NATURE, GOD'S GREAT PROJECT

by Philip Hefner

Scientific understandings suggest very strongly that humans are related to the rest of nature in ways that are expressed both by metaphors of genetic kinship and by ecological interrelatedness. The image of genetic kinship is the more intense image, and also the most likely to cause discomfort for Western traditions. Both secular critical reason and Western religious traditions favor images that portray the relation of humans to nature in terms of separation, domination, and stewardship. At best they are ambivalent toward portrayals of a more intense relatedness. In order to best serve our self-understandings, we must recognize (1) our intrinsic kinship with the rest of nature; (2) that our purpose as humans is to serve nature; (3) that we are preparers for nature's future; (4) that our highest calling as humans is to discern the dimensions of ultimacy in nature and to conceptualize them. In this, we follow God's own pattern of investing in nature as the greatest project.

Keywords: domination over nature; ecological model; humans and nature; kinship model; nature and ultimacy; nucleotide sequencing.

God, human beings, and the rest of nature. This triad has inspired a vast conversation over the centuries, a conversation that has been limited neither to our own epoch nor to our own culture. The chief pivots of concern in this conversation have been: How should humans understand their relation to nature? Are we or are we not a part of that nature? How should our understanding of this relationship influence our behavior in the world? How does God relate to the world? Finally, what relationship does God intend there to be between humans and the rest of nature? In Western religions

Philip Hefner, 1100 East Fifty-fifth Street, Chicago, IL 60615-5199, is Professor of Systematic Theology, Lutheran School of Theology at Chicago. He originally presented this paper at the Templeton Symposium, "Human Viability and a World Theology," organized by Zygon: Journal of Religion and Science and the Chicago Center for Religion and Science, 15-16 November 1991. This symposium and its publication were made possible through the generosity of the John M. Templeton Religion Trust.

especially, the question has arisen whether the painful position that humans hold in a natural world that often seems to be uncaring is not itself the most cogent argument against there being a God at all!

Richard Wilbur, one of our former poets laureate, has reflected upon this theme at some length. In one of his shorter poems, "A Problem from Milton," he suggests that whereas in the Garden of Eden the rest of nature goes its course, unthinking, and with apparent zest, Adam drives himself to distraction in his effort to understand how he should behave and why:

In Eden palm and open-handed pine
Displayed to God and man their flat perfection. . . .
And yet the streams in mazy error went;
Powdery flowers a potent odor gave. . . .
The builded comber like a hurdling horse
Achieves the rocks. With wild informal roar,
The spray upholds its freedom and its force.
Poor Adam, deviled by your energy,
What power egged you on to feed your brains?
Envy the gorgeous gallops of the sea,
Whose horses never know their lunar reins.

(Wilbur 1988, 311)

"Flat perfection" characterizes the natural world apart from humans, because everything in that world goes its way unreflectively, unaware of whatever reins might govern its motions. It is humans who are the "deviled" creatures, and the devilment is connected with their brains. As reflective creatures, they have to ask questions of Why—questions of meaning, questions of where the reins really are and what they signify for the ways humans ought to live. The devilment that besets the human race grows out of our tendency to ask these larger questions and fly to the heaven of ultimate meaning, since that flight to heaven turns out to be hell for us.

In another poem, entitled "Mind," Wilbur likens the mind to a bat that can fly all alone in a cavern.

It has no need to falter or explore; Darkly it knows what obstacles are there, And so may weave and flitter, dip and soar In perfect courses through the blackest air. (Wilbur 1988, 240)

But he realizes that his simile of mind to bat is not as perfect as the bat's sensors in the cave unless he adds something.

The mind is like a bat. Precisely. Save That in the very happiest intellection A graceful error may correct the cave. (Wilbur 1988, 240) The bat's perfection, like that of the palm and pine and ocean wave, lies in its unreflective accommodation to what it can do, within the confines of its environment. The human mind also seeks accommodation, but with the added dimension that at certain moments of both competence and graceful probing, even when its creativity errs, and our mind mistakes what the environment's reins would require, that error may alter the environment in ways that render both the mind's probing and the cavern in which it weaves and flitters more perfect. This lucky fit—despite its resulting from a "mistake," or because of it?—Wilbur calls "the very happiest intellection."

