

PNU University

Religious Texts (3)

Alireza Jalali, Ph.D

Faculty of Theology and Islamic Sciences

Department of Religions and Mysticism

In the name of
God

Part One:

Sociology and Religion

The discipline of sociology has been closely associated with the study of religion ever since sociology emerged as a distinct field in the mid-nineteenth century; only psychology is similarly close. Indeed, Auguste Comte, the social philosopher who coined the word sociology, saw his new science equally as religion and as science. In his *Positive Philosophy* (1830-1842), and again in *Positive Polity* (1851-1854), Comte envisioned sociology (which he first named social physics) not only as the queen of the sciences but also as the scientific basis of the new religion of Positivism, which would gradually push all existing religions out of sight. There were some excellent thinkers of the nineteenth century—among them Harriet Martineau and Frederick Harrison in England—who took Comte's religion very seriously. But the real and enduring relationship between sociology and religion was established by those, including Comte, who saw religion as one of the vital constituents of the social bond and thus necessarily a matter for careful study by sociologists.

Development of the Discipline. A significant change in attitude toward religion took place from that adopted by the eighteenth-century French philosophes to that represented by the nineteenth-century founders of sociology. The critical rationalists of the Enlightenment in the eighteenth century had seen religion essentially as a mental or intellectual phenomenon, for the most part a tissue of superstitions, and therefore capable of eradication once the truth was told the people; but the sociologists from the

beginning saw religion as a nearly inseparable aspect of social organization, a necessary window to understanding the past and present. Karl Marx, no lover of religion in any form, was not denigrating religion when, in a famous phrase, he declared it the "opium of the people." What he meant, as the context of his essay on Hegel's Philosophy of Right shows, is that in a world of human exploitation, religion is necessary to man; it is at once "the expression of real distress and the protest against real distress." Religion would not be banished, Marx stressed, until all of the social conditions of religion had been removed by revolution. Friedrich Engels, after Marx's death, went even further. He found many analogies between the infant socialism of his day and the infant Christianity of imperial Rome. Those who wished to understand the foundations of Christianity, Engels advised, needed only to look at "a local section of the International Workingmen's Association." He even advanced the idea that socialism, when it eventually drove out Christianity, would itself take on some of the attributes of religion. In this prophecy he has been proved largely right. As socialism became a mass movement in Europe in the nineteenth and early twentieth centuries, a prominent element was the apostasy of socialists from Judaism or Christianity and their turning to a surrogate. The longer socialism lasts in the Soviet Union, the more intense the reverence for Lenin and the more numerous the festivals and ceremonies in honor of great personages and events of the past.

Ludwig Feuerbach's *The Essence of Christianity* (1841) must be seen (despite Marx's assault on it) as a profoundly sociological work in its dominant theme of religion as alienation and etherealization of powers belonging in man alone, and also in the structural character of his treatment of dogma, liturgy, and symbol. Too often the political purpose of Alexis de Tocqueville's classic *Democracy in America* (2 vols., 1835-1840) leads us to overlook the cultural and social content of the work, especially in the second volume. Religion fascinated Tocqueville, and along with analyses of Protestantism and Roman Catholicism based upon the social-status groups to be found in each, there are treatments of the patterns that spiritual fanaticism and of pantheism tend to take in democratic society. Frédéric Le Play's monumental work *The European Workers* (1855), although directed primarily to family structures, contains a significant amount of insight into religion and the worker.

The attention these early sociologists gave religion in their studies of the social order was magnified in the works of the European sociologists at the end of the nineteenth century who are the true founders of contemporary

sociological theory. Max Weber, Émile Durkheim, Ferdinand Tönnies, Georg Simmel, and Ernst Troeltsch all made the study of religion a crucial aspect of their systematic theories of society and of man's relation to society. We shall come back to these seminal theorists, for they are still very much a part of current sociology. For the moment suffice it to say that in the aggregate they subjected religion to precisely the same kind of study that went into their explorations of politics, morality, science, and other major phenomena of modern society. Durkheim's *Elementary Forms of the Religious Life* (1912), without question his greatest book, richly represents the application to religion of the modern sociological concepts of community, role, social interaction, and hierarchy. Weber's *The Protestant Ethic and the Spirit of Capitalism* (1904-1905) and, above all, his *Sociology of Religion* (1920-1921) demonstrated the functional role of Calvinist belief in the seventeenth-century rise of the Protestant work ethic and illuminated the interaction throughout history of major forms of religion and the prevailing currents of social hierarchy and of bureaucracy. In his *Gemeinschaft und Gesellschaft* (*Community and Society*; 1887) Tönnies stressed religion as well as family as crucial elements of the "community" that he counterposed to "society," the former close and cohesive, the latter tending toward impersonality and anonymity. It was Troeltsch who, in his *Social Teachings of the Christian Church* (1912), made the fundamental distinction between "churches" and "sects" a fertile basis for insight into the effects of structural characteristics in religion upon matters of faith and dogma. Simmel, primarily interested in the social elements of capitalism and also of human personality and its intimate recesses, chose to make what he called "autonomous religious values" central elements of all forms of social interaction. Whether it is the tie between child and parent or that between citizen and nation, there is, Simmel declared, an ineradicable "religious key" to be found.

A kind of symbiotic relationship existed in the nineteenth century between sociology and religion. It should not be overlooked that in many areas religion, quite independently of currents in the social sciences, took on a strong social consciousness, manifest in the Social Catholic tradition in France and Germany and in the Social Gospel of some of the Protestant churches, especially in England and the United States. Interest in the study as well as the possible relief of social problems—delinquency, family breakdown, alcoholism, and poverty—is first manifest in the United States, not in the colleges and universities, but in religious seminaries; the study was thought by seminary leaders to be vital to any clergyman's pastoral work. Many of the sociologists active in the early part of the twentieth

century began their careers as clergymen or seminarians. It is not at all surprising that, during its first half-century, American sociology, lacking the kind of strong philosophical and historical influences that guided sociology in Europe, chose social problems as its primary subject matter. The American public may thus be forgiven for sometimes confusing sociology with socialism. From the beginning, the character of sociology in America was, and in some measure still is, more pragmatic, problem-oriented, and policy-directed than in Europe.

This close and reciprocal relationship between religion and sociology calls attention to another important aspect of their common history. Both areas of thought, sociology and the distinctively social cast of religion in the West, may be profitably seen as intellectual responses to the two great revolutions of modern times: the industrial and the democratic. Beginning in England and France in the eighteenth century, these massive disturbances of the social landscape spread in the nineteenth century to all of Europe and in the twentieth to the whole world. The growth and mechanization of the factory system, the mushrooming of villages into cities, the multiplication of population, the development of more egalitarian democracies and wider electorates—all of these, together with some of their by-products such as science and technology, the spirit of secularism, and an ever growing political bureaucracy, were bound to have profound impact upon the traditional social structure of Western nations. Everywhere the forces of political and economic modernism resulted in the fragmentation of ancient loyalties—of nation, community, kin, and religion. In sum, the rise and spread of sociology in the nineteenth and the twentieth centuries are part and parcel of the dual revolution that overcame first the West, then the world.

Sociological Antinomies. More than any other social science, sociology is the almost immediate intellectual result of the two revolutions. This fact is abundantly illustrated by the broad antinomies of the new discipline, which either encompass or loom over its more concrete concepts. In the sociological tradition five major antinomies arose in response to the great social changes of the past two centuries; each embodies a perspective that focuses upon a particular dialectic.

1. Community versus Society is the first of these antinomies, the opposition that Tönnies referred to as that between *Gemeinschaft* and *Gesellschaft*: the smaller, more cohesive, communal, and durable social relationships contrasted to the larger, looser, and more impersonal relationships of the marketplace and to the equally large and impersonal ties inherent in the national state. From the beginning, sociologists tended to see conflict between the two types of relationship. This conflict increasingly is

resolved in modern society by the triumph of the latter over the former, with consequent reduction in the necessary nurturing conditions of personality, morality, and social order.

2. Authority versus Power is the second antinomy. Authority is the natural accompaniment of any kind of organization, whether small and informal or large and impersonal. Authority inheres in the very roles of the members of such groups; in some degree it is natural to the very fabric of social life. Power, however, as the term is used by the pioneering sociologists, is characteristically perceived through its manifestations in the state and in large, corporate industry. Power tends to be more coercive than authority; more important, it is impersonal, rule-bound, office-centered, and expansive. In modern sociological writing, bureaucracy, whether in government, large industry, or profession, is most commonly made the focus of power, rather than authority. Here too an intrinsic conflict is perceived, and there is a wide conviction that in modern history the forces of bureaucratic power are winning out against traditional types of social and moral authority.

3. Status versus Class, the third antinomy, is a dichotomy emphasized in the work of Max Weber. But, like the other antinomies, it is found almost everywhere in sociology. Here traditional systems of hierarchy such as those spawned by Western feudalism, systems characterized by an almost universally perceived and accepted structuring of populations into upper, middle, and lower classes, are sharply distinguished from the diverse, variegated, and highly specialized statuses held by individuals in modern society as the result of the atomization of traditional classes under the blows of the two great revolutions. This antinomy, too, reflects a contrast between modern society and the whole social order devastated or made largely obsolete by industrialism and democracy.

4. Sacred versus Secular, the fourth antinomy, is where religion as the subject of sociological study most obviously comes to mind. From the sociological point of view, the large trends in modern history—impersonalization of social relationships, bureaucratization of authority, and the fragmentation of traditional classes—are accompanied by the secularization of society: the replacement of sacred values by others based upon utility, pragmatism, and hedonism.

5. Membership versus Alienation is the fifth and final member of my list of sociological antinomies. Throughout sociology, especially among the pioneers from Comte to Durkheim, there is the clear sense that modern society reflects a widespread alienation of individuals from their accustomed memberships in family, community, religion, and social class. More than

any other social science, sociology is responsible for the image of "the masses," of large aggregates of people wrenched from their traditional roles and made into a standardized, homogenized, and faceless multitude. For sociology, the very essence of alienation is the estrangement of individuals from community and other primary forms of association—estrangement even from self.

Central Concepts. With this historical background in mind, it is possible to understand more clearly the patterning of central concepts in contemporary sociology. We shall confine ourselves to those that have virtually universal acceptance by sociologists and that, taken together, constitute the theoretical structure of sociology today. All have been widely useful in understanding religion and the other major institutions of society. The concepts are primarily analytical, but they also take on significance as tools in social synthesis and the making of social policy. Although these concepts originated in the several great moral perspectives outlined above, their value to sociology and the other social sciences lies solely in their scientific utility in the study of human behavior.

Social interaction. All social structures are compounds of certain fundamental, universal patterns of social interaction. Social interaction among human beings differs from all other types of interaction in nature in that it is symbolic: that is, organized around signs and symbols that carry distinct meanings to those involved in the interaction. Animals interact; so do atoms and molecules; but symbolic interaction is limited to human beings. They alone fashion arbitrary symbols, reflected in language, thought, morality, religion, and other spheres—all of which constitute human culture, which has its own paths of evolution through time. Human thought is purposive, searching for meanings, responding to nature only through the acquired "filters" of values, norms, and meanings passed on from generation to generation. Our interactions are all influenced by the "pictures in our heads" (Walter Lippman), by our "definition of the situation" (W. I. Thomas). We never react to others or to the environment at large in a direct, unfiltered way. No matter who or what is before us, we perceive it as part of a larger context of meaning, one that we usually have experienced before. The really crucial episodes of symbolic interaction with other people take place during infancy and childhood. That is when, precisely through such interactions, the individual's self begins to take shape. The early American sociologist Charles H. Cooley referred to the self as "the looking-glass self," meaning that the reflection of ourselves we see in the responses of others to us has a strong influence upon what kinds of selves—passive, aggressive,

diffident, demonstrative, inward- or outward-turning—we are likely to be throughout our lives.

Social aggregates. When we look out on the world, we do not see masses of discrete individuals. We see social groups, associations, and organizations—or rather, we see individuals who are nearly inseparable from such aggregates. Man, as Aristotle wrote, is a social animal. What I have noted in the paragraph above about social interaction supports this claim. Interaction not only takes place in terms of meanings ascribed by the individuals concerned; it also tends to fix these meanings through symbols as elements of the culture that is transmitted through social mechanisms from one generation to the next. Social groups are composites of basic types of social interaction: cooperation, conflict, conformity, coercion, exchange, and so forth.

A great deal of contemporary sociological theory deals with analyses of social groups and organizations of all kinds and sizes. The reason for such analysis is not only the intrinsic interest of the structures themselves but the variable effects different types of groups have upon individual behavior. One of the most famous and by now deeply rooted typologies of social aggregates was referred to above: Tönnies's *Gemeinschaft-Gesellschaft*, or what Cooley called primary and secondary groups.

