FOR FURTHER REFLECTION

1. To what extent do you think it is good for people to be unreasoning about their religious beliefs and practices?

2. What would be the most important purpose for reasoning about one’s own beliefs and religious practices? To support them? To understand them more deeply? To disprove the claims of others?

3. How much should religious people be consciously reflective about the overall coherence of all beliefs with each other and with other human experiences? Why?

4. We usually say that people have a right to believe whatever they want. What limits would you set to this right, if any? Not to practice human sacrifice? Not to contradict science?

5. Which in fact is closest to how you would describe your own faith: blind faith or reasoned faith? Which do you think is better and why?

SUGGESTED READINGS


José Ignacio Cabeza, ed., Scholasticism: Cross-Cultural and Comparative Perspectives, 1998. Identifies rational theologies in seven different major religious traditions of the world.


Thomas Aquinas, Summa Theologica, Part, question 2, article 3. The five arguments for God’s existence.


Modern Religiousness and Beyond

Different people mean different things by the word “modern.” For most of us it means whatever has happened in our own lifetimes. Historians say that the modern era in Western civilization began about four hundred years ago because it was then that a number of ideas that are still influential today began to gain acceptance in Western culture. Because what is usually meant by “modernity” was originally a development in Western culture, the following chapters will focus mostly on Western developments in religious thought and practices.

During these last four hundred years, a new form of religiousness has slowly developed as part of the overall cultural transformation that makes up “modernity.” Some aspects of it grew comfortably from within traditional religion. Other aspects of modern religiousness originated first in opposition to certain religious beliefs or practices. This opposition sometimes ended up changing religion, to the point where ideas that were once considered unreligious or even antireligious eventually came to be part of some peoples’ religion.
It is difficult to be clear on what is "modern" in religion because many religious groups that exist in contemporary times are not themselves very modern in their type of religiousness. Even religious movements inspired by modern perspectives are not entirely modern. All religious groups are made up of us human beings, all of whom are inheritors of primitive, archaic, and historic modes of thought, both from our overall cultural history and from our individual development from infancy to childhood to adolescence to our always incomplete maturity. Even though we might hold some of the modern ideas that will be described soon, we also might believe in spirits, be influenced by some taboo morality, think of some rituals or symbols as semimagical, and so forth.

The complexity of all this will be laid out in more orderly form as we go along. Nevertheless, it can help now to provide a simple guide to identifying what is meant by the modern stage of religious development. There are four major aspects of it. (Eventually, some modern aspects will be reinforced by the "postmodern" thought to be described in Chapter Fifteen; other aspects will be challenged by it.)

A first aspect of modern religiousness is the elimination of the great gulf between earthly imperfection and divine perfection that historic religiousness often emphasized. Modernism has not wiped out the distinction entirely, but it has changed it. Most Christians, for example, were once taught to think of this earth as a fallen and corrupt place, infected by sin and death, doomed to pass away at the apocalyptic end of the world. Now the modern idea has crept into Christian thought that this world and its comforts and challenges, its loves and joys, are also divine gifts, worthy and even holy enough to rejoice in religiously.

A second aspect of modern religiousness is its appreciation of freedom, variety, and change. This is a radical idea for historic religion. Religion traditionally has offered stability and security in the face of threatening change and anxious uncertainty. Modern religiousness, however, is tolerant of variety and freedom and may actively support them. Modern religiousness tends to believe that no religious doctrine is the final word on any subject. It defines ideal human "personness" in a way that emphasizes individual choices, with all the uncertainty and instability this might risk. This second aspect of modern religiousness makes religious tolerance possible. The great historic religions are tempted, logically enough, to want to suppress other religions as erroneous and dangerous to the true faith. Modern thought preaches mutual tolerance among religions and, eventually, even for the nonreligious.

A third aspect, closely tied to the first two, is a fairly individualistic humanism. We will see again that there are different meanings to the word "individualism." In general, modern culture, building upon some classical notions, argues that every person has certain basic individual rights, as well as individual responsibility for one's choices. This individualism implies a humanism, a belief in the ability of us humans to take constructive charge of our own lives and in the basic value of human well-being. It usually implies that traditional authoritarian institutions, including religious institutions, must not seek to abrogate basic human rights and freedom.

Archaic cultures define a person through the person's group, usually characterized by a combination of religious and political authority. Historic cultures define a person through the person's relation to the universal or cosmic structure, often defined and enforced by religious leaders. Modern culture has come to define the person as a center of personal freedom and responsibility. Combined with openness to change and a greater worldliness, this often appears in the form of a humanistic belief in progress here on earth, in the hope for better earthly conditions for future generations through human efforts.

A fourth aspect is skepticism about miracles. Such skepticism is almost as old as the earliest classical thought of Greece, India, and China. But the development of science and scientific attitudes has led many more people to be skeptical of miracles. Many a modern religious person will prefer to define religion in such a way that the notion of miracles is omitted completely. This includes a general reluctance to speak of the supernatural, of revelation as miraculous, of divine healings, or of any other sort of specific divine interventions into the events of nature and history. God's activity is portrayed instead as a more general ongoing supportiveness and presence. This is a major characteristic of what has been called "liberal" theology.

In Chapter Fifteen we will deal with those who have adopted what they call "postmodern" thought. The postmodernists usually claim that there is a fifth characteristic of the European Enlightenment that is specifically modern. That is an emphasis on rationality.