In their present condition, so overnourished are their brains that Adam and Eve face the monumental challenge of discerning the reins that determine human life, where they are, and what they require. This is not, first of all, a question of what will serve the biological perpetuation of the species; rather, it is essentially a question of niche: Where do humans fit? What are the requirements and the possibilities of their niche? Discerning just what can constitute Wilbur's "happiest intellection" has become a question of our being or non-being, and thereby the question qualifies as thoroughly theological.

HOMO SAPIENS: FULLY NATURAL, YET . . .

The sciences provide us with a relentlessly vivid message concerning how we humans are related to nature: we are constituted by natural processes that have preceded us; we have emerged within the career of nature's evolving processes; and we bear indelibly the marks of those processes. In short, we are indissolubly part of nature, fully natural. At this late date in the twentieth century, the point surely does not require belaboring for this audience. In previous decades, it was chiefly the poets and philosophers who spoke of a unitary process of evolution that stretches from the formation of the universe (perhaps in what we call the Big Bang) through cosmic history to planet earth, the emergence of DNA, the emergence and unfolding of human culture, and on into the future. Before the end of our century, it is likely that scientists themselves will have put together that picture of evolution.

What are the chief tenets that we derive from the sciences for our theme concerning the relationship of human beings to the rest of nature? (1) We recognize that nature has a history, and we owe both the fact and the form of our present existence to that history. The model of kinship is appropriate for representing this intense interrelationship (Ode 1991). The concept of kinship points not so much to our sibling relationship with the ecosphere, but rather to our primary continuity

with nature's processes, and our origin and future within nature. The pertinent metaphors here are not so much drawn from ecology as from genetic kinship. The elements that comprise the periodic table we all learned in high school, and which also form the building blocks of our own bodies, were produced in previous epochs of the universe's history, many of them in the monster furnaces of the galaxies. The concreteness that defines us bears the marks of life's pilgrimage on our planet. Bricolage—constructing new things from the materials at hand—is evident throughout the biosphere. Whether we note the formation of jawbones from antecedent gill slits or the triune structure of the human brain that contains within itself the neurological ancestry of reptiles and ancient mammals, it is stunningly clear that human being is a segment of a process that can be related reasonably, on the basis of empirical observation, to the whole of nature. When we add the testimony of genetics and the results of nucleotide sequence comparisons, including those that deal with mitochondrial DNA, the sense of our kinship within one human community and with the higher primates is rendered very intense indeed.

(2) Alongside the image of kinship, we are also aware of the ecological model for representing the intense interrelatedness between humans and the web of the natural ecosystems in which we live. This model describes the structure of how we live with our natural kin. In some ways, this is a simpler and more graspable image, particularly since the delicate balance and interweaving of the many factors that make our continued existence possible on the planet become more vivid to us every day. In a negative sense, the dangers of disrupting this balance are also susceptible to vivid representation. Even though presently, we still have not taken it with enough seriousness, our current thinking gives more attention to the ecological model. It is often a more palatable image than that of kinship, because it is less intense. It can be understood (though inadequately) as consisting only of external relations between us and the rest of nature, whereas the image of kinship insists upon a decisively internal relatedness.

On the basis of these scientific perspectives, there can be little doubt that *Homo sapiens* is nature's creature. How are we related to the rest of nature? We flourish only within an intimate ecological fabric, and within the relationships of that fabric, we are kin to the other citizens of nature's society. Our interrelatedness is best conceptualized according to the model of genetic relatedness. Nature's processes have produced us, we are constituted by our inheritance from its past, and we live in the ambience of its creative balances today. There is a kind of nonnegotiability to the message that science delivers on this point. Our kinship with nature is not a matter of our

preference, nor is it an issue that calls for our acquiescence. It simply is.