The sociological theory of groups, communities, and associations has been widely applied to religion in the literature of sociology. Émile Durkheim declared that religion originated in primitive man's absolute dependence upon his community and therefore his worship of it. Durkheim demonstrated through examples how the primitive worship of tribe and totem has become transmuted into many of the more ethereal symbols of the advanced and universal religions. Troeltsch and Simmel showed the close correlation between the size of a religious organization and the type of doctrine held: in small sects it is easier to insist upon a strict, undeviating dogma and code of conduct than in the larger, more cosmopolitan, and relatively impersonal churches. Every belief that is in any way tinged by religious passion suffers in strictness and purity as the number of its adherents grows. As Simmel pointed out, the history of socialism illustrates this as well as does that of Christianity.

Sociologists have recently given much attention to the reference group. This may be family, school class, church group, or neighborhood, or it may be a street gang or other manifestation of deviant or delinquent behavior. Whatever its nature, the group is by definition the social entity—complete with values, symbols, and role models—to which one tends chiefly to refer in self-appraisals. One's assessments of one's own actual or potential

bravery, cowardice, honesty, loyalty, team play, or betrayal are formed by observation and experience with one's dominant reference group. At any given time we may, especially in complex modern society, have not one or two but many reference groups of varying importance. But generally one group is supreme at any given time: in civil life it may be one's professional group; in war, however, it is likely to be composed of other, comparable, soldiers.

Social authority. The study of authority follows from the study of groups. No group, however small and informal, is without some degree of authority. It may proceed from the dominant personality in the group, from ready consensus, from cooperation necessary to the achievement of some end, or from mere custom and tradition. But no form of social life exists without authority, from the mother's domination of infant to the state's sovereignty over its citizens.

The most famous theorist of authority is Max Weber, who identifies three types: the charismatic, the traditional, and the rational-bureaucratic. The first is the kind of authority that emanates directly from the great individual, whether a Jesus in religion, a Caesar in warfare, or a Napoleon in war and government. Such authority is inseparable from that individual. Often, as in Judaism, Christianity, and Buddhism, the charismatic authority of the founder becomes "routinized," as Weber put it, through disciples and followers. Words spoken by the founder become writ, tradition, dogma, and liturgy. Most traditional authority is the result of cumulation through the centuries of certain injunctions or admonitions or simple ways of doing things originally prescribed by some leader of charismatic power. The third great type of authority for Weber was bureaucracy—a rationalized, calculated, designed structure in which the office or function rather than the individual is crucial. Weber and his followers see a large part of history as involving the passage of authority from the charismatic to the traditional to, finally, especially in the modern Western world, the rational-bureaucratic. Weber saw educational, charitable, military, and political organizations, as well as churches, undergoing this development in time.

Some sociologists, such as Robert K. Merton, building on Weber's base, have studied the impacts upon personality of these types of authority, especially the traditional and the bureaucratic. When Weber, citing the poet Schiller, wrote of "the disenchantment of the world," he had in mind the relentless supplanting of the purely spontaneous and the traditional or customary by the forces of bureaucracy in the modern world. A bureaucratization of the spirit as well as of organizations takes place; sociologists following Weber have brought insights into the sheer power of

bureaucracy—power to bend men's wills, power to alter the very ends of an organization. Thus the church, the hospital, the university, or the army may grow so large that the organization becomes its own reason for being, where devotion to organizational processes may crowd out many of the original motivating goals.

The structure of authority has played an immense role in the histories of religions. The authority of Hinduism lies chiefly in the Indian caste system, and it was revolt against caste and its forms of punishments for infractions of caste inviolability that as much as anything inspired the Buddha's renunciation of Hinduism and his founding of a new religion flowing directly from his charismatic being. Struggles over the legitimacy of priestly and ecclesiastical authority have been the substance of a great deal of Christian history: Indeed, the Reformation was largely a challenge to the legitimacy of the authority wielded by the pope and the Curia Romana. It would be difficult to find any religion in which boundless authority is not attributed to some divine being or principle, but as to the mediation by men on earth of that authority, religious sects and churches, like political and economic organizations, differ vastly, ranging from the self-immured anchorite to an organization as huge and complex as the Roman Catholic church.

Social roles. "All the world's a stage," wrote Shakespeare, "and all the men and women merely players. / They have their exits and their entrances; / and one man in his time plays many parts." Natural man is a myth, although that fact has not prevented people through the ages from wondering what an individual would be were he totally isolated from all the social and cultural forces that shape our lives and assign us our varied roles. It is as true to say that human beings are roles as it is to say that all roles are human beings. We do not know people except in their near infinity of roles, but on the other hand any study of roles must be of individual persons.

Roles are, at bottom, ways of behavior, most of which have been handed down through the ages. There is no recognized role that is without norms from the social order to give it direction and meaning; nor can there be a social role that is not a part of some social union or interaction. Even Simeon Stylites occupied a role in the desert that, although physically isolated, was nevertheless part of a religious organization. Very strong in any role is the element of legitimacy. We will accept from individuals in their role capacities as police, physicians, clergy, teachers, and parents obligations we might be loath to accept from others. We do not consider the most intimate examination of our bodies offensive or immoral if done by a physician, nor do we think the close observation of our minds disturbing if it

is carried out by a priest or psychiatrist. Role, in short, confers legitimacy. Killing other human beings is widely deemed immoral, but most people do not hold the same act as immoral when done by a soldier in fulfillment of his legitimate role.

There is also a strong element of duty inherent in every recognized role. To occupy the role of mother or father, teacher or lawyer, cleric or police officer, or any other of the multitude of roles in society means to accept the various values and norms that define or identify these roles. When we find ourselves saying "It is my duty to" perform certain acts of social character, we are only acceding to the implicit demands inherent in every social role. To assume the role of parent is to assume certain duties and obligations, starting with the care and feeding of the infant. Roles are often reciprocal and complementary. Obviously there cannot be a teacher without a student, a physician without a patient. Our culture, drawn from the ages, is the source of the diverse prescriptions for what we think of as normal role-behavior. Illness may be physical in origin, but the actual roles of the sick—self-regard and regard by others—are cultural and vary from people to people, age to age.

We must not overlook the phenomenon of role conflicts. In simple societies these are few, but they are numerous in a society that is as filled with specializations and alternatives as modern Western society. Essentially the feminist revolution of the past century in the West has been a series of assaults upon previously unchallenged roles of women. Much social history is in essence the history of roles—their persistence, their alterations, their conflicts, and their erasure by negative forces.

Nor should we overlook the history of the prestige of given roles. Roles are statuses: any role can be evaluated by its rank in a social order's scale of values. Whenever we ask about anyone's status, we are asking about his position in a social hierarchy. When one is born to or achieves a given role in society, he also, willy-nilly, has the status of that role. A given role—for example, physician, businessman, scholar, or leather worker—can be of very high or low status, depending upon the social order or age in history. But despite the relativity and diversity of status rankings of roles, there are certain universal criteria of the kind of status of a given role—namely, gender, age, wealth, power, education, job, ethnicity, and kinship. Thus, in Western society, a middle-aged, economically or politically powerful, Caucasian, college-educated, professional man of "good family" has historically been accorded high status.

Social classes are coalescences of people who have low, medium, or high "amounts" of the various kinds of status by which a society ranks its

members. Karl Marx declared social class to be the dominant key to the understanding of history, and further believed that in due time the lower class—the proletariat or working class—would overthrow the upper class by revolution, thus inaugurating socialism and a classless society. For Marx, social class, whether low or high, was the crucial determinant of social behavior. But Max Weber, the principal architect of the contemporary sociological theory of status and stratification, realized that in modern, developed Western society, the single concept of class was inadequate to define the complexity of social life. He thus distinguished between power (chiefly political), economic level, and status—the last meaning the ranking an individual may receive in society by factors independent of power and wealth—for example, ancestry, family, breeding, schooling, mental acuity, talent, and so forth. Sociologists have come to realize that, in Western society, social classes are not the distinct, homogeneous entities they once were. The forces of modernization have fragmented social classes as they have kinship systems and certain religions. It is much more accurate today in the West to refer to minorities and elites, all of highly variable status, all dependent upon numerous spheres of values in our complex society. The number of elites is almost beyond count, and they are to be found in sports, theater, movies, television, and even crime as well as in politics, industry, professional groups, and universities. The large number of roles generated by liberal democracy, a highly technological society, and an increasingly secularized and relativist moral order carry with them the inevitable prestige-ranking that results in their being statuses, ascribed and achieved, as well as roles.

Deviance and change. From its beginnings in the nineteenth century, sociology has been closely concerned with the phenomena of deviance and change in human behavior. Few human beings live their lives in perfect accord with the rules and norms governing social interaction, social groups, social authorities, and social roles. Always there is at least an infinitesimal variance between role perfection, ideally defined, and actual role performance. When such variance becomes pronounced, we refer to it as deviant behavior, that is, behavior that violates the normative rules, codes, and stereotypes of a given social order. From a universal point of view, relativity is the very essence of moral behavior; behavior that would be regarded as deviant in a middle-class U. S. suburb might be acceptable in an urban ghetto or in an utterly foreign culture. Headhunting would be regarded as deviant, to say the least, in America and most parts of the world, but it is far from being perceived as deviant in certain primitive cultures. The same holds for cannibalism and a host of other practices. What defines deviant

behavior is the flouting or bypassing of rules and norms in a specific social order or system. Killing, robbing, arson, mutilation, and assault are almost universally regarded as deviant within the social order, but they are not so regarded when they are the acts of legitimate soldiers at war with external enemies.

Émile Durkheim is probably the preeminent pioneer in the study of social deviance, and his most basic principles continue to undergird its study and conceptualization. From Durkheim, especially his famous *Suicide* (1896), we have learned that deviance is at one and the same time abnormal and normal. Suicide, crime, desertion of family, arson, and the like are all abnormal in that they are recognized as violations of a given moral and social code and are punished or deplored accordingly. But, Durkheim continued, certain incidences of these acts of deviance are to be expected—are to be considered sociologically normal—when certain social, economic, and political conditions are present. Thus, sudden and high rates of urbanization, industrialization, and secularization in a population are almost certain to induce processes of community disorganization that in turn lead to erosions of social authority and of traditional social roles. Deviant behavior almost always increases in such circumstances. Durkheim concluded that the high rates of suicide he observed in the Western nations resulted from the alienation of people from traditional moral values and from the ties of close social cohesion—family, church, village, neighborhood, and so on.

When we consider change, we often find that it is the continuation and cumulation of deviant acts that will in time lead to changes in the social groups and roles by which deviant behavior is identified. One need think only of the changes that have occurred in the last century in the public definition of what is proper behavior in a "lady." There is no need to list the behavior patterns now almost universally accepted as respectable in women that even a half century ago would have raised the eyebrows of the conventional. It suffices to say that in very large degree the change in the criteria of female respectability over many decades is the cumulative consequence of a multitude of at first minor, then major deviances from the norm.

Religion is, of course, a fertile field for the study of deviance in the strict sociological sense. Many of the mainline religions have undergone extraordinary changes in creed and liturgy during the last century, and although we cannot ignore the calculated, planned nature of many of these changes, we are obliged to note the small but increasingly significant deviations of religious people from the strict codes of their forebears.

But not all social change is gradual, continuous, and cumulative. When we turn to the more notable historical changes in social systems and social organizations, we are forced to deal with the discontinuous—with the major conflict, the sporadic event, and the sudden, unforeseeable intrusion of an alien system. Nor can we overlook the immense force of charismatic human beings in religion, politics, science, or other social systems. Most change is slow and incremental, often so slow as to be more nearly persistence and fixity than change. But there are periods when changes are great, sudden, and explosive, inducing myriad consequences in thought and action in the population. Wars such as the two great ones of the twentieth century, spectacular revolutions such as the French and the Russian, spiritual awakenings such as that associated with John XXIII and the Second Vatican Council, major epidemics, rapid scientific and technological advance—these and other great interruptions of the normal have to be taken into consideration when we deal with social change.

There is one more preoccupation with change that has sociological as well as ethnological or anthropological aspects: social evolution. At the same time that anthropologists such as E. B. Tylor, Lewis Morgan, and James G. Frazer were constructing their patterns of social and cultural evolution, such sociologists as Auguste Comte, Herbert Spencer, and Lester Ward were engaged in almost identical pursuits. Inevitably religion figured large in social-evolutionary schemes. There was search for, and wide disagreement about, the natural origin of religion: some found it in psychic states such as animism, others in ritual acts like totemism, still others in awe of celestial bodies and terrestrial phenomena such as the changes of seasons. There was similarly universal interest among anthropologists and sociologists, and again wide disagreement, about the natural stages of development that religion has gone through from its origins to the development of the great world religions such as Christianity and Islam. For the most part, contemporary sociology has dismissed the kind of interest in social and religious evolution that was rife in the nineteenth century. Both unilinear and multilineal patterns of the supposed development of religion in the human race have come under wide attack as being more nearly philosophical and speculative than scientific. Unlike their forebears, today's sociologists do not foresee the demise of religion and its succession by the scientific and secular. Religion, it is now generally believed by sociologists, answers certain psychosocial needs in human beings, and until or unless these needs become casualties of biological evolution of the human species, religion in one or another form will remain a persisting reality of human culture.