It is certainly true that modern culture has included an emphasis on rationality, especially in the form of modern science. But an emphasis on rationality is not specifically modern, nor is it solely European. Rationality in the West flourished long before modern times, from the axial age in ancient Greece through twelfth- and thirteenth-century scholasticism in Europe. Rationalistic philosophies can also be found in the axial age in China and India. Rationalistic analyses had a significant impact in ninth-century India, among philosophical Muslims during the same time and later, and in the Neo-Confucian movements in China in the eleventh to thirteenth centuries. But it is good to be aware that many writers now ignore or underplay this history. They claim instead that the strongly rationalistic temper of modern science is peculiarly modern and not a characteristic aspect of much of human thought in different times and cultures. At stake here is the question.
of whether a rationalist approach is simply a local custom of some Europeans at a certain point in history, or whether a rationalist approach represents a common tool that humans have found valuable and valid in many cultural contexts. Chapter Fifteen will deal with this when describing the perspective known as cultural relativism. The combination of an emphasis on rationality and skepticism about miracles may make modern religion sound irreligious. There is certainly no common agreement among Westerners about what religiousness should be like in these contemporary times. What we can do is go back to the approximate beginnings of modern thought and sort out some of the events and ideas to better understand and evaluate modern religiousness. For convenience we can start at about 1600, the time of Galileo.

CHAPTER TWELVE
Science and Secularity

The Modern Era Begins

We have seen that adherents of historic religion tend to believe in a perfect existence that lies beyond this earthly existence. By contrast with the mind’s image of perfection, concrete earthly conditions appear as dismal and fallen, unworthy of concern except as a temporary condition to endure righteously on the way to perfect happiness. Modern thought, however, begins with a new confidence that somehow or another earthly life has intrinsic importance and is worth taking very seriously, worthy of enthusiasm and dedication for its own sake.

In the West this modern turn to the world has its roots in the fifteenth-century Renaissance in Europe. For a variety of reasons, Renaissance Europe experienced a great surge of energy and optimism about life in this world. The new art, architecture, and music exhibited a fascination with worldly life and beauty. Great exploratory expeditions sailed from European ports to discover new continents and new wealth. Mechanical inventions multiplied; mathematical methods improved.

All of these were an early part of the great cultural development that led to the modern era. All of them together contributed eventually to a different perspective on human existence, on mystery, and on hopes for the future. This meant that there would also develop a new sense of what religiousness is, a new sense of the deepest mysteries of existence, and how we are to discover meaning and hope in them rather than threat and confusion.

This shift towards a new way of understanding existence did not occur overnight. In the sixteenth century many people still expected the apocalyptic end of the world to arrive soon. These same people were more often inclined to see humankind as fallen, weak, and sinful rather than wise, good, and creative. These more pessimistic souls were also likely to fear Satan’s power and to persecute witches. Even as the foundations of modernity were laid, the worst persecution of witches in European history broke out. By the
Enlightenment of the eighteenth century, though, many elements of modern culture were in place. It is a shift that is still just beginning in the lives of many people around the world, including those in supposedly modern cultures. The growth of early modern science was a major aspect of this shift in culture.

**EARLY MODERN SCIENCE**

From about 1600 to 1800 in Europe and America there developed a pattern of thought that soberly celebrated the complex orderliness of the universe. In this orderly universe there was no place for miracles, spirits, and omens. Believers identified themselves by various names: natural philosophers, enlightened ones, free thinkers, desists. Many of these we would now call scientists, though that word was not invented until the nineteenth century.

**Galileo and the Beginnings of Modern Science**

Galileo Galilei (1564-1642) died after more than fifty years of prodigious scientific work. He is popularly remembered for his support of Copernicus’ argument in favor of the theory of the ancient Greek Aristarchus, who claimed that the earth went around the sun. But Galileo did more than support the Copernican theory of the solar system; he promoted much of the basic method that came to be known as science.

Up to Galileo’s time and beyond, science was a part of philosophy. It tried to explain not merely what patterns existed in nature, but also their ultimate purposes. As we have seen a number of times, the human mind tends to presume that things make sense. The animist and polytheist assume that many events are caused by spirits and gods who have some humanlike motive for intervening in life. Those who believe in a personal universal power, such as God, say that all events are under God’s control, so that all things that happen do so in accord with God’s purpose. To understand reality thoroughly, then, it would be necessary to explain why God made them happen that way, for what purpose.

One theologian of Galileo’s time, for example, is said to have contradicted Galileo’s claim that the planet Jupiter had moons. Because no one on earth could see the moons without a very good telescope, he contended, there was no purpose for God to put moons around Jupiter. They could not be guides for the navigator as the stars were. They could not move people to admire God’s talent as a creator since they were invisible to most people. Therefore they could not exist. One clever person responded that since Galileo’s telescope showed that the moons did exist, there must be intelligent life on Jupiter; beings who used the moons for navigation on Jupiter’s oceans. This person obviously agreed that it was indeed important to show the purpose for the existence of the moons.

In his many investigations of the pendulum, of motion, of centers of gravity, and so forth, Galileo had long been taking a different approach. By profession, Galileo was a mathematics professor. Forget about figuring out what purpose there is behind the events of nature, Galileo insisted. Concentrate instead on finding out with mathematical accuracy just how things act, just what the reliable patterns of physical nature really are. That is enough.

Science today no longer asks why God puts the seeds on the outside of strawberries, or why God gave Mars two moons, or why God created mosquitoes. When science asks today why something happens, it does not seek to know the ultimate purpose of each thing, but only how reality is structured so as to have caused given events to happen. Before Galileo it was hard to do science without eventually mentioning God and God’s purposes. Since Galileo’s time we have become accustomed to leaving God and other numerous powers out of scientific theories.

This is true of both kinds of physical events, the regular and the irregular. The unusual or irregular event is one such as lightning striking a house, a comet appearing in the sky, or a disease suddenly afflicting a healthy person. From the most primitive times to today, people have found it plausible to say that such irregular events are the work of numerous powers. Up until Galileo’s time, everyone was certain that each comet was sent individually by God to warn people of a calamity to come. Every lightning bolt was God’s punishment. Every sickness was caused by a demon. Many people today still speak of every flood or tornado as something God sent or permitted for some divine purpose. But under the influence of the new science that Galileo helped to establish, we are no longer so sure. We usually think irregular events in nature are actually manifestations of basic and highly regular patterns. Our scientific explanations of diseases can omit any mention of God. Also dead and gone are the spirits that once lived in the tree, the river, or the cloud.