STRUGGLING TO FIND WHERE WE FIT

Against the background of what our scientific understandings tell us, it seems very strange that the fundamental problem of our time is that we do not know where we fit into nature, nor how our patterns of living can be creative and also harmonious with the rhythms of the rest of nature. In those cases where we do have a glimpse of how the indicative of our kinship with nature is to be translated into the imperative, we often resist and choose to go in different directions that seem to offer greater pleasure. As powerful as the knowledge and the experience of our belonging to nature is, we struggle with that belonging. We are creatures of culture—those learned patterns of behaving and understanding whereby we create the worldviews and mores that literally put our worlds together and tell us where we fit. Our culture, enabled by our brains, rooted in our consciousness, and adapted to our bodies and their genetic evolution, does not allow us to exist as Richard Wilbur's "gorgeous gallops of the sea, whose horses never know their lunar reins." In the main, we have to discover those reins, clothe them in our own symbols, investigate them, define their bounds and their possibilities, and then decide how we want to relate to them. Our lack of proper fit with nature rests finally in this essential aspect of our character. We have to discover what our kin in nature know by genetic programming. We distance ourselves from nature's laws through our symbol-making tendencies. We insist that what other citizens of our ecosystem must receive as imperative, we can treat as hypotheses to be tested and manipulated. The bat takes the cavern's walls of stone as absolutes to be observed; the human mind takes those same walls as proposals for negotiation and proceeds to compose a list of demands for presentation. And the process of negotiation is always accompanied by a significant degree of human error and lack of understanding.

What we are experiencing today is that we are poor negotiators; we have not understood just what proposals we ought to make. We are largely inept in carrying out "the very happiest intellection" that can allow us freedom and yet gracefully correct the cave to our benefit and that of the rest of nature as well. Consequently, we exercise our kinship poorly, whether it be with our fellow human beings or the rest of nature.

A PROBLEM OF CULTURE AND SYMBOL SYSTEMS

There are those among us today who believe that the symbol systems that offer the most wholesome expression of our relatedness to the rest of nature are primitive or ancient ones, those that derive from Stone Age people and the native American religions of North and South America. Most of these ancient attempts, however—as well as many more recent ones—are seriously flawed as modern symbol systems, because (1) they have not been rendered in forms that are credible and that present serious options for contemporary living; (2) they are limited in scope; (3) and they are ineffectual in comparison with the less wholesome prevailing images and symbol systems that speak of our relations with nature. These prevailing symbol systems derive from our Hebrew-Christian traditions, as well as from our secular wisdom, and instead of relatedness and kinship, they speak of our responsibility for nature as its stewards or masters, and of the possibilities nature presents to us for exercising our creative abilities and propensities to reshape it, to make it conform to us and serve us. In the main, we have symbolized our work upon nature as furthering its development and improving it, thus placing the weight of the Good on the side of doing unto nature rather than accepting a place within it.

The primary instrument by which humans act upon the rest of nature is their culture. Culture is, in effect, a learned and symbolic system of information and guidance for behavior which in the human species must supplement the programs of information and guidance that genetic evolution has bequeathed to the species (Burhoe 1981, ch. 6, 7). Culture is a rich and manifold system of information that includes many facets; here I can speak only in very general terms that will ignore the differentiated aspects of culture and their dynamics. To speak more specifically, the confusion and out-of-kilter state between humans and the rest of nature centers in our inability to discover the proper correlation between these two systems of information and guidance: the genetic and the cultural. The cultural system is the locus of the difference between the human mind and Wilbur's bat. It is true that just as the genetic system can be our undoing (when it guides us in maladaptive directions), so the cultural system can work at direct odds with the welfare of humans and the rest of nature. Clearly, our principal challenge is that of interrelating our genetic and cultural systems of information within the configuration of our present biosociocultural environment. The relationship of religion and science comes to bear, perhaps most significantly, on our attempts to meet this challenge (Csikszentmihalyi 1986, 1991).

ALIENATION FROM NATURE IS SIN

In the West, both our critical secular reason and our Hebrew-Jewish-Christian religious traditions tell us that the lack of fit with nature is wrong, dangerous, and profoundly unnatural.