Sociological interest in religion is as great today as it ever has been during the past two centuries. Once the orientation toward universalist schemes of religious evolution faded, much more concrete, empirical, and scientific studies of religious behavior began to proliferate in all Western countries. Numerous sociological studies are to be found on such topics as the relation of religious thought and behavior to social class, to ethnicity, and to wealth and poverty; the systems of authority, stratification, and role formations in religion; religion and political ideology; and religion as a mainspring of social integration, but also of social change and revolution. These are but a few of the problems concerning religion that present-day sociologists consider significant. The general development and refinement of sociological methods of investigation—survey, case history, statistical, and mathematical, among others—have occurred as often in inquiries into religious behavior as in studies of other dimensions of human existence. There is no reason to suppose that the close relation between religion and sociology, now close to two centuries old, will dissolve soon.

Part Two:

SCIENCE AND RELIGION.

This entry traces an argument concerning why modern science could have arisen only within the philosophico-cosmological frame-work established by Christianity. For further treatment of issues involving the relation of the sciences to religion, see Artificial Intelligence; Evolution; Neuroepistemology; and Physics and Religion.]

It is a widely held view that to speak of religion and science is to embark on a long recital of conflicts, for most if not all of which religion is to blame. In the same view most of the conflicts have been resolved in favor of science or at least will be in due course. And if some conflicts will be found unresolvable, underlying the stalemate there will be found an unfathomable intellectual perplexity that can hardly give comfort to any religion that claims to satisfy the demands of a reason that is often equated with science.

What Science? What Religion? That both religion and science are vast entities is, in this view, the only feature they may have in common. The differences between the two may appear striking even to a casual onlooker. Science is relatively new; it became robustly manifest only about three hundred years ago. The professedly exclusive concern of science is easily definable as an observation of empirical data and their being cast, as much as possible, into a mathematical mold. With its ever heavier reliance on

mathematics, science is achieving an ever broader knowledge of, and technology a firmer control over, empirical processes. The same reliance also assures to science an ability to predict phenomena that has at times a revolutionary novelty. Its subject matter (empirical reality) and its method of interpretation (ever wider and deeper quantification) secure for science, taken as a communal inquiry, a stunning facility in communicating and in achieving consensus.

Ever since its rise in the seventeenth century the scientific community has not been seriously divided as to what constitutes science. The rise of that community was marked by its signal success in discrediting alchemy and astrology as scientific pursuits. It proved itself just as effective in distancing itself from Naturphilosophie in the first half of the nineteenth century. In our own times students of extrasensory perception and telekinesis have had but meager success in becoming a recognized part of science. The passing away of a particular generation of scientists is usually sufficient to make dissent on a topic a thing of the past. Even when dissenting groups such as non-Darwinian evolutionists endure over three or four generations, the matter is hardly considered a real rift in science. Neither is any rift implied in disagreements among scientists as to what extent the quantitative method is applicable to the life sciences, or, especially, to the sciences that are on the borderline with the humanities, such as psychology, sociology, and historiography.

To science's impressive measure of youth, uniformity, consensus, coherence, and definability, religion presents an unflattering contrast. Religion predates recorded history and easily appears as a fossil of bygone ages. Religion repeats old sayings, and if it offers something "new," the novelty turns out to be either a studied vagueness or an eventual boomerang. The statements of religion, if truly theological, are never testable in a scientific sense. Perhaps no other word than religion has ever been used, with apparent equanimity, to denote outlooks that are not only widely different but at times mutually exclusive. Confucianism, Shinto, and Buddhism, which do not consider man a being dependent on a personal, transcendental creator, pass for religion no less than do the three great monotheistic religions: Judaism, Christianity, and Islam. These three in turn all profess to be the privileged recipients of a supernatural message of the creator who has a personal hold over human history.

Supernatural revelation may seem to be an especially effective source of further fragmentation in the religious landscape. At one end of the spectrum are those Jews, Christians, and Muslims for whom such revelation has become an unbearable burden and for whom the force of revelation has

dwindled to mere adherence to cultural traditions. At the other end are the fundamentalists for whom the primordial revelation must be preserved in a pristine, literal sense. This latter trend is, within Protestant Christianity, an offshoot of the infallibility which the reformers had ascribed to the pious and informed reading of the Bible. In Roman Catholicism, doctrinal infallibility is assigned to concrete human beings, such as the pope and, under certain circumstances, the college of bishops.

A portrayal, however brief, of religion as an actual phenomenon that can react to science cannot be complete without a reference to unitarianism and to deism. The former has increasingly approached the erstwhile position of deism, whereas the latter is now hardly distinguishable from a kind of cosmic "religion" to which Albert Einstein has given much currency. The residue of "religion" can be detected at times in secular humanism, which rejects even the vague pantheism of cosmic religion; mere aestheticism might be a more appropriate label for this religiosity.

It may seem well-nigh self-defeating to attempt a meaningful discourse on the relation between an entity such as religion, which has such disparate features, and another entity, science, which to all appearances is the paragon of coherence and consistency. And it may appear a sort of sectarian preference to center such a discourse on the relation of science to a Christianity that still holds onto a set of propositions that are distinct enough to pass for dogmas. Such a restriction commends itself as a dictate of logic, and it is also imposed by history. The emergence of science in the seventeenth century took place in western Europe (taken in a broad sense that includes Italy), where dogmatic Christianity still had a sway and where church structures—Catholic hierarchy and Protestant synods—still had a strong public influence. From that century date some of the chief confrontations between Christianity and science, such as debates regarding free will and mechanical laws, natural laws and miracles, and nature and revelation as God's two messages.

The Christian Matrix of the Rise of Science. The emergence of science in the Christian West in the seventeenth century has until recently been seen in the framework of Comtean positivism. [See Positivism and the biography of Comte.] According to Comtean positivism, Christianity could conceivably have had a role in that emergence by providing a set of metaphysical tenets that ultimately led to a rationalist view of nature. Comtean historiography tried to play down the actual presence of Christianity in the seventeenth-century scientific context and emphasized rather the contribution of eighteenth-century deism, which was quite acceptable to the leaders of the Enlightenment. The seventeenth-century

emergence of science relates strongly to Christianity, however, partly because most of its representatives were sincerely believing Christians. Huygens and Newton were two notable exceptions, of whom the former harbored an outright hatred for the Christian religion he knew, Calvinism, while the latter tried as best he could to conceal his unitarianism in order to maintain his peace and position in the Anglican establishment.

An especially telling aspect of the Christian background of the seventeenth-century emergence of science relates to the history of the three Newtonian laws of motion. Newton himself can be credited only with the third, the force-acceleration law. The second, the action-reaction law, predates Newton, and so does the first, the law of uniform inertial motion realizable when no resistance is present. While the first law is customarily ascribed to Descartes, he was undoubtedly heir, as was Galileo, to a trend of thought that began with Buridan and Oresme at the University of Paris in the fourteenth century. Among their doctrines, which were carried by a large number of students to other places of learning in Europe, was a sharp dissent from some tenets of Aristotelian science and cosmology. Aristotle's theory of the cosmos was based on his doctrine of the eternity of the world, as well as on his pantheism—that is, his doctrine that the world is the ultimate living entity. Such tenets were at variance with the Christian creed, which is pivoted on the doctrine of creation. Creation in time meant a finite cosmic past, and this in turn imposed an absolute beginning on all motion, and in particular on the motion of the sphere of stars, which in the Aristotelian view determined other motions in the lower realms, celestial and terrestrial.

Buridan, and after him Oresme, took the view that the sphere of stars received, when created by God, a certain amount of motion (impetus). Furthermore, they saw that impetus as conserved, because the motion was taking place in a frictionless area. Most significantly, Buridan and Oresme discussed in the very same context such ordinary cases of motion as the throw of a javelin or any other projectile. That they discussed celestial and terrestrial kinds of motion on the same basis was an enormous break with the past and a major portent for the scientific future. Newton's view of the fall of an apple as identical with the fall of the moon in its orbit should come to mind in this connection as one of the greatest breakthroughs in all scientific history. It was also a feat that the Christian creed had enabled, for, according to Christian doctrine, the heavens were as mere creatures as was anything on earth.

Buridan and Oresme in fact made a complete departure from Aristotle's theory of motion, which rested ultimately on the divinity of the heavens and on the Prime Mover's essential identity with the outermost

sphere. It was this identity that ultimately imposed on Aristotle the notion that the mover had to remain in uninterrupted contact with the moved in order to assure its continued motion. While this seemed to be an innocuous postulate with respect to the study of the motion of the sphere of the fixed stars, it was straddled with great difficulties in respect to planetary motion, and invited contradiction in terms when it came to terrestrial projectiles. Thus Aristotle had to postulate the closing in of the air behind the projectile as its continued propellant. This was the logical equivalent of raising oneself by one's bootstraps, and the contradiction proved a very high price for Aristotelian physics to pay for its author's being steeped in pantheism.

It was that pantheism that put physics into a strait-jacket for almost two thousand years. Tellingly, the only serious critic of that theory in ancient times was Philoponus, a Christian, who objected to it with explicit reference to some consequences of the Christian doctrine of creation. That a break from that straitjacket could have been achieved apart from a commitment to Christian doctrine is not at all likely. Major events of intellectual history, to be discussed shortly, also suggest that unlikelihood.

As a breakthrough in the direction of full-fledged modern science as it emerges in Newton's *Principia*, the fourteenth-century formulation of the impetus theory was not an isolated event. Speculations on uniformly accelerated motion followed in the same century. That in such motion, of which the free fall of bodies is a case, the distance covered after starting from rest is directly proportional to the square of the time elapsed was a widely voiced notion two generations before Galileo went on record on this point. In this respect, as Pierre Duhem, the great discoverer of medieval science and of its being steeped in reflections on the Christian creed, had aptly noted early in this century, "there was nothing for Galileo to discover." Galileo's immortal contribution was the mathematical proof of the time-squared law and its empirical demonstration in the famed inclined-plane experiment.

The striking novelty of medieval speculations on motion was of a piece with the trend in which the world was gradually divested of its animistic properties. These properties were the invariable accompaniments of classical pagan pantheism, which was incompatible with the absolute transcendence ascribed to the creator in Christianity. It was no accident that in the cosmology of Giordano Bruno, a professed pantheist and a wizard of Qabbalah, all material entities, especially the stars and planets, were members of an infinite, eternal, living entity. As such, they were subject to eternal cycles of birth, growth, death, and rebirth. Furthermore, as part of a pantheistic organism, each material entity could, almost as if prompted by

willfulness or caprice, turn into any other part. Such an outlook was diametrically opposed to the consistency and stability that science presupposes in all changes in nature, if nature is to be truly investigable. Not surprisingly, Bruno decried Copernicus's reliance on "the file [exactness] of geometry." Again, there is no hint in Bruno's writings of a view, already popular in the fourteenth century, of the world as a clockwork mechanism. Such a mechanism, unlike Bruno's pantheistic world-animal, full of caprice and volitions, was clearly germane to investigations that could be scientific in the best Newtonian sense.

The investigability of the universe in strict quantitative terms received further invaluable support in the medieval popularity of a verse in the Wisdom of Solomon to the effect that the creator "arranged everything according to measure, number, and weight." This verse was the most widely quoted biblical passage in medieval writings, according to E. R. Curtius, a prominent authority on medieval literature. The Wisdom of Solomon also contains the emphatic insistence, repeated almost verbatim by Paul in his Letter to the Romans, that the human mind is capable of recognizing the creator from his works. Since, however, the creator was believed to be fully rational, his works had to possess the same quality. The understanding of God's works had to be eminently within the reach of man, as precisely because of his rationality man was believed to have been created in the image of God.

Galileo made much of this in setting forth the methodology of the new science in his famed and ill-fated Dialogues. Tellingly, the most serious fault in Galileo's methodology consists in his becoming Archimedean at the expense of his Christian belief. According to the latter the human mind could fathom the laws of nature, but it could not dictate them. A truly created world had to have a rationality that, whatever its consistency and permanence, could only be contingent in the sense of being one of an infinite number of possibilities available to an infinitely powerful creator. This point too received much emphasis in late medieval centuries. Oversight of this exacted its due when Galileo, in view of the alleged absolute perfection of the sphere, dictated that the motion of planets had to be perfectly circular. Such was the apriorism that prevented Galileo from recognizing the crucial value of Kepler's three laws of planetary motion. Quite similar was the trap that apriorism had set for Descartes, who did his best to underplay the significance of the elliptical orbit of planets as established by Kepler.

It was also a part of that Christian view of the created mind, which became a widely shared cultural matrix in medieval times, that man as an

analogous image of God was also God's steward over creation. This view was part and parcel of the medieval explosion of technological inventiveness. Weight-driven clock mechanisms, first produced in the late thirteenth century, soon found industrial applications. A similar technological breakthrough was the cam, which made possible the transformation of linear motion into circular motion and vice versa. In addition to original inventions, the medievals made enormous improvements on techniques they had inherited from Roman times or learned from the Arabs. Such improvements related to windmills, horse harnesses, crop rotation, and various architectural devices that made possible the construction of Gothic cathedrals. It could indeed be stated that until the industrial application of steam power and electricity in the nineteenth century, modern western Europe thrived on a technology of essentially medieval make.