Religious believers often combine their belief in scientific explanations with at least a vague sense that it is God also who is at work in the events of nature. A meteorologist may pray as though it were God who guides the tornado even though she also believes that tornados follow a course laid down by natural atmospheric conditions. When she studies what is known about tornados, she would be surprised to find any reference to God in her textbooks as part of the explanation of how tornados form, why they are so powerful, what paths they tend to take, and so on.

Scientists find they can also describe all the regular aspects of nature without any mention of numerous reality. These are the various reliable patterns of nature, ranging from the extremely regular forces such as gravity and electromagnetism to the fairly regular patterns such as the movement of the
tides and the chemical reactions of an acid with a base. A famous meeting between an emperor and a mathematician illustrates how science has come to describe such patterns without reference to God.

The French mathematician Laplace (1749-1827) had developed a theory of how the universe might have slowly evolved into its present form. The Emperor Napoleon invited Laplace to describe this theory to him. Laplace elaborately explained the mathematics of gravity and mass and motion, perhaps losing Napoleon in the details. But Napoleon did notice that Laplace had not once mentioned any part God played in the whole process. As the story was told by an astronomer present at the discussion, Napoleon challenged Laplace on this: What about God? Laplace supposedly replied, “I have no need of that hypothesis.” These words do not deny God’s existence or power; they just state what science has come to take for granted, that the patterns of nature have a regularity of their own. There is no need to slip some mention of God into a description of nature’s patterns in order to explain how they operate and what events they cause.

This was not entirely new. Even the science of Aristotle’s day as well as the science of late medieval theologians proposed that nature followed regular patterns of secondary causality that operated without extra divine intervention. But after Galileo’s time the sheer number of events that could be explained as part of the patterns of nature constantly increased. Therefore the number of things that seemed instead to be the product of divine intervention—miracles—constant decreased, to the point where miracles no longer seemed plausible. In short, the active presence of God in the particular events of life became less directly evident to people.

Deism

By the middle of the eighteenth century, the century that came to be known in Europe as the Enlightenment, many scientists and science-minded people had come to share a kind of natural theology known as deism. This was a new form of historic religiousness, which accompanied many other new and radical ideas such as belief in democracy and free speech.

Deism usually divided all of reality into two distinct realms: the physical and the spiritual. Galileo had earlier recommended treating the physical as matter-in-motion, as nonliving stuff that acted always in accordance with basic mathematical patterns that were built into the nature of physical reality. By the time Isaac Newton died (1642-1727), there had been a century-and-a-half of success after success in science by the use of Galileo’s method of treating physical reality in this way. Deists felt entirely reasonable, then, in agreeing with this approach.

The success of science also encouraged the belief that the physical universe was entirely intelligible, and intelligible in mathematical or mechanical terms. The force of gravity is equal to the product of the masses (and a constant), and inversely proportional to the square of the distance between those masses. That is a scientific statement. Come from science were claims such as “God made gravity to hold the universe together.” Gone also were older ideas that said, “Rocks fall because they seek a natural state of rest.” Rocks do not “seek” anything, the new science said. Language that suggests any life or consciousness in raw matter is simply inaccurate, most deists believed.

The mathematical order of things awed the new scientists. Where once there had seemed to be countless unpredictable happenings caused by demons, saints, angels, or God’s intervention, now there was order. Now there was dependable regularity built into physical matter. Every irregularity in nature turned out to be caused by an intersection of regular natural laws in a way that could be predicted by the mind that knew the laws of nature. This led the new scientists to support certain ideas about God’s power and activity. These ideas together constitute the core of deism.

First of all, there was common agreement that the orderliness of nature, its thoroughly mathematical intelligibility, could not possibly be an accident. It must have been designed. The older argument for God’s existence was the argument from design taken on new power. The Designer, it seemed clear, must have been a perfect intelligence capable of designing and creating a whole universe of such detailed orderliness that in spite of its enormous complexity it could run on its own by its own built-in constant laws of nature, its own natural set of secondary causes. In one famous image, God was compared to a master clockmaker who designed and created an intricate timepiece, wound it up, and then let it tick away on its own. Some deists insisted that God was also continuously sustaining the universe in existence by the divine “concursus.”

The same deists who were sure that God the Designer must exist promoted a second idea: this Designer did not intervene in the orderly operation of the clockwork universe. There were no miracles, in other words (though some deists made an exception for the miracles of the Bible and the general miracle of revelation). Robert Boyle (1627-1691), the English scientist and acquaintance of Newton, said God is not a puppet master pulling strings from behind the scenes.

Deists provided a logical argument against divine interventions. To believe that God intervenes in nature is to suggest that God did a sloppy job when God first designed or created the universe. People once believed God had to work to keep the planets moving in their orbits or to make the fertile rains fall each spring, as though God had made a rickety universe that required tending. We know better now, the new scientists said. We know the
almighty and perfect God did a perfect job in creating. Now it is just up to people to understand that creation.

Naturalism

From the deists onward, scientists have thought that science has to be guided by "naturalism," a presumption that every event can be accounted for fully by natural (secondary) causes. Naturalism comes in three forms. Metaphysical naturalism is a claim that the natural universe of time and space, matter and energy, is truly ultimate. Nothing but this natural universe exists. There is no God or other Ultimate. So metaphysical naturalism is atheistic rather than deistic. Because it denies that there is a supernatural reality such as God, it says that no divine interventions are possible.

Cosmic naturalism is the second form. It says that the events in the entire cosmos are due to natural causes. This can be agnostic about whether God exists. Or it can be religious in a deistic manner, supposing that God planned and produced the universe to operate entirely by secondary causality.

