Rousseau's solution to the main problem of *The Social Contract*, the advantages and disadvantages of the social contract; what characteristics of Enlightenment thought are reflected in this selection.

"The problem is to find a form of association which will defend and protect with the whole common force the person and goods of each associate, and in which each, while uniting himself with all, may still obey himself alone, and remain as free as before." This is the fundamental problem of which *The Social Contract* provides the solution.

The clauses of this contract are so determined by the nature of the act that the slightest modification would make them vain and ineffective; so that, although they have perhaps never been formally set forth, they are everywhere the same and everywhere tacitly admitted and recognised, until, on the violation of the social compact, each regains his original rights and resumes his natural liberty, while losing the conventional liberty in favour of which he renounced it.

These clauses, properly understood, may be reduced to one—the total alienation of each associate, together with all his rights, to the whole community: for, in the first place, as each gives himself absolutely, the conditions are the same for all; and, this being so, no one has any interest in making them burdensome to others.

Moreover, the alienation being without reserve, the union is as perfect as it can be, and no associate has anything more to demand: for, if the individuals retained certain rights, as there would be no common superior to decide between them and the public, each, being on one point his own judge, would ask to be so on all: the state of nature would thus continue, and the association would necessarily become inoperative or tyrannical. Finally, each man, in giving himself to all, gives himself to nobody; and as there is no associate over whom he does not acquire the same right as he yields others over himself, he gains on equivalent for everything he loses, and an increase of force for the preservation of what he has.

If then we discard from the social compact what is not of its essence, we shall find that it reduces itself to the following terms—

Each of us puts his person and all his power in common under the supreme direction of the general will, and, in our corporate capacity, we receive each member as an indivisible part of the whole.

The passage from the state of nature to the civil state produces a very remarkable change in man, by substituting justice for instinct in his conduct, and giving his actions the morality they had formerly lacked. Then only, when the voice of duty takes the place of physical impulses and right of appetite, does man, who so far had considered only himself, find that he is forced to act on different principles, and to consult his reason before listening to his inclinations. Although, in this state, he deprives himself of some advantages which he got from nature, he gains in return others so great, his faculties are so stimulated and developed, his ideas so extended, his feelings so ennobled, and his whole soul so uplifted, that, did not the abuses of this new condition often degrade him below that which he left, he would be bound to bless continually the happy moment which took him from it for ever, and, instead of a stupid and unimaginative animal, made him an intelligent being and a man.

Let us draw up the whole account in terms easily commensurable. What man loses by the social contract is his natural liberty and an unlimited right to everything he tries to get and succeeds in getting; what he gains is civil liberty and the proprietorship of all he possesses. If we are to avoid mistake in weighing one against the other, we must clearly distinguish natural liberty, which is bounded only by the strength of the individual, from civil liberty, which is limited by the general will; and possession, which is merely the effect of force or the right of the first occupier, from property, which can be founded only on a positive title.

We might, over and above all this, add, to what man acquires in the civil state, moral liberty, which alone makes him truly master of himself; for the mere impulse of appetite is slavery, while obedience to a law which we prescribe to ourselves is liberty. But I have already said too much on this head, and the philosophical meaning of the word liberty does not now concern us.

## Eighteenth-Century Europe: Enlightened Absolutism

M. S. Anderson

*Historians have long debated exactly how much the Enlightenment influenced monarchs of the time. Traditionally there has been considerable acceptance of the view that monarchs such as Joseph II of Austria and Frederick II of Prussia were enlightened. In recent years this view has been seriously narrowed and questioned to the point where many historians feel that enlightened despotism and enlightened absolutism are no longer terms that can usefully be applied to these eighteenth-century monarchs. M. S. Anderson, of the London School of Economics and Political Science, supports this newer critical view. In the following selection he analyzes the limited ways in which eighteenth-century monarchs can be considered enlightened.*

*Consider: The characteristics of enlightened despotism, why Joseph II (see the primary documents in this chapter) and Frederick II (see primary documents in the preceding chapter) might be considered enlightened despots; how enlightened despotism differs from seventeenth-century absolutism and the "new monarchs" of the sixteenth century.*

It is generally agreed that in the later eighteenth century, notably in the generation from about 1760 to 1790, many of the monarchies of Europe began to display new characteristics. In one state after another rulers or ministers (Catherine II in Russia, Frederick II in Prussia, Gustavus III in Sweden, Charles III in Spain, Struensee in Denmark, Tanucci in Naples) began to be influenced, or to claim that they were influenced, by the ideas which economists and political philosophers, notably in France, had been proclaiming for several decades. This 'enlightened despotism' is in many ways an unsatisfactory subject of study. Except in a few cases—namely those of the Archduke Leopold in Tuscany (1765–90) and his better-known brother Joseph in the Habsburg dominions—it was always largely superficial and contrived. Usually the policies actively pursued by the enlightened despots, however warm the welcome they gave to new theories of government and administration, ran to some extent in traditional channels.

All of them attempted to improve the administration of their states, especially with regard to taxation, and to unify their territories more effectively. Many of them attempted or at least envisaged judicial reforms,

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notably by the drawing up of elaborate legal codes. The code of civil procedure and the penal code issued by Joseph II in 1781 and 1787, and above all the great Prussian code of 1791, the outcome of many years of labour during the reign of Frederick II, are outstanding examples. With few exceptions the enlightened despots hoped to achieve their ends by increasing their own authority and the power of the central government in their states. But with the partial exception of the desire for legal reform none of these ambitions was new. In differing ways they had been seen in the activities of the 'New Monarchs' of the sixteenth century and in those of Louis XIV and his contemporaries; they were to be seen once more, with greater intensity and effect, in those of Napoleon I. Some elements of novelty can, it is true, be detected in the attitude of several rulers and governments of the later eighteenth century. In particular the growing humanitarianism, which 'enlightened' thought and writing had done much to foster, was now inspiring efforts to abolish judicial torture and greater consideration than in the past for the interests of such groups as orphans and old soldiers. But there were few rulers whose policies in practice represented more than the development of ambitions cherished by their predecessors. Thus Frederick II made little real alteration in the administrative system bequeathed him by his father; and most of his territorial ambitions, notably in Poland, were also inherited. Most of the changes which Catherine II attempted or contemplated in Russia—the secularization of church lands in 1764, the reform of local government in 1775, the codification of the law, attempted particularly by the unsuccessful Legislative Commission of 1767—had been suggested during the reigns of her predecessors. What distinguished Frederick and Catherine from Frederick William I and Peter the Great was not so much their policies as their explicit justification of them (especially in the case of Catherine) in terms of advanced contemporary thought. It was this appeal to intellectual and moral standards rather than to those of mere expediency that made these rulers appear to be doing something new. And this appeal was essentially spurious. No ruler of any major state could allow his policies to be dictated by theory, however attractive. The history, geographical position, and resources of the state he ruled, the power or weakness of its neighbours, and a host of other factors, set limits to what he might reasonably attempt in either internal or external affairs. Joseph II spent his reign in a continuous series of efforts to improve the administration of his territories and the condition of his subjects. More than any other major ruler of the period he was truly inspired by the theories of government then current in enlightened Europe. Yet his disregard of realities in his relations with the Hungarians, with the inhabitants of his Netherlands provinces, and with the Catholic church, and the failure and near-collapse to which this disregard had led by the end of his reign, were the supreme proof that, as always, there was an 'order of possible progress' in politics and all other aspects of life in the eighteenth century, and that this order could be disregarded only to a very limited extent.