The conception of the sudden emergence of science from Galileo's mind, as the leap of a fully armed Athena from the head of Zeus, is no longer the kind of undisputed tenet that it was only fifty or so years ago. Not much more creditable than some rear-guard defenses of that tenet are the efforts of some historians of technology who aim at distracting attention from the medieval theological matrix of the rise of modern science. At best those efforts offer pleasing similes in place of explanation. Such is, for instance, the reference to the medieval confluence of important ingredients for the making of science, as if it were then merely a case of self-ignition. To see the true merit of such similes, even when they are buttressed by references to psychological, sociological, and economic factors at play, one has to consider the fate of science in all great ancient cultures. In reviewing them, and in particular the cultures of Greece and the Islamic world, it is well to recall that culture has much to do, even etymologically, with cult, that is, religion.

Ancient Religions and Science. Studies of ancient Greece rarely fail to contain something equivalent to the phrase "the Greek miracle." With respect to science, the Greeks' achievements give also an unintended twist to a remark of Einstein's, according to which the real problem is not why science was not born in any of the ancient cultures but why it was born at all. Marvel should indeed yield to perplexity on pondering the two-century-long creative work in geometry that Euclid systematized at the beginning of the Hellenistic period (c. 300 BCE-c. 600 CE). The Euclidean synthesis is undoubtedly one of the great "monuments" of the human mind. Yet it almost immediately became a monument that failed to inspire further construction for those almost one thousand years. The same is true of Aristotle's work in

biology, an achievement that prompted Darwin's remark that Linnaeus and Cuvier were mere schoolboys in comparison with the Stagirite.

There were many other Greek men of science whose achievements would undoubtedly be judged today as of Nobel-prize caliber. One example is Hipparchos's discovery of the precession of equinoxes. Another is Eratosthenes' method of estimating the size of the earth, which yielded a value in close agreement with modern measurements. It helped Aristarchos of Samos to devise a method for measuring the sizes and distances of the moon and the sun, a method that yielded rather poor results with respect to the sun only because of the difficulty of making one of the necessary measurements with sufficient accuracy. Aristarchos of Samos is, of course, best remembered as the proponent of the helio-centric theory—the ancient Copernicus, in short.

Yet even in Greece, so often and so much praised for its championing the *logos*, or reason, these splendid advances failed to issue in an intense intellectual reflection. Archimedes, for one, did not endorse the heliocentric theory, although he made much of the foregoing distance estimates in his *Sand Reckoner*. Ptolemy, who made the widest application of Euclidean geometry to astronomy, had only scorn for heliocentrism, as was also the case a century or so before him with Plutarch, who is often praised for the daring modernity with which he spoke of the moon as a body similar to the earth. Yet, the modernity of Plutarch is only apparent. His discussion of the tides is a revealing instance. To be sure, he attributed the tides to the moon's influence, but the latter was for him a volitional sympathy for the earth and vice versa. As such it was a throwback to the organismic view that Ptolemy himself endorsed when doing astronomy not as a mathematician but as a physicist. The harmonious motion of planets was for him equivalent to that of a group of dancers intent on not colliding with one another.

This organismic view of nature varied from the crudest to the most refined. The latter was exemplified in Aristotle's cosmology, which in turn was a sophisticated codification of precepts laid down by Socrates as, in the *Phaedo*, he argued to his friends the correctness of his decision to drink the hemlock. The exchange of arguments as recorded in this dialogue is of crucial importance for an understanding of the theological or religious underpinnings of the ultimate fate of Greek science. On one side were Socrates' friends, who with the atomists insisted on a mechanistic view of nature in order to dissuade Socrates from his belief in the immortality of the soul. They were as unable to conceive that matter and spirit were not necessarily contradictory as Socrates himself had once been. In his youth an

avid student of Anaxagoras and therefore a convinced mechanist, Socrates saw only one way of vindicating purpose, value, and soul (in short, humanities and religion). The way consisted in the rejection of mechanism through the universalization of purpose, volition, and soul. In the dramatic context provided by his own imminent death, Socrates argued that to demonstrate the immortality of the human soul, one had to recast the entire physical science in terms of purpose.

In fact, the methodical precept that Socrates imposed as the first and ultimate question about any event, motion, or thing was whether it was best for it to happen, to be so, or to proceed in this or that manner. Obeying that precept amounted to turning the entire cosmos into an animated being. In few other cases did intellectual history serve a more momentous proof of the truth of the saying that all science is cosmology, which, it is well to recall, has always had the closest ties to considerations that are the very domain of religion.

The *Phaedo* marks the beginning of a volitional or organismic physics that found its major installment in the third part of the *Timaeus*. The same was presented on an even grander scale in Aristotle's *On the Heavens*. The statement there that of two bodies the one with twice as much mass as the other would fall twice as fast has been recalled on countless occasions with that ridicule that betrays rank superficiality. Hardly ever recalled is the broader reason given by Aristotle, who simply put in concrete form the Socratic program, which was a dramatic resolve to save the purpose, cosmic and human. It was that resolve, infused with religious inspiration, that ultimately prevented Greek science from aiming at more than a mere saving of the phenomena of the physical world.

The agony of the Greek mind was to see only an all-or-nothing choice between science (mechanics or dynamics) and purpose (religion). The Greek mind lost out on both because it did not seem to possess the fiducial strength to accept irreducible features of existence (materiality and spirituality) and to give both their due. The problem lies in the heart of the relation of science and religion, compared with which all other problems pale in significance. The clue to it would not be on hand without the subsequent ability of medieval and early modern Christian Europe to trust in the ultimate harmony of these two apparently contradictory features of experience. To the Europeans in question that trust came from their belief in a transcendental rational creator, the very belief that the Greeks did not possess. It is well to recall that in the half-dozen occasions when the question of a creation out of nothing emerged on the Greek philosophical horizon, it was invariably dismissed with scorn and ridicule.

The Socratic solution for which Greek posterity overwhelmingly opted was a move hardly helpful either for science or for soul. As to science, and Aristotle's physics in particular (which dominated the scene for almost two thousand years), it has been aptly said that it contains not one correct page. It is an illustration of the fact that the often acclaimed birth of science in ancient Greece was a stillbirth, one of the two most momentous such cases. Just when the various conditions for a mathematical treatment of motion, including the ubiquitously present accelerated motion of free-falling bodies, were on hand, the Socratic insistence on treating all moving bodies as sorts of living entities that aspire to their proper place nipped in the bud the true birth of science.

Archimedes, who applied methods adumbrating infinitesimal calculus to static bodies (such as the computation of the volume of a cone), failed to do the same in kinematics. Insofar as he was part of the post-Socratic Greek "religion" he had no encouragement for doing so. His failure is all the more significant as he was a genial student of the balance, and in general of mechanical as well as of hydrostatic equilibria. Those studies of his might have conceivably led him to the formulation of the principle of virtual velocity, on which all Newtonian dynamics ultimately rests.

Tellingly, this first decisive step toward the exploitation of the scientific significance of balance took place in the late thirteenth century, when there was on hand that Christian religion that provided a balanced trust in matter as well as in spirit. Had the Greeks of old been able to approach nature with that trust, they not only might have saved their science but also their soul or religion. With a trust in the value of two sides (matter and spirit) of a single human existence, they would have had a much greater chance to resist the inroads of the Eastern mysticism and worldview that flooded the Mediterranean just when the golden age of Athens was over.

Elements of that worldview are already distinctly apparent in Plato's major dialogues, especially in the Republic. It contains among other things the graphic account of what is the quintessence of Eastern and in particular of Hindu thought: the coming of the universe to a full stop and its restarting, a mere incident in a recurrence that has been going on since eternity and will go on for unending ages. For Plato's student Aristotle the same notion of eternal cycles provided that smugness with which he looked at his own times as the crest of the wave with respect to technological comfort and learning. The price of that smugness was despondency, the worst threat to scientific enterprise. For the specter of cycles evoked for Aristotle the logical prospect that all technology and learning had already been achieved innumerable times in each of the innumerable bygone ages or

world cycles. It could hardly be an encouraging thought that the same argument would be made time and time again in an eternal succession of ages. For the cosmos of Aristotle was eternal; indeed, its eternity was the decisive vote for its divinity, a belief unanimously shared in all Greek antiquity.

The whole debate among the Greeks of old concerning the doctrine of recurrence related to the question of whether only the classes of beings would reappear, or all individual beings in their uniqueness. Not even this touch of skeptical questioning arose with respect to the doctrine of eternal cycles in its classic home, ancient Indian culture.

Ancient India was also the place that witnessed the formulation of the decimal system, including place notation with the use of zero, at least a thousand years before the common era. Ancient South Asians can also be credited with advancing algebra to second-degree equations, but their scientific exploration of the material world surrounding them showed little if any sophistication. Practical know-how was, however, considerable in ancient India, as witnessed by the nonrusting iron pillars set up during the reign of Asoka, who unified in the third century BCE much of the Indian subcontinent. Its coming into close contact with Greek learning and science during the time of Alexander the Great laid bare in one stroke the marked inferiority of Indian science.

Attention to chronology is obviously a function of the prevailing notion of time, which in ancient India had little to do with linearity. Because of the recurrence of world ages, or yugas, in the ancient Indian conception of time, the uniqueness of events, which in a sense constitutes the linearity of time, could not but be largely lost. Time then easily became the prey of pessimism. The pessimism that such a perspective enhanced is well evidenced in the Puranas, the chief literary form throughout much of the well over one thousand years corresponding to the Hellenic and Hellenistic periods. In the Puranas one finds the major ancient Indian use of the decimal system, the computation of the number of years in the yugas in ever more encompassing units of cycles of which the Day of Brahma was the largest. Yet the Day of Brahma did not suggest at all an end to what would appear a perennial treadmill. Some modern Indian writers, among them accomplished cosmologists, clearly betray a disregard for context when they quote some of those calculations as being in close agreement with modern scientific estimates of the age of the universe. Not a few modern Indian scholars, however, have concluded that only a radical break with ancient patterns of thought would secure for science a flourishing role in their country.

While in ancient China preoccupation with world cycles was not so prominent as in ancient India, it was still a distinct part of their markedly organismic view of nature, epitomized in the doctrine of yin and yang. Confucians subscribed to it no less unreservedly than did Taoists. It entrenched a long-standing reluctance to de-animize considerations about the physical universe, a reluctance evident prior to the exposure of China to Western civilization with the arrival of Jesuit missionaries, as well as long afterward. As late as 1921 such a prominent Chinese thinker as Fung Yu-lan was not reluctant to claim that China needed no science as it was wholly alien to the best in Chinese thought. Whereas similar statements made around 1800 by Chinese scholars on being shown a microscope (a falsifier of true perception, in their eyes) may seem a minor matter, the situation in the twentieth century, when world powers stake their strategy on the successes of their respective scientific research, should seem quite different. Indeed it was the rise of China after World War II to the status of superpower that prompted major studies on the failure of China to become the birthplace of science.

As is well known, there has never been in China a lack of social organization or dearth of talent and technological inventiveness (the compass, gunpowder, ceramics, block printing, the stirrup, to mention only a few major items). There were also long periods of peace, of which the four centuries of the Han dynasty and the three centuries of the Sung are the most memorable. In fact, in the most massive of studies of Chinese scientific thought, *Science and Civilisation in China* (5 vols. to date, 1954-), Joseph Needham was forced to conclude that religion played a crucial role in that failure. According to Needham, a sort of monotheism was replaced about a millennium before the onset of the Confucian era (c. 500 BCE) by a vague pantheism or naturalism. Needham argued that after they had parted with a belief, however inchoate, in a transcendental rational creator, the Chinese retained no confidence that men, whose powers of reason are far more limited, could fathom nature in such a way as to provide control over at least some of its parts. Similar analysis of three other major ancient cultures, the Egyptian, the Babylonian, and that of pre-Columbian America, also reveals the inhibiting impact of the religious idea of an eternal world subject to perennial cycles.

Two cultures, Jewish and Muslim, demand special consideration here, as they are both steeped in monotheism, the kind of religion most at variance with the organismic pantheism prevailing in the other main ancient cultures. Yet neither Jewish nor Islamic ambience has become the birthplace of science.

The case of Judaism shows that whatever potential spur monotheism may provide in that respect, it may not be effective in the absence of certain other factors. Some of those factors, such as social organization, were denied to Jews following the destruction of Jerusalem and the Diaspora. Yet that scatteredness acted also as an exposure to the most varied data of learning and culture. Philo Judaeus (first century), Moses Maimonides (twelfth century), and, even later, Hasdai Crescas (fourteenth century)—all show the openness and acumen of Jewish scholars. Yet to some extent already in the writings of Philo, and certainly in the works of Maimonides, whom Thomas Aquinas referred to as the "Great Moses," one can see evidence of the growing inability of Jewish thinkers to keep the creation dogma from the inroads of pantheism, a point clearly acknowledged in all the great twentieth-century Jewish encyclopedias. This is also a rarely noted but all-important point to be made in connection with the development of Muslim thought.