The third form is known as methodological naturalism. This merely assumes that the method of science is restricted to explaining all events as though they had only natural causes. It is not a claim that there are not or cannot be divine interventions. Some religious scientists even speculate on how God might intervene in such subtle ways that the supernatural influence would be undetectable. Methodological naturalism is a claim that science can use only natural causes to explain things, because the object of scientific study is nature, not the supernatural. (The Epilogue will look at this issue again.)

Naturalism works well in science. To abandon naturalism at any point and say that only divine intervention (or secret manipulation of the forces of nature by spirits or demons) accounts for an event would be to give up trying to understand how the event came about, beyond the bare assertion that some sort of non-natural cause was at work. By never giving up on the naturalistic approach, by assuming that there were natural causes that could be understood by the human mind, science has produced a vast array of highly precise, reliable, and effective ideas that all fit together with each other. Over and over, things like comets and lightning that had once been thought to be miracles, interventions by God into nature and history, turned out to be the effects of the great web of natural causes.

Deism as a Religious Humanism

The new scientists had great confidence in the power of human reasoning. God made the world intelligible and made the human mind intelligent, able to understand the world's intelligibility. Science was what God made people for, they thought. By the end of the eighteenth century, many people, including both some deists and some irreligious skeptics, were assuming that there were also natural laws of human behavior in addition to the natural laws of physical nature. The new sciences of economics and sociology and psychology began to appear, seeking to understand the regular laws of human life in order to tell us how to live wisely and happily. There should be no need, therefore, to ask for God's help in life, to hope for miracles or expect divine guidance. In the beginning God made all things quite orderly. We can trust that this world is a good place to live. All we need to do is to understand it thoroughly and then set to work to make it all better for us humans.

Of course, there would still be a lingering source of trouble in this magnificently ordered universe. The human person is not merely a physical and emotional being subject to the laws of nature, the deists said. The person is also a spiritual being, with a soul that has the power of free choice. The spiritual aspect of our humanness is not controlled by the natural laws of the physical universe. It can cause disorder, confusion, and evil. But if God made people free, God nonetheless would not allow freedom to wreck the overall order of things, the deists argued. God must have provided some way of regulating the human use of freedom. In light of this, a traditional Western belief seemed quite logical, namely, that God must eventually punish those who use their freedom to cause the evil disorders of life. So God is not completely at rest but, somewhat anthropomorphically, is watching us. After our deaths God will pass judgment on us and reward or punish us in accordance with the choices we have made.

Those are the ideas that constituted deism. It was called a "natural religion," one based on natural theology rather than revelation. The God of deism was the Designer God and the Judge, the God who created the world at the beginning and who will judge all people in the end but who does not intervene in the meantime. The deists were humanists. They believed that they especially did not need God's intervention because they had now discovered the wonderful power of human rationality. Traditional religion stressed the importance of obedience to religious scriptures and authority. The deists believed that human reason was the highest authority. This and the disbelief in miracles set the deists in opposition to the traditional religious groups, although they were still explicitly religious in their own way. Even in the eighteenth century, however, some science-minded people began to abandon this untraditional but real religiousness in favor of a nonreligious position. By the nineteenth century the rise of evolutionary thought contributed to more widespread skepticism.
RELIGIOUS TOLERANCE

English deism was rooted partly in the writings of Lord Herbert of Cherbury (1583-1648). Edward Herbert was made Baron of Cherbury for his service as ambassador to France during the Thirty Years' War, a series of religious wars fought in Europe between 1618 and 1648. Killing in the name of God disgusted Herbert, so he looked for a way to leave religious divisions behind. He believed he had found it in "rational religion," a few basic ideas that he thought all rational people everywhere in the world could accept. He formulated this religion as belief in a God who designed the universe, created humans with intelligence and moral sense, and left it to people to honor the God who made them by behaving intelligently and morally. You can see how this might grow into full deism in the years to follow.

Herbert's plan to eliminate religious conflict by creating a simple universal religion has not worked. Most people in Western nations now enjoy freedom from religious wars not because all share in a single rational religion, but because most religious groups respect the right of other religious groups to follow their own beliefs and practices. Even in those European nations where one religious group is supported by the state, all religions are normally granted freedom. Norway is officially Lutheran; the clergy are paid by the government; the churches are built by tax money. But other Christian denominations, as well as non-Christian religions, enjoy freedom of worship. Nevertheless, as Chapter Six indicated, mutual religious tolerance does not come easily.

While Lord Herbert was ambassador in France, the Huguenots (French Calvinists) enjoyed some degree of religious freedom that had been granted by the Edict of Nantes in 1598. But by 1685, when the effect of the Edict was already eroded, it was repealed and bloody conflict between dominant Catholic power and the Huguenots broke out again, with many of the latter leaving France for other nations or the New World. (The official separation of church and state did not arrive fully and lastingly in France until early in the twentieth century.) In the same century a major civil war in England was fought on religious issues. In the North American colonies, the Puritans (Calvinists also) kicked Roger Williams out of the Plymouth colony for preaching religious tolerance. Quakers sought religious freedom in William Penn's American territory.

Religious tolerance was not easy to find in Europe. Spain was one of the last nations of Europe to grant full religious freedom, at the death of its fascist leader, Generalissimo Francisco Franco, in 1975. Until then, Franco followed the old Catholic rule, overturned by Second Vatican Council in 1965, that error has no rights. This meant that erroneous religions—every religion except Catholicism—had no legal or moral rights and should not be practised openly lest it lure others into error also.

These examples of religious intolerance from Western history can be matched, of course, by similar intolerance in many places. As earlier chapters mentioned, historic religions are universalist, claiming to have the single truth and true way for all humans everywhere. In some places like China and India, various religions often managed to live side by side in peace nonetheless. Hinduism and Jainism share beliefs in karma and the cycle of rebirth. Buddhism was once persecuted in China, but eventually the more philosophical Confucian and Taoist traditions interacted peacefully with Buddhist ideas. But in the twentieth century in India, tension between Hindu and Muslim, and between Hindu and Sikh, have led to bloody conflicts. Muslims everywhere are hearing the call of intolerant traditionalists to cleanse non-Islamic elements from Muslim lands. If only a few heed that call, that is enough to cause enormous trouble. Many a good Protestant fundamentalist still feels an obligation to convert people everywhere in the world, if possible, on the grounds that only the converted and baptized have a chance at heaven.

A historic and universalist religion finds it logically difficult to practice religious tolerance, as Chapter Six indicated. Those who believe that divorce and remarriage are sinful can be dismayed by civil laws which allow them. Or for the word "divorce" substitute abortion, pornography, homosexuality, and artificial contraception. Religious tolerance demands a degree of privatization of religion, as not all moral norms are shared publicly by everyone. But in practice this seems to imply that these norms are not truly universal, that each group has its own norms. Each universal religious tradition can still claim that its own norms are the only ones that are correct. But religious tolerance tends to make people think in a relativistic rather than universalistic way—that moral norms are relative to one's group, or to one's time and culture. We will return to this topic of moral relativism when we look at cultural relativism in Chapter Fifteen.

The increase of religious tolerance in the West was made possible partly by the defeat search for a common rational religion. Even though this search was not successful, deism took a critical look at existing religious beliefs that led so often to war and hatred. This weakened the hold of traditional religion a bit. It would not be long before agnostic and atheistic ideas would challenge the influence of religion even further.

EVOLUTION AND AGNOSTICISM

Evolutionary Theory
The deists lived in a universe they saw as static; no significant changes were expected in its basic structure. A few thousand years earlier God had placed
the sun in the center, with the earth and other planets around it and the stars in their appointed places in the sky. But then astronomers began to think that perhaps the universe had evolved. In the mid-eighteenth century Emmanuel Kant (1724-1804) propounded a theory of cosmic evolution. By the end of the century, Laplace also said that the universe was not static but was a changing process, that the sun and planets had slowly formed over very many thousands of years out of some heavenly gases or matter.

During the eighteenth and early nineteenth century geologists had ample evidence that the earth had evolved physically also. The Bible had seemed to indicate that the earth was created around 4000 BCE. The only major geological changes in the biblical record were catastrophes caused by God’s intervention, such as the great flood which only Noah and his family had survived. (That seemed to account for the strange phenomenon of seashell fossils on mountain tops.) By studying the numerous layers of different kinds of rock formations, however, and comparing them to current processes of sedimentation as well as volcanic and glacial activity, geologists became convinced that only a slow process of change taking place over many millions of years could account for the appearance of those layers.

It was not long before many people began theorizing that maybe not only heaven and earth evolved but life also. The numerous fossils recovered from mine shafts, mountain sides, and special excavations were startling. In higher layers of rock, mammals abounded, were harder to find in lower layers, and were entirely absent from yet lower layers. Great lizards (dinosaurs, they came to be called) had once dominated the land when only tiny mammals lived, but in lower layers there were no lizards of any kind at all, nor even amphibians if one dug deeper. Below that there were no land animals or insects, and so on. Especially odd were major transitions, when thousands of species seem to have been wiped out in a relatively short amount of geological time, after which there was a proliferation of new species, some of which often seemed to be variants of a few species that had survived earlier catastrophes. The fossil record indicated that there had been what we now call an evolutionary process, a very long and rather meandering process at that.

It was difficult to construct a suitable theory about how this evolutionary process could have occurred. There were many attempts, each with its own problems and limitations. Finally, Charles Darwin (1809-1882) captured the attention of the scientific community with a theory that has turned out to be amazingly fruitful. He published this theory as *The Origin of Species* in 1859. For thirty years Darwin had gathered bits and pieces of information about fossils, seashells, and mountainsides, about similarities between species, and about odd animals in strange places in the world. But evidence is not really evidence until someone sees how it fits into a theory.

Darwin provided theory borrowed from economics. Nature was like a capitalistic economy, said Darwin, hearkening back to Adam Smith (1723-1790) and Thomas Malthus (1766-1834), in which a struggle for survival weeded out the inefficient and weak. In Darwin’s theory there are three main factors at work. The first is superfecundity, which is the tendency of every species to give birth to more offspring than would or could survive. The second factor is that there are random variations among members of a species. The offspring are not all exactly alike. The third factor is what Darwin called natural selection. Some variant forms survive and produce others like themselves. Less successful variant forms die or fail to reproduce. The philosopher Herbert Spencer (1820-1903) summed it up as “survival of the fittest”, a phrase Darwin himself eventually used also.

There was a variety of responses to this theory. Many religious authorities rejected it completely as they had rejected other theories that seemed to contradict the Bible. Some depicted them as a God given natural law, that of the survival of the fittest. How ingenious of God, they said, to have built into nature an evolutionary process. These evolutionary deists, along with traditional religious people of various beliefs, at least agreed that there still was a Creator God. Not everyone else did.

**Atheists and Agnostics**

As noted in the Introduction, atheism is a name for the belief that there is no God. Agnosticism is a name for the conviction that no one can know whether there is a God or not. The true atheist says that the mystery we humans face is ultimately a meaningless emptiness. The agnostic just says that the mystery is a mystery. In practice, both the atheist and the agnostic get along without God.

When the new science had begun to cast doubt on some aspects of traditional religion, many turned to the nontraditional religion of deism, but others simply turned away from religion altogether and became atheists. Belief in miracles diminished or was disparaged. Church authority had been weakened by the Protestant Reformation and by later strife among religious factions. New methods of historical research called into question attempts to interpret the Bible literally. In this context, the reasoned arguments of natural theology still favored by the deists were no longer as convincing to everyone as they had been.

Darwin’s evolutionary theory gave an additional boost to atheism in a number of ways. One was Darwin’s claim, published only in 1871 in *The Descent of Man*, that humans had descended from apes. This made many persons doubt there was a soul or any place for the soul such as heaven or hell.
It made God less necessary, no longer needed as a hypothesis to account for human existence, nor even as a judge for the soul in an afterlife.