Within a century or so after the Hijrah the Islamic world was a vast cultural entity in full possession of the Greek philosophical and scientific corpus. Muslim studies of this body of work, intense as they were, did not, however, lead to its critical development. Scientific advances within the Muslim world were restricted either to medical skill, centering on the treatment of eye diseases, or to algebra and geometry, the latter being also a part of optical studies. Concerning the study of motion, or physics and cosmology in a broader sense, Muslim studies fell into two main categories, which correspond broadly to Islam's two major theological trends, known as the Mu'tazilah and the mutakallimun.

These two trends resulted in two possible reactions to the notion of physical law, or laws of nature. One reaction was that of an Islamic orthodoxy for which the laws of nature represented a curtailment of the freedom of God as set forth in the Qur'an. Among orthodox Muslim thinkers, one finds an emphasis on the inscrutable will of God, the creator, with some implicit detriment to the full rationality of his creation. Such prominent Muslim thinkers as al-Ash'ari and al-Ghazali took a distinctly occasionalist view that could but discredit the notion of physical law. The other trend, represented above all in the writings of Ibn Sina (Avicenna) and Ibn Rushd (Averroës), took Aristotelian science with all its apriorism as the last word in learning. Of course such a stance, or patent rationalism of the worst kind, is incompatible with belief in a creator and a revelation, and had to be presented in an expeditious way. Such was the doctrine of triple truth: one (the plain Qur'an) for the common faithful, another (ritualistic theology) for the clergy, and still another (Aristotle) for the truly learned.

It did not occur to the Mu'tazilah that natural laws and the creator's freedom were not irreconcilable. It only had to be recognized that the actual laws of nature were created and therefore contingent, that is, representing the realization of only one of an infinite set of possible laws available for the creator's choice. The failure to perceive this was all the more telling because the notion of contingency was clearly set forth by al-Farabi with an eye precisely on some passages of the Qur'an where it is stated that only God exists necessarily. Yet even an al-Farabi would not entirely free himself of the necessitarianism of Aristotelian physics and cosmology. For al-Farabi the heavenly parts of the universe appeared to be necessarily eternal and unchangeable. Needless to say, the Averroists subscribed with no hesitation to Aristotelian apriorism or necessitarianism.

An aspect of this seeming schizophrenia among some Muslims concerning faith and science was the widespread espousal both of the doctrine of cycles and of astrology. These in turn, as was the case everywhere in other ancient cultures, lent strong support to an organismic view of nature, the very opposite of a de-animized worldview, so indispensable for the purposes of exact physical science.

The result was a stillbirth of science within the Islamic world. Ibn Sina, for one, failed to perceive the implications of his own reflections on inertial linear motion in a void. The leading Muslim scholars became convinced that the cultivation of the science of motion, or physics, was in a sense a waste of time, and if it was to be pursued at all it had to be in terms of volition and similar psychological frameworks. A major illustration of this position is the *Muqaddimah*, a vast survey of the various branches of learning, by Ibn Khaldun. Written around 1370, the work presents a revealing contrast to the very different reaction to Aristotle's physics and cosmology in the Christian West. For it was almost exactly at that time that Oresme, with his commentary on Aristotle's *On the Heavens*, lent powerful support to the trend started by his teacher, Buridan, a generation earlier.

Religion versus Scientism. The Islamic world did not lack economic strength, cultural cohesion, or contact with other cultures, both Eastern and Western. Moreover, it was steeped in monotheism. Therefore, the stillbirth of science in Islam invites a further look at the very different outcome in the Christian West. Christian monotheism obviously must have had a special character capable of fostering the rise of the scientific worldview, and it is not difficult to identify the source of this quality in the doctrine of the incarnation of God in Christ. The incarnation enabled Christian consciousness to reject unconditionally the idea of a cyclic universe. Whereas the average Greek or Hindu felt little if any revulsion to

the idea of his own reappearance in an infinite number of future ages, the mere thought of a replay of Christ's suffering and resurrection filled the Christian mind with overwhelming dismay. It is precisely this point that brings to its highest pitch Augustine's *City of God*, perhaps the book most influential in molding medieval Christian consciousness.

The securing of the dogma of incarnation in its pristine form had been a supreme concern throughout patristic times, and the struggle for the Nicene Creed against Arians, Semi-Arians, Monophysites, and Nestorians had momentous consequence for the notion of the physical universe as well as for subsequent theology. In that antique world, where the universe was invariably looked upon as a pantheistic entity, or an emanational product from the godhead, the Christian doctrine about Jesus as "only begotten Son" represented the sharpest conceivable form of dissent. For if Jesus, a flesh-and-blood reality, was alone begotten (*monogenes*), the existence of no other thing could be ascribed to divine generation, which like all generation produces an offspring of the same nature. Rather, each and every thing had to be seen as the result of a very different process, creation out of nothing, which can but produce beings very different in nature from the creator.

Once the dogma of incarnation secured the dogma of creation, the effective escape from Aristotelian necessitarianism was secured, thus creating the possibility for the view of cosmos required by science. A created universe had to be rational and consistent, but also contingent, that is, only one of an infinite number of possibilities available to an infinite creator who cannot but be infinitely powerful and rational. Such a universe is not, however, investigable by the limited human mind in an *a priori* way, but only in an *a posteriori* fashion, which is precisely what is needed by the experimental method. Christians, furthermore, looked upon themselves as heirs to the injunction given in Genesis and Psalms where man is spoken of as God's appointed steward who has to explore and exert power over the entire material realm.

The claim that this worldview is closely tied to dogmatic Christianity and uniquely germane to creative science is subject to several tests. These in turn represent major interactions between science and religion in modern times. One of those tests relates to the difference between the foregoing worldview, essentially a set of philosophical propositions, and the primitive world-picture, such as given in Genesis I, in which that worldview was originally adumbrated. The test is in a sense the kind of answer that can be given to the question "What has been the measure of awareness of that difference, especially when the progress of science demanded drastic revisions of that world-picture?" In his Letter to the Grand Duchess

Christina, written in 1616, Galileo, for one, quoted extensively various church fathers, especially Augustine, concerning the revisability of the biblical world-picture in which the earth was floating on waters and the sky was a solid roof with the sun and the moon sliding on it. In the two treatises of Augustine on the interpretation of Genesis, which were widely read during medieval and Renaissance centuries, the faithful are warned against taking literally biblical details about the external world that are at variance with what reason and observation (science) had established. Underlying this warning was the conviction that the God of creation and the God of revelation were the very same God to whom no logical or factual contradiction could be ascribed.

As is well known, Galileo's Letter could circulate only in manuscript copies for twenty or so years. Augustine's awareness of the limitations of revealed religion was hardly to the taste of the fundamentalist literal exegesis that the Catholic church supported in Galileo's time in order to meet Luther, the first to denounce Copernicus, on his own ground. Three generations earlier Copernicus had no problem with church authorities or with scriptural exegesis. It was the Lutheran Kepler who first deemed it appropriate to preface a major scientific work, his *De stella Martis* (1610), with a dissertation on biblical exegesis that echoed Augustine and anticipated Galileo's Letter. Copernicus himself, in his own preface to his *De revolutionibus* had set forth a variant of the cosmological proof of the existence of God. The helio-centric arrangement was in his eyes precisely an embodiment of a worldview most worthy of God and most germane to science. Catholic officialdom, however, seemed to learn from its bungling in the Galileo case, about which Catholics can take the sole though no small comfort that Paul V, a rather impetuous personality, refrained, in the last moment, from making an irrevocable and infallible pronouncement on the case by leaving it to lower-echelon authorities.

Two hundred or so years later, not only the theory of evolution and the discovery of the vast geological past but also the specific mechanism set forth by Charles Darwin of the origin of species had to be faced by dogmatic Christianity. Interestingly, the real opposition to Darwin's ideas came from the Protestant side, which, apart from its liberal sector, regarded the Bible as literally true in the sense bequeathed by Luther and Calvin. The quarrel of "Darwin's bulldog," T. H. Huxley, was with the Anglican bishop Samuel Wilberforce, and not with the Roman Catholic cardinal Henry Edward Manning. Wilberforce might have fared better had he kept in mind that both Huxley and Manning belonged to the Metaphysical Society, where

Manning was spoken of as "Professor" while Huxley was known as "Archbishop."

T. H. Huxley was neither the first nor the last man of science to speak as if science were the exclusive source of truth and scientists its ordained priests. Not entirely unaware of the difference between empirical science and philosophy, Huxley even admitted that the Darwinian evolutionary view was essentially a metaphysical generalization. Huxley was, however, too much a professed agnostic to suspect the extent to which such and similar admissions of his undermined his scathing indictment of theologians as so many dead snakes lying around Darwin's pedestal. Much less could one expect from Darwin, or from most Darwinists, that they perceive the contradiction (to recall a pregnant remark of Whitehead's) between their crusade against purpose anywhere in nature and the purposefulness of their crusade. Much of the vast literature produced by Darwinists betrays indeed a rank disregard of the ontological and metaphysical (and therefore implicitly religious) problems involved in the notions of species and of evolution, a disregard that relates to the other side of the test mentioned above.

In going through the crucible of the conflict with Galileo and Darwin, a recognizable segment of Christian thinkers has developed a fair measure of awareness of the limitations of the propositions of religion. Insofar as they deal with ethical and metaphysical issues, those propositions cannot be touched upon by science, nor can they touch on anything specific in science, save its use. At the same time it has also become widely recognized among religious thinkers that the ultimate truth of any empirical aspect of any dogmatic statement lies with empirical science. But such recognition is hardly a part of the recent resurgence of Creationism. The existence of a matching lack of awareness on the part of a not negligible sector of the scientific community is no less evident. Metaphysical and ethical aspects of existence are too often ignored or blissfully reduced to purely quantitative statements by a considerable number of scientists and by many of those responsible for the haute popularisation of science (its "popular" popularizations do not deserve intellectual respect in most cases). They show little if any concern for the potentially self-defeating impact of their dicta. Their procedure is the very essence of what Jacques Maritain was the first to call "scientism."

Scientism is also known as reductionism or physicalism. According to it, statements have truth content only in the measure to which they relate to quantities and empirical facts. Scientism can but produce conflicts with any religion with meaningful metaphysical ingredients, let

alone with claims to supernatural revelation. It was in fact no coincidence that David Hume, who urged the burning of all books that present anything beyond quantities and empirical facts, was also a resolute critic of miracles and revelation. While Hume's grasp of science, as it stood a generation after Newton, was very meager, he certainly had the philosophical acumen to perceive that his scientism (radical empiricism clothed in copious though hollow references to science) had nothing to quarrel about with a religion reduced to mere sentiments but only with a religion that unequivocally proclaims man's eternal responsibility to a transcendental personal creator, a creator who obviously can give revelation and work miracles.

Liberal Christianity, be it in its semantic paraphernalia Protestant or modernist and neomodernist Roman Catholic, is a matter of sentiments, and therefore its dialogue with science is at best a good poetry in prose. This kind of dialogue is particularly apt to run out on trivialities, with Christianity being invariably reduced to statements to which most pantheists, transcendentalists, ethical naturalists, Buddhists, Confucians, adherents of Shinto, and even secular humanists can readily subscribe. To that dialogue quite a few theologians and scientists have in recent times contributed books that show two main characteristics: one is protestation, not always convincing, that the quantitative method and empirical study are not the whole story; the other is a not much more convincing set of allusions to man's uniqueness.

All too seldom does this literature testify to philosophical perplexity as powerful as that felt on occasion by Darwin, who, it is well to recall, was a professed materialist from almost the moment he had disembarked from the Beagle. If man, as Darwin put it on two different occasions, was but a haphazard offshoot of brutes, could any thought, however scientific, be taken for anything that truly transcends haphazard events and processes? Last but not least, could in that case man's ethical strivings, his conscience, sense of justice and sin, his dedication to human dignity and equality, be anything but a mere pragmatic convenience helpful only to the powerful individual, nation, and race? .

Particularly silent on these problems are the advocates, in our times, of extraterrestrial intelligence. They are one of the main groups claiming credit for the recent "scientific" abolition of the uniqueness of man's mind. The two other groups are mostly made up of biochemists and computerologists. All three groups are the just targets of a remark made by Sir Andrew Huxley, president of the Royal Society, who in November 1980 warned his Darwinist colleagues against resorting to the sleight of hand

whereby the problems of the origin of life and of consciousness are considered solved by shoving them under the rug.