Of particular importance in Darwin's theory was the notion that evolution operated by random variation. The evolutionary process, as Darwin described it, was long and aimless. Each generation begets dozens of offspring. Randomly, each offspring is a little different from its parent, and that difference, also by random chance, occasionally is of use in the offspring's struggle to survive. As a result of this double randomness, that particular offspring is more likely, though not guaranteed, to grow up, breed, and pass on that lucky variation. As long as that variation helps for survival, it will tend to become more common. Many billions of such random variations over more than the last three and a half billion years of life on earth, according to current estimates, have given rise to the present species.

All theories that stressed the factor of randomness in the evolutionary process made it seem less and less reasonable to accept the traditional belief that the universe was guided by a God who intervened to guide things, or even the deist belief that God was a master designer. This impression was fortified by observations of nature's seeming cruelty. Even before Darwin published his theory, the poet Tennyson had written of "nature red in tooth and claw" caring not for individuals but only for species, and even then wiping out many scores of species over the eons. Neither tiny brachiopods nor massive mammoths survived nature's processes. Thus those who were already inclined to be atheistic saw evolutionary theory as additional support for their atheism. The theory also helped produce the new word, agnosticism.

One of Darwin's main supporters was biologist Thomas Huxley (1825-1895). In the heat of arguments about God's existence, he was asked whether he was a theist or atheist. In order to have a label for his position, he invented the word "agnostic." It means "one who does not know" or more literally "not-knower." Huxley heard those who argued that an evolutionary process that resulted in humankind could not be purely accidental but must have been planned by God. He also heard those who said the randomness of evolution proved there was no God. As a scientific-minded person, he could see no way in which either of these claims could ever be tested scientifically. He came to what seemed to him to be the most rational conclusion, therefore: no one can know whether God does or does not exist.

Agnosticism and Social Darwinism
Agnostics usually claim they arrive at their position by reasoning. It is intellectually sound, they say, to acknowledge that the ultimate state of things is simply unknowable. But we humans do not live by intellect alone. It is easier to be an agnostic or atheist if there is also no practical and emotional need for a God. The nineteenth-century agnostics could feel comfortable in a godless universe because they believed human beings could do quite well without one. A movement known as social Darwinism is a good example of this kind of agnostic optimism. Herbert Spencer was its best-known advocate.

It is reasonable to believe, said the social Darwinists, that the pattern of evolution will continue as social evolution. Human reasoning is a product of life's evolution, they said, and is itself evolving. With reasoning as a tool for survival, those who use it best will survive best. Those ideas that would best promote survival are ideas that promote better health, international peace (or at least military victory over enemies), and economic prosperity. Therefore, these ideas would steadily increase in influence until one day humankind would enjoy health, peace, and prosperity everywhere. Thus does society evolve.

Because social evolution was doing all this by itself, there was no need to rely on God's help to improve things. People would be saved from hunger and war not by divine help, but by the natural process of evolution. The millennium was coming, but not because of ancestors, gods, or God. This time of joy and peace and love would arrive, liberating people from their limits and their estrangement, because this was the pattern of evolutionary progress.

Secular Evolutionary Humanisms
A Substitute for Religion
From nineteenth-century thought until today, there have been visions of salvation that are similar to this agnostic evolutionary optimism. They are most often called secular evolutionary humanisms, or just "secular humanism." There are various forms of them (we will look at two), but they have some characteristics in common.

First, they are secular, which means that they are thoroughly this-worldly. They do not believe in any numinous powers—not spirits, gods, or God (although they sometimes believe in a God-substitute, as we will see). They are also this-worldly in that they do not believe in any life after death. We humans are born into nature and history, live our lives and die, they say. Our meaning, value, and purpose must be found within the limits of these earthly lives and our effect on the lives of the generations to come.

Second, an evolutionary view holds that reality is in constant process of development. There is ongoing change which is not merely repetitious but is a process of improvement, at least in the long run. That includes human culture, its social conditions, morality, economics, politics, and so forth.

Third, as we have seen, humanism is a viewpoint that trusts in human abilities, and maintains that the quality of human life is the most basic value
there is, to be sought above all else. A humanism is a basic-value morality that proposes that a humane, loving, free, and creative existence for all people is the most important goal there is. (Note that there can be religious humanisms as well as secular ones.)

A look at secular evolutionary humanisms can help to understand modern religiousness because these humanisms are often modern substitutes for religion. Secular evolutionary humanisms agree with modern forms of religiousness in their renewed appreciation of this-worldly existence, their emphasis on growth and freedom, and their skepticism about miracles. This can be seen in the nineteenth-century belief system of Karl Marx (1818-1883) and in the twentieth-century belief system of Julian Huxley (1887-1975; Thomas Huxley’s grandson). Each is a quasi-religious vision of salvation.

**Marxism**

The most famous—or notorious—secular belief system in the world today is probably Marxism. People who are antagonistic to the socialist or communist ideas associated with the name Karl Marx would not call Marx’s thought progressive. That implies improvement. For many Marxism is just the opposite. Yet to Marx himself and to millions of Marxists, his theory is truly progressive. We can more easily see why Marxists believe this if we look at a rather simplified version of basic Marxist theory. (In passing we might note that Lenin changed Marx’s theory somewhat. Communism in the former U.S.S.R., China, and some other places is not quite what Marx predicted or wanted.)

Karl Marx felt great sympathy for the suffering of humankind. He knew well that people have endured sickness, loneliness, hatred, oppression, and hunger throughout history, but he believed that history had been following a certain developmental pattern that was now producing a series of events leading to an ideal earthly life, a secular millennium. History, to him, was a kind of pattern of events operating by its own inner laws. At times Marx treated the flow of history almost as a Taoist treats the yang-yin pattern. One major difference between Taoism and Marxism is that the Taoist does not believe that there can be strong and useful progress in culture, politics, or economics, but Marxism does. To Marx, social and political, and, above all, economic developments were precisely the chief manifestations of the progressive power of history.