A religion that is essentially a matter of intellectually coated sentiments and aesthetics is no match for the reductionist and scientific leveling of man that characterizes the ideology of a capitalist liberalism aimed exclusively at some kind of hedonism. The outspokenness of Marxist ideology, no less steeped in scientism, which holds religion to be, in Marx's phrase, the "opium of the people," seems to be a lesser threat to dogmatic Christianity, which under duress is forced to fall back on its orthodox roots. The ethical relativism that is an inseparable part of that capitalist liberalism is being proclaimed with rapidly decreasing concern for the sensibilities of the truly religious in contemporary Western society. Thus the author of the article "Keeping Up with the Genetic Revolution" (New York Times Magazine, 16 November 1983) quotes a geneticist with no sign of unease: "Morality changes as the times change. What we deem unacceptable today could be embraced by generations in the future." The increasingly scientific intellectual community takes for granted the demise of absolute moral and religious values with the passing of the Victorian age. It has no eyes for the fact that "societal consensus," as the sole basis of culture, paves the way for anarchism. The latter receives enormous assistance from the ease with which scientific technology can produce and make widely available tools of destruction.

Neither to this problem nor, much less, to the problem of global nuclear holocaust can scientism provide an answer, let alone the moral strength for implementing it. A religion of aestheticism is just as ineffective in this regard. An alternative can come from dogmatic Christianity, as it combines absolute truths about human dignity with an emphasis on humility and forgiveness. That scientific circles keep viewing that religion, on account of its dogmatism, as the only real threat to their aims and "freedoms" (a threat that they often equate with the threat of dogmatic International Communism) is very logical. It is not so logical that their conflict with dogmatic Christianity has for some time been taken as the conflict between science and religion.

Actually, the science in question is a science that has grown into a religion, called scientism, and that is all too aware of its true physiognomy though it is not always ready to show its true colors. The religion in question is not any religion, and certainly not religion's liberal variants, but only a dogmatic Christianity. Its "incurability" is in the eyes of its antagonists its chief crime. In the eyes of its most penetrating analyst in modern times, John Henry Newman, that "incurability" is the very thing that should most

commend it. Insofar as it remains aware of its complete lack of mission to decide about empirical facts and measurements, it will remain clear of any serious conflict with science. But aware or not on that score, its worldview, which it bequeathed historically and culturally and which is still held by its orthodox theologians, is yet a worldview within which alone creative science can survive and progress even in the twentieth century.

The Twentieth-Century Perspective. An analysis of science in the twentieth century is particularly germane to an analysis of science and religion that is centered on fundamental epistemological issues. Positions taken on these issues will invariably decide the appraisal of any particular aspect of interaction between science and religion in our times. To any student of science who focuses on twentieth-century science, scientific advance will not chiefly be located in space probes, atomic energy, and microtechnology. Rather, he will single out the arrival, for the first time in the history of science, of a cosmology that is scientifically sound.

That arrival was signaled by Einstein's formulation in 1917 of the cosmological consequences of general relativity. Prior to 1917 scientific cosmology was either a misnomer, as it dealt with only a part of the cosmos, such as the solar system and the Milky Way, or it was in the grip of self-defeating paradoxes, as was the case with the notion of an infinite Euclidean homogeneous universe usually referred to as the "Newtonian" universe, although Newton never held that view. Scientific cosmology has become during the last fifty years a vastly expanding field of study in which the study of stars and galaxies is intimately connected with fundamental particle physics. Underlying that study is the conviction that it is possible to speak meaningfully about the totality of consistently interacting things, or the universe, partly because already in Einstein's work the universe has emerged as an entity with very specific—that is, extremely particular—overall features. This is equivalent to a rebuttal of the Kantian position in which religion is reduced to the level of mere sentiments, however important practically, because, according to Kant, the notion of universe, "a bastard product of the metaphysical cravings of the intellect," cannot function as the basis for a rational inference to the existence of a fully transcendental creator.

Half a century after Einstein's paper, cosmic specificities are being unfolded at a stunning rate. They relate above all to the early phases of the evolution of the universe that appears to be the more specifically constructed the more closely cosmologists investigate ever earlier phases of cosmic evolution. These phases are also the shorter the earlier they are, with the

result that the perspective of an absolute cosmic beginning imposes itself ever more forcefully on scientific minds.

Theologians who have seized on that development as a means of establishing the moment of creation have proved only their unawareness of the limitations of the scientific method. The scientific method cannot establish about any physical configuration, however primordial, that only "the nothing" could have preceded it. Rather, these theologians should focus their attention on the cosmic specificities that have been unraveled in ever larger number by modern scientific cosmology. These specificities include the specific total mass of the universe and the specific space-time curvature it provides, the specific rate of the expansion of the universe, and the slight imbalance that obtained between matter and antimatter preceding the "cooking" of the elements, to mention only a few. Invariably laden with their own, at times dubious, specificities—such as the specific rate of emergence of hydrogen atoms out of nothing (and without a creator); the specific, progressive lengthening of the universe's expansion-contraction phases; and the strangely asymmetrical initial postulates—the proponents of various cosmological theories (steady-state, oscillating universe, and inflationary universe, respectively) have with more or less explicitness aimed at glossing over the theological pointers of the very specific cosmos unveiled by modern scientific cosmology. The universe as revealed by all such specificities, true and contrived, is a far cry from an infinite, homogeneous universe, in which, if it were truly homogeneous, nothing could happen or be perceived as genuinely real.

Realist metaphysics is to be distinguished from Kantian and Hegelian, that is to say idealist, metaphysics, and also from a so-called rational metaphysics, which empties metaphysics of its meaning by being in fact sheer rationalism. Realist metaphysics secures reality precisely through attention to the specificity of things. Such metaphysics is powerfully buttressed by cosmic specificities in its view of the universe as the valid notion that grounds the cosmological argument, the sole foundation of a religion that is both genuinely religious and soundly intellectual. Furthermore, the derivation, on an a priori basis, of actual cosmic specificity as a necessary form of existence, a derivation that would pose a most serious threat to theism, is not feasible. Proof of this impossibility is tied to the nontrivial set of mathematical postulates that scientific cosmology must embody. Such a set, if Gödel's incompleteness theorem is true, cannot have its proof of consistency within itself. What is, however, not consistent can hardly be necessary. In other words, science in its most comprehensive form,

cosmology, assures the theologian that no objection can be raised on scientific grounds to the recognition of the contingency of the universe.

Undoubtedly, Einstein's general relativity and the scientific cosmology it inspired are a classic case of creative science at its best. That it strongly supports metaphysics at its best, which is the intellectual inference of the existence of a creator, is but a replay of a now fairly old pattern of science. Scientific methods—it is enough to think of the ones proposed by Descartes, Bacon, Hume, Comte, Mach, and the logical positivists—that on account of either their rationalism or their empiricism blocked the way of the cosmological argument proved ultimately to be so many roadblocks for science. It is hardly an accident that Newton, who by early conviction was a Cartesian and by ambience a Baconian, was helped by his scientific creativity to choose an epistemological middle ground in his mature scientific work.

As to quantum theory, the other great monument of modern science, a distinction should be made between it as science and its prevailing philosophical interpretation by the Copenhagen school. The pivotal point in that interpretation relates to the Heisenberg uncertainty principle, according to which no two conjugate variables, such as position and momentum, can be measured simultaneously with complete precision. According to the Copenhagen interpretation of quantum mechanics, what cannot be measured exactly cannot take place exactly. Such an inference amounts to a confusion of the operational with the ontological to the detriment of the latter. Indeed, the essence of the Copenhagen interpretation is that statements about being are meaningless.

Yet the same interpretation includes the assertion that while beings as such cannot be the object of valid discourse, their aspects, such as the complementarity of waves and particles, can and ought to be. Such a claim is equivalent to taking for real, say, a pair of horns but not the head in which they are rooted. It is well to recall that Einstein's fierce opposition to the Copenhagen school went far deeper than an objection to its denial of causality. For in that denial Einstein rightly saw, as he put it, "a dangerous game played with reality." [See the biography of Einstein.]

Clearly, reality becomes meaningless if, as Ilya Prigogine claims on the basis of his work in quantum thermodynamics, novel things can arise in nature with no sufficient causes behind them. No less destructive of meaning, or at least of its communicability, should seem the multiworld theory in which the Copenhagen interpretation is carried to its logical end with the assertion that there are as many worlds as there are observers. This

radical subjectivism, if not plain solipsism, also unmasks speculations in which the Taoist outlook is taken for a prophetic anticipation of the "true" message of quantum theory.

Not a few theologians have seen in the "aspects only" philosophy a scientific justification of the exclusive validity of the phenomenological method in the study of religion. The method itself is a resolve to limit one's discourse to phenomena. Yet, since no discourse is feasible without ontological statements, such a resolve will soon turn into the answering of ontological questions in terms foreign to them. The result is the kind of subjectivism that with respect to the interpretation of science has already worked its havoc in the view according to which science is but an incoherent succession of paradigms or revolutions. Without ontology those paradigms cannot be coherently linked together, and as a result their totality, science, will appear incoherent. The recent emulation by theologians of the paradigm method is only the latest example of an old pattern. It shows theologians seizing on what is the latest fashion in science and ignoring the lessons of history.

Whatever the truth of the claim that science is revolutionary, true religion is not and cannot be revolutionary if it is really about eternally valid truths. This type of religion proved to be an essential ingredient in the only viable birth of science, and science, in its subsequent great creative advances, has been driven back to the essential philosophical worldview embodied in that religion.

Part three:

MONOTHEISM

MONOTHEISM. Derived from the Greek mono ("single") and theos ("God"), the term monotheism refers to the religious experience and the philosophical perception that emphasize God as one, perfect, immutable, creator of the world from nothing, distinct from the world, all-powerfully involved in the world, personal, and worthy of being worshiped by all creatures. Some forms of monotheism, however, differ about the notions of God as distinct from the world and as personal.

The term monotheism has generally been used theologically rather than for philosophical or cross-cultural descriptions of religion. Philosophers have used the term theism with the same meaning as monotheism, and cross-cultural descriptions find categories like monotheism and polytheism to be inappropriate in describing some religious traditions. The term monotheism presupposes the idea of theos—a divine being with mind and will, fully personal, conceivable in images drawn from human life, and approachable through prayer. In this respect monotheism differs from deism and from the various forms of monism. It also presupposes the unity of the divine and raises one theos exclusively to absolute supremacy and power, producing and governing everything according to the divine will. In this respect monotheism differs from those views that accept a plurality of divine beings. In the strict sense, monotheism best describes the idea of God in Judaism,

Christianity, and Islam, and in the philosophical systems based on these traditions. But we can extend the term to include conceptions of deity in certain other traditions such as Zoroastrianism, Sikhism, and some forms of Hinduism and Buddhism, even though these traditions include somewhat different conceptions, such as the existence of evil forces alongside God, the nonpersonal nature of God, God's complete immanence in the world, or the fundamental unreality of the world. In this article, the basic requirement for a religious tradition to be considered monotheistic is that it emphasize both theos and monos.

Monotheism in Religious History. Whereas monotheism is most often associated with the Jewish, Christian, and Islamic religions and philosophies, tendencies contributing toward a monotheistic outlook have long been present in human religious history. Monotheism is like a river with many springs and many tributaries. The course of the river is difficult to map, for monotheistic beliefs are often put forward in protest against other beliefs and practices.

Obscure as they are, springs of monotheism can be discerned at the very earliest levels of known human cultural life, in the primordial high god of the archaic hunters. The theory of Urmonotheismus ("original monotheism") as put forth by Wilhelm Schmidt and others held that a primordial monotheism was the earliest form of human perception of deity, and that the plurality of gods and spirits found in most primal religions was a degeneration from this original perception. While that theory cannot be substantiated in the history of religions, research in recent years has made it clear that a great many primal or archaic peoples have conceptions of a high god who is creator of the world, has supreme authority over other gods and spirits, and presides over human morality. Some of the most archaic peoples, such as certain groups in Africa, Australian Aborigines, and the nomadic hunters of Tierra del Fuego, have definite conceptions of a supreme god associated with the sky who is changeless, invisible, and all-powerful and who gives morality. The supreme high god characteristically is a remote god (*deus otiosus*), too distant, all-powerful, good, and just to need worship or to be intimately involved in ordinary existence; there are lesser gods and spirits who play a much more active role in the lives of the people.

The streams of the monotheistic vision run dimly through the fertile valleys of archaic agricultural religions with their pluralistic experience of the forces of nature centered on Mother Earth. Here the high god tends to become head of the divine pantheon; pushed into the background by earth gods of fecundity, the high god could hardly be the focus of a unifying perception of deity. But a few high gods developed with

fully monotheistic, yet they all put forth the two essential ingredients of monotheism: monos and theos.

Monarchic monotheism. Monarchic monotheism, the belief in one God who rules over many gods, is close to polytheism and grows out of a cosmic religious context. One high God rises to supreme authority and unlimited power, forcing the other powers to total submission. Akhenaton's monotheistic movement in ancient Egypt was of this type; and Yahvism in early Israel displays this form, with Yahveh pictured as "a great king above all the gods" (Ps. 95:3). The attitude which subjugates other religions and imposes a monolithic system on all may be a result of this type of monotheism.

A subtype of monarchic monotheism would be dualistic monotheism: one God opposed against evil forces. In this view there is one ruler God, all-good and all-just, who tends to become distant, watching over the struggle within existence in which evil divine forces play a part. The distinctive quality of this type of monotheism is that it takes evil away from the being of the one God, accounting for it through demons or devils. Zoroastrianism is a classic example of dualistic monotheism: although the one God, Ahura Mazda, is supreme, the evil spirit Angra Mainyu struggles throughout the history of the world, to be overcome only at the end. Popular forms of Judaism, Christianity, and Islam have sometimes approached this type of dualistic monotheism with ideas of Satan or the devil defying God's will, although generally these religions see the evil one as a creature permitted by the one God to perform evil within creation. The struggle between God and evil forces can be seen as a cosmic struggle, as in the Hindu Puranas, in which demonic powers arise anew in each new age and Visnu incarnates himself in an avatara to do battle and realign the cosmic order. Some traditions in Judaism and Christianity describe God's struggle with Satan or the Antichrist as taking place on a trans-historical, cosmic plane. More commonly, however, dualistic monotheism has strong ties to the historical plane of human existence and provides an ethical dimension for human involvement in God's struggle against evil.

Emanational mystical monotheism. We can divide emanational mystical monotheism into two subtypes: the worship of one God through many gods, or the worship of one God as the world soul. The first subtype, congenial especially to a monistic context, recognizes many gods but sees them as emanations of the one divine source, which is conceived of in theistic terms. Some ancient Greeks rationalized the plurality of the gods in relation to a particular supreme high god in this way. Hindu theistic cults sometimes offer this explanation of the relation of the many gods to the one

transcendent; he created the world out of nothing (*ex nihilo*). At the same time, most forms of monotheism hold God not only as transcendent but also as immanent in the world: God's presence, power, and operation are immediately present in human experience. [See *Transcendence and Immanence*.] The world is a creature, real and good as part of God's design. Revelation from God is important as guidance; prophetic and devotional emphases predominate over the mystical and meditative ones. God is a personal theos who confronts one in historical existence as an Other, to whom one relates through obedience and service. And God works in the history of the world, directing events toward an eschaton in which there will be evaluation and judgment. History has a beginning and an end, and God transcends it all.

Dimensions of Monotheistic Belief and Practice. In setting up a typology of monotheism to show the ideal types toward which the various monotheistic religious traditions point, it is important to realize that even within one tradition there will be different experiences and philosophies of monotheism. Thus, while a tradition may be dominated by a certain type, its particular coloration may be affected by hues drawn from other types. Further, monotheistic thought focuses especially on the theoretical or verbal dimension of religious experience. When we move to the practical and the social spheres we encounter a variety of phenomena which at times may not be distinctively monotheistic. Worship, law, customs, and social forms may show striking parallels in different religions without regard to the theoretical stance on monotheism, polytheism, or monism. For example, visual images of the divine reality are used in Christianity as well as in Hinduism, but not in Islam or Judaism—and also not in polytheistic Shinto. Some Muslim mosques are as bare and simple as Buddhist meditation centers, while some Christian churches gleam with golden brocade, candles, images, and saints that rival Hindu or Taoist temples. Orders of priests, monks, and nuns bring some Christian groups close to Buddhism, while the rabbi and imam of Jews and Muslims resemble more the learned teacher of a Hindu ashram. The veneration of saints in some sectors of Islam and Christianity appears similar to the veneration of spiritual beings in traditional African religions, but other sectors of Islam and Christianity strongly reject these practices. Thus care needs to be taken in setting up a monotheistic typology, so that religious traditions are not fitted in too tightly, doing damage to the integrity and richness of the particular religion.

The following typology of dominant emphases in the monotheistic religions includes elements from some religious traditions that may not be

although it does allow for the experience of various aspects of the one God at different times.

A form of thought close to monotheism but still related to polytheism and henotheism is theistic dualism. [See Dualism.] Typically, this experience of the divine reality separates out the hurtful or evil elements and associates these with another divine power, thus setting up a divine struggle with echoes in human life. One unified supreme God is posited as the good divine force, and the source of evil can be thought of as many beings or as one evil being.

Strictly speaking, monotheism does not allow the one God to be limited even by the causes of destruction and evil; these causes cannot be divine forces outside the will of the one God. Ultimately the one God must be the source of all reality and all events, including those that humans experience as evil and destructive. Some forms of monotheistic thought do allow for evil beings as creatures of God, permitted to cause destruction and evil for various purposes within the overall authority of the one God. But these demons, devils, and satans are only part of the panorama of human existence, and they cannot limit or act against God's power, authority, and will.

Monism (nondualism) in the history of religions refers to a broad category of thought and experience in which the divine reality is unified and no ontological separation exists between the divine and the world itself (monism), or the divine is the "soul" of the world (nondualism). [See Monism.] All reality, including humans, share in the divine nature. Monism and nondualism tend to be nontheistic, for qualities of personal will and otherness from the world do not fit this perception of the divine. The world is not what it appears to be in the multiplicity of our perceptions. Rather, either the world is in essence one divine reality, or it is fundamentally an illusion, or it consists of forms and expressions that emanate from the one divine source. Further, monism and nondualism tend to be nonhistorical, in the sense that a cyclical rhythm of time expresses the experience of the one divine reality. The religious path is one of mystical discipline and meditation, bringing progressively higher stages of knowledge and ultimate liberation in union with the one divine reality. Of course, provision is made for theistic practices at the lower levels of spiritual perfection.

Monotheism distinguishes itself from the various forms of monism and nondualism by positing a definite separation between the one divine reality and the world which God brought into existence. In this sense there is a dualistic emphasis in monotheism, for there are two distinct realms of reality, the divine and the created world. Only God is eternal and

showing himself in historical events and demanding exclusive loyalty and ethical behavior according to the covenant law. Prophets arose who challenged the polytheistic notion that various gods controlled the functions of nature. Elijah and Hosea, for example, held that it is only Yahveh who makes his power felt in all areas of existence, as the creator of all and the one God who sends corn at the harvest and wine at the vintage. Just as polytheistic ideas were overcome, the prophets also struggled to overcome the limitations of a henotheistic view of God. At one time it was accepted that one could not worship Yahveh outside the land of Israel. But Amos insisted that the one God, Yahveh, had not only brought Israel out of Egypt, but had also brought the Philistines from Caphtor and the Arameans from Kir (Amos 9:7). And Second Isaiah, the prophet of the Babylonian exile, went so far as to describe Cyrus II, the mighty king of the Medes and Persians, as "the anointed one of Yahveh" whom Yahveh had taken by the hand (Is. 45:1). In the vision of these prophets, Yahveh is no tribal god sharing power with other nations' gods; rather, he is the universal creator of all and the director of the history of all peoples according to his holy design.

Jews, Christians, and Muslims drew on the fundamental monotheistic vision of ancient Israel, each group filling out the picture of God with colorings and shapes drawn from its own particular culture. The dimensions of the Jewish, Christian, and Muslim type of monotheism will be discussed at more length below.

Sikhism. One more expression of monotheism should be mentioned in this religio-historical survey: Sikhism. Starting with Guru Nanak (1469-1539 CE), an Indian type of monotheism developed that synthesizes the mystical monotheism found in Hinduism and the ethical, personal monotheism brought into India by Islam. In Guru Nanak's teaching, there is only one God, who is immortal, unborn, self-existent, creator of all the universe, omniscient, formless, just, and loving. God is both transcendent as pure potentiality and immanent as world-embodiment. Thus God is contained in everything. God is personal but is beyond complete knowledge, to be worshiped mainly in rituals of repeating his name. Revelation comes through gurus who speak the divine word. Humans attain heaven or hell at the end of a lifetime, although they are involved in many rounds of births and deaths. Final salvation for humans is nirvana, absorption into God's being like water blending with water.

Summing up this cross-cultural religio-historical survey, it is clear that monotheism has arisen in a number of ways. In some areas it came through rationalization, seeing the logic of unified divine power. In other traditions, mystical experience of everything as one and unified with the

world, associates with himself the six Amesha Spentas ("holy immortals"), spirits or angels that represent moral attitudes and principles. Ahura Mazda, the Wise Lord, is good, just, and moral; he creates only good things and gives only blessings to his worshipers. The one God is sovereign over history, working out the plan he has for the world. Humans are to assist God through upright deeds, and there will be a final judgment in which every soul will be judged to see if it is worthy of entering Paradise. Conflict is accounted for as the hostility of two primordial spirits: Spenta Mainyu, the good spirit, and Angra Mainyu (Pahl., Ahriman), the evil spirit. Ahura Mazda apparently fathered these two spirits; the struggle between them has been going on since the beginning of time, when they chose between good and evil. It appears, then, that Ahura Mazda cannot be called omnipotent, for the realm of evil is beyond his control; in that sense it may be said that this is not a complete monotheism. Yet there is no doubt that Zoroastrianism considers the realm of Ahura Mazda to be ultimately victorious. Further, in this eschatological religion the conflict between good and evil is understood not so much metaphysically as ethically, involving the free choice of humans either for the rule of the Wise Lord or for that of Angra Mainyu. It is true that later Zoroastrianism brought some of the other gods back into the picture again. But in the teaching of Zarathushtra in the Gathas is found a unique monotheism with an ethico-dualistic accent.

Judaism, Christianity, and Islam. The three religions that are generally held to be the full expressions of monotheism, Judaism, Christianity, and Islam, also arose against the background of the polytheism of the ancient Near East. These three religions are closely related in that they grew from the Semitic cultural background and the foundations of the religion of ancient Israel.

Although it was the fountainhead of this type of monotheism, the religion of ancient Israel was not actually monotheistic in early times. Stories of the patriarch Abraham show that he worshiped the Canaanite high god El in a variety of forms in addition to the god of the clan, and when the people of Israel entered into a covenant with the high god Yahveh they did not exclude the existence of other gods. One might call early Israelite religion henotheistic or monolatrous in the sense that exclusive loyalty was to be given to Yahveh, but Yahveh's power was limited because other nations had their own gods. Some Israelites lived with a polytheistic vision, giving loyalty to Yahveh as the god of the covenant but also worshiping Baal and the other gods of fecundity as they settled in Canaan and became agriculturalists. But the covenant relationship with Yahveh contained the seeds of monotheism; the Israelites experienced Yahveh as personal,

Hinduism does recognize the oneness of the divine, and it includes theistic forms of worship, even worship of one God exclusively, without denying the reality of other gods.

Buddhism. Buddhism, like Hinduism, is essentially a monism which has only an inferior role for those born at the level of gods, trapped as they are like all living beings in the cycles of rebirth. But in Mahayana Buddhism, the idea has arisen that beings who have realized their Buddhahood (that is, Buddhas and bodhisattvas) can function similarly to gods in theistic religions. Generally Mahayana Buddhism holds to the multiplicity of these powerful beings, but in certain schools one such Buddha becomes supreme and is worshiped exclusively. Such is the case with Amitabha (Jpn., Amida) Buddha in Pure Land Buddhism, a soteriological monolatry offering the one hope of salvation for this degenerate age. Esoteric Buddhism has developed a unified cosmotheism, according to which the whole universe is the body of Mahavairocana, the Great Sun Buddha, with all Buddhas and bodhisattvas—and thus all reality—united in this supreme Buddha-reality.

Egyptian religion. One of the earliest forms of exclusive monotheism apparently developed in ancient Egypt. Within the elaborate and complicated polytheism of Egyptian religion there had long been rationalistic tendencies toward seeing various gods as different forms of one particular God, with an emphasis on the supremacy of the Sun God, who tended to absorb other gods. Around 1375 BCE Pharaoh Amunhotep IV repudiated the authority of the old gods and their priests and devoted himself exclusively to Aton, the god appearing as the sun disk. He proclaimed himself the son of Aton, taking the name Akhenaton ("devoted to Aton"), and he imposed this worship on others. By royal decree Aton became the only God who exists, king not only of Egypt but of the whole world, embodying in his character and essence all the attributes of the other gods. Akhenaton even had the names of the other gods effaced from inscriptions and replaced with the name of Aton. Akhenaton's monotheism was related to protest against abuses in the cults of the gods, but it does not appear to have led to new ethical standards. Within twenty-five years Akhenaton was gone, and his successors restored the old cults.

Zoroastrianism. Growing from the ancient Indo-Iranian polytheistic religion, Zoroastrianism unified all divine reality in the high god Ahura Mazda. Zarathushtra (Zoroaster), who lived sometime between 1700 and 1500 BCE, was a priest who turned against some of the traditional cultic rituals and proclaimed the overthrow of polytheism. In his teaching, Ahura Mazda (Pahl., Ohrmazd) is the one God who, to implement his will in the

supreme sovereignty and autonomy, as sources of fecundating power and guarantors of the order and norms of the world and of human society. For example, Zeus and Jupiter were ruling high gods fashioned in accord with the Greek and Roman notions of norm and law. In India, Varuna was sovereign guardian of rta, cosmic order, a role taken over later by the great gods Visnu and Siva. Yahveh, the high god of the ancient Hebrews, showed himself as all-powerful creator, absolute sovereign, and author of all norms and laws by which the earth functions. Belief in these high gods did not necessarily exclude lesser divine forces, but it did provide the opportunity for reflections on the unity of divine reality, as we see in the following examples from ancient Greece, Hinduism, and Buddhism.