Marx was highly impressed with industry. Late eighteenth-century and nineteenth century techniques for using energy from steam engines held the promise of a transformed human existence. Coal (not to mention water, oil, gas, nuclear, and solar) power changed into usable machine-driving energy could accomplish something unseen and unheard of prior to this time: it could produce enough food, clothing, and shelter for everyone. In fact, Marx claimed, industrial power could even create such incredible luxuries as leisure time for most people, education for everyone, the ability to travel and learn about others. Everyone might be able to live life more freely and comfortably than even kings once could. Marx has turned out to be at least partially correct about this. In highly industrialized countries this has become generally true. The average American citizen now lives better than Henry VIII of England or even Queen Victoria.

There is something that Marx considered more important than material goods. Adequate material possessions were only a base for supporting the higher values of freedom and equality. Marx believed that in the past ages of desperate scarcity humankind had become accustomed to valuing possessions and wealth as a means for survival. It was because of this, Marx thought, that people had learned to measure their own worth in terms of the quality of their clothes, the size of their home, their social class, instead of by what should be the true measure of worth: compassion and concern for one’s neighbors. The ideal society would reverse this and give primacy to justice and compassion. (PIaget and Kohlberg would say contrary to Marx that the desire for outward status and possessions is just a normal if regrettable stage in growing up; Hindu tradition agrees.)

Marx was wrong, dangerously wrong, about how the ideal human society was to come about. He thought it would begin in industrial nations unlike Russia and China. He thought the industrial nations would experience class conflict and eventually violent revolutions. These would lead to the overthrow of capitalism and the establishment of ideal socialist states. Regardless of Marx’s errors of prediction, this general vision of the perfect society is still an inspiring one, shared by many who are not Marxists. It is a vision of society of material abundance. More importantly, it would be a free and equal society in which all would work together in harmony, sharing the products of the collective effort. It would be a thoroughly democratic state with equal justice, rights, and power for everyone.

With such a vision it is not hard to see why Marxism became so popular in the world. Marxism does not offer an afterlife. Nor did Marx believe there was a God such as Jews, Christians, and Muslims believe in. Moreover, Marxism has not proved correct or even wise in its effect on many nations in the world. Nevertheless, it has been an appealing vision because it promises salvation from hunger and hatred, from oppression and futility. To the person who dedicates his or her life to the advancement of Marxism, it offers a sense of being important, of contributing to a grand and glorious humane world. Moreover it encourages hope by claiming that the flow of history is like an all-embracing pattern driving cultural developments towards a perfect earthly realm.
Marxism is often considered antireligious because of its opposition to belief in God, in divine help, or in heaven. Marx described religion as the opiate of the masses, numbing their present pain by promising happiness in the next world. Marxism sees religion as a force supporting the traditional economic and political powers that oppress people. Yet Marxism functions as a kind of quasi-religion. It offers an equivalent for God in its belief that history can be trusted to act as a kind of ultimate power influencing everything to move towards the ideal state in which many limits and forms of estrangement will be overcome. One person’s atheism is sometimes another person’s religion.

Marx proposed his vision as one worthy of a faith commitment.

**Huxley’s Earthly Religion**

Karl Marx is probably the most famous of the secular evolutionary humanists, but many view Marxist thought with suspicion. So it is good to give at least one other example, that of the evolutionary philosophy of Thomas Huxley’s grandson (and Aldous Huxley’s brother) Sir Julian Huxley (1887-1975) proposed in his book, *Religion without Revelation* (1928, revised 1956). As the title of the book suggests, Huxley does not believe in any supernatural revelations from God. In fact, he is rather thoroughly secular, rejecting belief in miracles and heaven and hell, and taking a strongly agnostic position about the existence of any other-worldly power or being.

Nonetheless this secular viewpoint is also a religious viewpoint, according to Huxley. He defines religion as a unifying perspective on reality that expresses people’s deepest convictions about the ultimate nature and purpose of life. Huxley’s unifying perspective treats evolution somewhat as Marx treated history, as a force or pattern within the universe moving in a predetermined direction. For Huxley, therefore, the pattern of evolution is a sort of God-equivalent, not all-powerful but nonetheless universal in its influence and transcending the limits of all smaller powers and forces. Huxley believed that salvation would come through cooperation with evolution, a this-worldly salvation of an ideal human future.

Huxley’s vision includes a theory of purposeful cosmic evolution. At the beginnings of the universe, the primal energy divided into various forms including the many subatomic particles. Because the particles are different from one another they organized into complex atoms. Because there are different kinds of atoms they react to one another in complex ways, causing chemical reactions and new organized bondings. These molecules interact and become organized into amino acids, proteins, and eventually into living cells. The incredibly complex organized living cells develop in different ways and eventually interact to form multi-celled organisms. The complexity of interactions between cells increases and the multicellular organisms become complex plants, animals, and eventually humans. In particular the extraordinarily complex interactions of the various nervous system cells produce the human ability to interact consciously with the environment and with one another. Because of the complex organization of individual consciousness, people are able to interact with one another to create social structures, farming, politics, literature, and so forth.

Throughout this long process of cosmic evolution, Huxley says, there is a pattern. Whatever exists differentiates, i.e., takes different forms. The different forms can then unite in something more complex. This is a higher level of organization. The more complexly organized forms differentiate further through ongoing evolution, which allows them to then unite in even more complexly organized ways. Differentiation, complexity, and organization are constantly on the increase. The first major aspect of the pattern of cosmic evolution can be summed up, therefore, as the law of increasingly complex organization.

As complex organization increases it also produces ever higher levels of consciousness. This is the second law of cosmic evolution. The highest form of consciousness produced by this evolutionary process so far is human consciousness. And it has already differentiated into different sets of ideas, languages, tools, institutions, roles, rules, values, visions, poetry, religion. These now interact in complex ways to constitute the different cultures of the world. These cultures are more complex levels of organized consciousness.