Greek religion. Among Greek thinkers, ideas of a unitary divine reality were expressed as a means of showing the order and reasonableness of the world. Already in pre-Socratic times, it seems, philosophers like Xenophanes depicted the spiritual unity of the whole world in the notion of the All-One, uncreated, unchangeable, and immanent in all things. Plato stressed the unity of the Good and identified God with that: God must be perfectly good, changeless, and the maker of the best possible world. Aristotle also made the idea of goodness central to his concept of God, the causal principle of all. The unicity of the supreme First Mover follows from the unity of the physical world: God is one, eternal, and immutable. God is defined as pure mind (nous), who always thinks one and the same subject, namely himself—and thus this view is not really theism. Later in the Hellenistic religions, the sense of God's unicity was expressed by raising one god or goddess to supremacy, encompassing all others. For example, Apuleius described Isis as the one Great Mother of all, by whatever name she may be called in different areas (*Metamorphoses* 11).

Hinduism. Hinduism is characterized by monistic (advaita, or nondualistic) thought, which merges the divine reality with the world in a unity called brahman. Here the unifying principle is strong, but the theistic quality of the unified divine reality is of lesser importance. There have always been theistic tendencies in Hinduism, but these have been associated with a variety of divine beings. Yet intense concerns of bhakti (devotion to a god) have sometimes led Hindus to raise up one god as supreme ruler, or to see the various gods as manifestations of one God. "They call it Indra, Mitra, Varuna, and Agni . . . ; but the real is one, although the sages give different names" (*Rgveda* 1.169). Among Vaisnavas, Visnu tends to become all, and the same is true of Siva among Saivas. Krsna, avatara of Visnu, can be put forth as the supreme God behind all names: "Many are the paths people follow, but they all in the end come to me" (*Bhagavadgita* 4.11). Thus

divine gave rise to monotheistic expressions. In still other traditions, historical experiences of one powerful, personal God led toward formulations of monotheistic belief.

Monotheism in Contrast to Nonmonotheistic Views. Monotheism often arises in antagonism to other views of divine reality. One of the most obvious contexts against which monotheism defines itself is a plurality of divine beings or forces, which is commonly called polytheism. Central to polytheism is the notion of theoi, personal divine beings within nature and society. These gods have personal wills, control specific spheres, and interact with one another to make up a functioning organism. The functioning of nature is seen as the operation of a plurality of divine wills, and this plurality and conflict are extended to human life and society. Typically there is a head of the pantheon, but this high god is limited in power and authority and often is thought of as old or impotent.

Monotheism distinguishes itself from the various forms of polytheism in that the whole realm of divine power is unified, with no conflicting wills or limitations. God has unlimited authority and power but still is theos, possessing personal will and relationship to the world. The plural forces are seen as qualities and attributes of God or as subservient beings of the created world. In the monotheistic view, God transcends the world of nature and human society; the world is not the locus of divine power, for God is the universal creator of everything out of nothing (*ex nihilo*). Humans find value and integration of meaning by realizing their common creaturehood and serving this one universal God. Revelation from God is the source of unified, universal meaning.

Related to polytheism is what F. Max Müller called henotheism and what others have called monolatry: worshiping one god at a time or raising up one most powerful God as the only one to be worshiped. [See Henotheism.] The other gods, while real, are downgraded before this supreme God. Monolatry means one God is worshiped as supreme, though the lesser gods of other peoples are recognized. Henotheism (*kathenotheism*) would be the view that different gods can be worshiped as the supreme God one at a time without implying that the other gods do not exist.

In contrast to monolatry and henotheism, monotheism universalizes the power and authority of the one God exclusively, for even sharing power with lesser gods would be a limitation that cannot apply. Monotheism is intrinsically universal, transcending tribal or nationalistic limitations; the one God has authority and power over all peoples, friends and enemies alike. And monotheism refuses the henotheistic idea that one god can be worshiped as supreme at one time and another at another time,

great god worshiped in that cult. Visnu, for example, can also be worshiped in many avataras and with many different names. Another example would be Esoteric Buddhism, in which all Buddhas and bodhisattvas can be seen as emanations of the Great Sun Buddha, Mahavairocana.

Another type of monotheism related to the monistic worldview is the mystical view of the one God as the world soul. This type of monotheism holds that there is one personal theos who is not sharply separate from the world but rather is the creative divine force in everything. Again, the great theistic cults of Hinduism and Buddhism often show this type. For example, Ramanuja's "Qualified Nondualism" holds Visnu to be the absolute, supreme God to whom the worshiper relates in bhakti as qualitatively different from the worshiper himself; yet Visnu and the worshiper are united as soul and body are united. In the theistic Krsna cults, Krsna as the supreme personality of God can be experienced as different from the world, yet in the highest mystical experiences these differences fade away and Krsna becomes all, as expressed in Arjuna's vision (Bhagavadgita, chap. 11). Sikhism is a monotheism that emphasizes God as absolute creator, self-sufficient and unchanging; yet God is embodied in the world, and the believer who finally reaches nirvana becomes absorbed in God. Sikh monotheism, like Hindu monotheistic forms, tends to be nonhistorical, looking on existence as a countless series of cycles until finally the separation is overcome and the worshiper achieves complete union with the one God. Certain mystical movements within Judaism, Christianity, and Islam have also approached this type of monotheism without displaying the ahistorical feature. For example, the "panentheism" ("everything is in God") of Sufi mystics like Ibn al-'Arabi (1165-1240 CE) or of medieval German Jewish mystics tended to see the whole universe as an emanation of God's own being, a reflection of the divine, while maintaining a view of God as distinct from the world.

Historical ethical monotheism. Historical ethical monotheism, the belief in one God guiding the historical design, characteristically describes God as personal, having a will for the historical design of the world, guiding all events as the creator, separate from the world yet immanently involved in human history as the God whose law governs all, who gives value to all and holds all accountable at the end of history, and who reveals himself through pivotal prophets, events, and scriptures. Humans are expected to follow God's design by establishing goodness and justice in human society. God makes total demands, controls political history, is intolerant of other gods or other ultimate commitments, and is to be worshiped by all exclusively.

Zoroastrianism contains most of these monotheistic features, although it makes the dualism of good and evil central to the conception of

the divine and thereby assigns some limits to the power of God. Sikhism also contains many of the features of ethical monotheism, but it gives central place to a cyclical view of existence and the goal of mystical absorption into God.

The family of religions made up of Judaism, Christianity, and Islam most fully expresses this type of monotheism and places it at the center of religious thought and practice. Each of these three traditions also adds its particular hue to the universal monotheistic vision. Judaism places a strong emphasis on the personal character of God, encountered in an "I-Thou" relationship and providing an ethical design for life as spelled out in the Torah and Talmud. The universal character of the one God is seen as turned toward humankind, especially in the very specific form of the covenant relationship with the Jews as "chosen people." The particular nature of this covenant and its demands does not negate God's universality, in the Jewish view. God's design for the world is to be fulfilled especially through the covenant with the Jews and thus a great responsibility is placed on them. Further, all non-Jews who fulfill in their lives the basic human principles known as the "seven commandments of the sons of Noah" will have a share in the life of the world to come. Thus the religion of Judaism expresses a universal monotheism that focuses on God's particular relationship to humans through the covenant with the Jews.

Christians have modulated historical ethical monotheism into concrete, existential terms by emphasizing the personal character of the one God revealed in human history. Resisting tendencies of tritheism, Christian tradition has worked out a triunity that makes God concretely immanent in this world as Father, Son, and Holy Spirit. Central to this vision is the incarnation of God in the person of Jesus Christ, a historical particularization of the universal God that provides a pivot for all of human history and points to the fulfillment of God's whole design in the eschaton. Christians insist that their Christology is monotheistic; Christ is one substance (homoousios) with God the Father. Jews and Muslims, of course, find this doctrine of the incarnation of God in Christ to be out of line with their understanding of monotheism.

Muslims have made the unity (tawhid) of God the central statement of their confession of faith: "There is no god but God." Islam puts forth a very radical monotheism in insisting on the utter transcendence and sovereignty of God, all-powerful in every aspect of the universe, to be likened to nothing. The greatest sin is shirk, associating anything else with God. The universal God is particularized in Islam by making the Qur'an the concrete revelation by which God relates to all humans and gives them

guidance. While the final revelation came through the prophet Muhammad, it is intended for all humans in all ages as their guide to the ethical life and to the blessings that God intends for faithful creatures.

Current Reflections on Monotheism. Monotheism is the long-established religious tradition in the cultures informed by Judaism, Christianity, and Islam, but still a considerable amount of searching and rethinking goes on. Philosophers and theologians continue to draw out the implications of the monotheistic vision for thought and society. For example, an influential work by H. Richard Niebuhr, *Radical Monotheism and Western Culture* (New York, 1960), argues that modern society tends toward henotheism, making one particular society into the center of value and the object of loyalty; in contrast, radical monotheism has as its reference the One, beyond all the many, from whom all reality receives its value. Contemporary Jewish and Muslim writers have also stressed radical monotheism as a critique of the polytheistic or henotheistic tendencies of modern society.

Modern thinkers have also been wrestling with some of the central characteristics of traditional monotheism that seem to be problematic. Difficulties revolve around God's personality, God's immutability, and his strict separation from the world; the theocratic overtones of monotheism, its patriarchal associations and seeming suppression of human freedom; and the rejection of mystical spiritism found in monotheism. Without surveying all the recent critiques and reinterpretations of the doctrine of God among philosophers and theologians, several lines of thought directly related to monotheism may be mentioned here. For example, feeling that the traditional view of God as personal tends to make him another being in addition to those we know in the world, John Macquarrie and Paul Tillich speak of the divine reality as "Being" or the "Ground of Being," avoiding pantheism but holding God to be not one being but the source of all being.

The movement known as process philosophy or theology has attempted to move to a *via media* between an untenable unipolar theism in which God is immutable and completely separate from the world, and an equally untenable pantheism. Alfred North Whitehead and Charles Hartshorne maintain that God includes and penetrates the world, while still being distinct from the being of the world. This bipolar view sees God as infinite personal existence and thus independent of the actual world in his abstract identity but including the actual world in his concrete existence. God is the source of love and the cause of nature's order and has an overall design for the world. Since God is personal, change and growth take place in God as well as in the world.

Critiques of traditional monotheism have also come from analyses of the type of ideology and society associated with monotheism. In 1935 Erik Peterson, in an essay called "Der Monotheismus als politisches Problem," described monotheism as a political ideology linked with the notion of divine kingship and leading to totalitarianism, and this line of criticism has recently been renewed. Disillusioned by the effects of secularism, thinkers of the "New Right" in France, such as Alain de Benoist and Manuel de Diéguez, blame monotheistic ideology for suppressing human freedom and forcing people to adopt atheism as the only alternative. They seek a neopagan resurgence as a new location of the sacred in the plurality and freedom of human life rather than in the monolithic totalitarian rule of monotheism. David Miller likewise has suggested that monotheism can no longer sustain and provide creativity for modern culture, calling for a return to the creative sources of polytheism. And feminist thinkers have criticized monotheism as a model of the highest form of patriarchal power and authority; in monotheism, God is imaged as male, omnipotent with unilateral power and authority over the world, separate and autonomous, exclusive, and opposed to everything related to change, sensuality, nature, feeling, and femininity.

There have, of course, been many responses to these critiques. For example, theologians have attempted to be more careful in the use of conventional dualisms like monotheism-polytheism, personal-impersonal, and transcendent-immanent, recognizing that religious traditions, including those labeled monotheistic, are complex and embody elements from both sides of these conceptual dualities. New defenses of monotheism are being proposed. For example, Bernard-Henri Lévy turns to the Jewish tradition to show that monotheism actually has a liberating function, safeguarding against totalitarianism and all the idols of nature, ideology, and the state. Some Christian theologians, like Jürgen Moltmann, recognizing the problems with a monarchical, patriarchal monotheism, stress God's liberating relation to humans by reemphasizing the trinitarian conception—though such emphasis widens the gulf between Christian thought and that of Judaism and Islam.

This ongoing discussion makes it clear that monotheistic thought, while often challenged by and in tension with alternate and modified religious understandings, is still central to most of the Western world and will continue to be a dominant mode of experiencing and expressing the divine reality.

THEODORE M. LUDWIG



متون دینی به زبان خارجی ۳

گردآوری: دکتر علیرضا جلالی

دانشکده الهیات و علوم اسلامی

گروه ادیان و عرفان