A world culture in which all the prior cultures retain their distinct identities but interact positively with each other would be an ever higher level or complex organization and consciousness. All of this is part of the same single cosmic evolutionary process.

We humans are part of cosmic evolution, not only in our biology but also in our ideas; not only physiologically but psychologically, socially, and culturally. There is but one evolutionary process and it encompasses all aspects of the universe from the birth and development of stars to the birth and development of cultures; one pattern runs through it all. There are many moments of apparent randomness, Huxley acknowledges. The potential for chaos in history and nature is evident. This makes it all the more awesome that cosmic evolution has occurred as it has, effectively making use of the possibilities of greater diversity, complex organization, consciousness, and the complex interactions of consciousness in culture.

Most striking of all is Huxley’s idea that we humans are now cosmic evolution become conscious of itself. We are not merely aware of evolution; we are evolution’s highest self-expression so far. Now that we are cosmic evolution’s most conscious form we have great power in our hands. We might fail to make use of our power, Huxley acknowledges, but he is basically optimistic. We can increase our consciousness of evolution, of ourselves, and of our potentials.
The End of Easy Optimism

From Galileo to Marx and Huxley there grew a confidence in the intelligibility of the universe, and in the capacity of the human mind to grasp that intelligibility and live by it. This world increasingly appeared to be a potential utopia. Human society was seen more and more as something perfectible. As a result secular humanisms began to gain wider acceptance and to replace traditional religiousness. But then came the shattering experience of the First World War.

People were too rational to kill each other for a few miles of earth or for national pride, the optimists thought. Yet for a few miles and for pride millions died. Technology would bring only health and wealth, the optimists expected. But mustard gas and improved armaments contributed to the slaughter. People had outgrown blind patriotism and military pride, optimists believed. But for the glory of the fatherland people were eager to spill the blood of their neighbors. Two hundred years of "enlightenment" were not enough to eliminate war. In some ways the development of scientific rationality made it even worse.

Thoughts such as these released other doubts and confusion. Old beliefs had been breaking down for a few centuries now. Many people were uncertain about religion, about the social and economic order, about all the new ideas and inventions, about changing morals. The twentieth century was going to prove to be a very difficult one. The next chapter will describe one of the greatest difficulties for religion, atheistic skepticism.

Summary

Traditional historic Christianity had relied on divine revelation and church authority as the source of true understanding. From Galileo on, science-minded people began to trust human investigation and reasoning more. An early result was deism which promised a religion based on reason, celebrating a watchmaker God who did not intervene in history. Evolutionary thought then moved further from traditional religion by suggesting that the process of evolution was too random to have been planned or guided by a God, but was orderly or purposeful enough to provide hope for an ever-better worldly existence, even one without any God.

When the twentieth century began, World War I subverted many people's hopes for human progress even while skepticism about religion was still widespread. That is the topic of the next chapter.
FOR FURTHER REFLECTION

1. How do you distinguish miracles from non-miraculous events? Explain why it seems reasonable or not to you to believe that miracles do happen.
2. Describe any ways in which scientific ideas about laws of nature and evolution have an effect on your religious beliefs. Should they?
3. Which position seems most reasonable to you: atheism, agnosticism, or theism (belief in a God)? Do you decide this entirely on the basis of reasonableness? Explain.
4. Does the description of Marxist thought make it sound appealing? Is Marxism an adequate substitute for religion? Why or why not?
5. Julian Huxley perceived a great cosmic pattern behind the cosmic events of the universe. Could this be evidence that there must be a Designer-God? Explain.
6. Are you optimistic about how we human beings will handle issues of war and peace, of economic justice, of the environment through our growing knowledge and our moral commitment?

SUGGESTED READINGS

Peter Gay, Deism: An Anthology, 1968. Includes significant excerpts from major deist writings.
Richard A. Fortey, A Natural History of the First Four Billion Years of Life on Earth, 1988. Nicely summarizes geological and other evidence that supports evolutionary theory.
Julian Huxley, Religion without Revelation, 1956.
Noel G. Coley and Hall Vance, eds., Darwin to Einstein: Primary Sources on Science and Belief, 1980.

CHAPTER THIRTEEN

Life without Religion

Twentieth-Century Skeptical Humanisms

Throughout history, people have perceived mysteries in life and have had faith nonetheless that life is coherent, intelligible, and meaningful on the deepest level that they could imagine for their time. The primitive person took it for granted that various stories could explain the pieces of life. Archaic people, who believed in larger powers at work in reality, were less sure that life could be fully happy, but they usually lived with some confidence that their myths explained the structure and events of life. Historic religions believe that notwithstanding all the chaos and evil in the world there is an underlying ultimate intelligibility and value in life.

In this twenty-first century, however, skepticism about life's intelligibility and value has increased. A variety of factors, including the end of nineteenth-century optimism, have led to increased doubts that there is any ultimate intelligibility and value to human existence.

Skepticism has a long history. In the axial age when the gods were demoted to lesser status, philosophies arose in which religion had no place. In ancient India, for example, even as classical Hindu and Buddhist and Jain thought were taking historic form, a few such unorthodox philosophies appeared. They rejected the newly orthodox belief shared by the religious traditions of India that we are caught in an endless cycle of rebirth controlled by the cosmic law of karma. The sixth-century BCE Carvaka school of thought, for example, rejected belief in the gods and in any life after death, on the grounds that there was no good empirical evidence for either of these beliefs.

One could also count Confucius (Kung Fu Tzu) as unreligious. Confucian thought more or less ignored the gods, focusing instead on social relations and on cultivating good character. (Neo-Confucian thought of the eleventh century CE and later was more metaphysical—concerned with the ultimate principles of reality—but still not really religious.)

In ancient Greece, Epicurus (341-270 BCE) declared that the gods were