The voices of critical secular reason are obvious all around. They drive the discussion of the so-called environmental crisis, at the level of science, technology, personal life-style, and the many layers of government planning. We should take particular note that our Western thinking greatly favors what we called earlier the ecological model for relating humans and the rest of nature. Where we acknowledge this relatedness, we prefer it to be an external quality. thereby rendering it as nonessential to our being as possible—we call nature our home, the house in which we live. We speak of our dependency upon nature, in the sense that it provides what we need for life. On the basis of these images, we like to think of humans as caretakers, stewards, creative dominators with respect to nature. These images do not carry the weight that kinship does, since that image suggests that we are part of nature, not on the basis of external relations, but in the internal sense; we are a segment of nature's own processes, and those processes have inwardly shaped us. The concepts of bricolage and the conclusions drawn from nucleotide sequence comparisons, including mitochondrial DNA comparisons, are not adequately imaged by models that emphasize external relations; they require the more emphatic images that arise when we speak of kinship and genetic interrelationship.

The religious traditions are also powerful, if ambiguous, in their insistence that the misfit with the rest of nature is wrong. The story of Adam, Eve, and the serpent speaks of a flaw that cuts right through the fundamental character of the human creature. We have tended to interpret Adam's apple eating as original sin in the sense of the first or initial sin that has condemned us all, and we correctly reject this as an impossible myth. More profoundly, there has also been a millennia-long tradition that interprets "original" sin as that which accompanies our origins, our very emergence as humans. We may term this the fall into personhood, as Paul Tillich does (1957, 29-43). Or, we may focus, as Ralph Wendell Burhoe has, upon the inherent conflict within us between the information we inherited from our prehuman evolutionary past and that governs our genetic constitution, and the cultural information that our brains make possible (1981, 65, 201-28). Prehuman programming animates Wilbur's palm and pine, which are coiled in flat perfection, and also the builded comber, whose horses never know their lunar reins.

Brain-based cultural programming, on the other hand, always asks the question of whether our destiny is not, rather, to become like God. Or, one might take up Donald T. Campbell's theories that pit selfish, genetically programmed and competitive individuals against their complex social forms, which require altruism and cooperation if they are to work. Much of our sin may also be charged to the fallibility and vulnerability of our mental equipment—we do crash into the wall of the cave on occasion, with terrible results for ourselves and others, even for succeeding generations.

Whatever other explanations may be at hand, the religious interpretations available to us in the ancient traditions of the Book of Genesis express the essential sin in images that often include our being out of kilter with the rest of nature: "Cursed is the ground because of you; in toil you shall eat of it all the days of your life"; the pain of childbearing; the enmity between humans and snakes (Genesis 3: 14-19); and in a most startling manner, the action of God in the promise to Noah to form a covenant with nature that will protect the earth against humans, the imagination of whose hearts is evil from their youth (Genesis 8: 20).

We recall also the teachings of Jesus in the Sermon on the Mount, with its amazing insistence that God metes out justice and love in the natural processes. In these texts we encounter a quintessentially religious perspective on nature. Jesus chides his listeners for not being in close enough touch with the natural world to perceive the love that its processes enact. The birds of the air, the lilies of the field, the grass that flourishes and then dies are examples, not of an impersonal natural law, but rather of how God blesses the entire creation (Matthew 6: 25–31). The rain and the sunshine that fall upon the just and unjust alike are models for how we should direct our love toward all persons, friends and enemies (Matthew 5: 43–48). Such fragments of our tradition have proven to be so confounding that we scarcely even discuss them as the straightforward maxims they appear to be in the original texts of the New Testament.

DOMINATION: "MAN AS CALIPH"

Neither our secular nor our religious traditions, however, give us adequate help in assimilating the nonnegotiable message of the sciences that we are part and parcel of nature.

Our secular understandings by and large inculcate within us the sense that being "natural" or "only nature" is too little for creatures of our capabilities and attainments. The secular spirit prizes human beings for what they can do with nature, how they can manipulate

and "develop" it. We could document this at many points in our past, but in our present century, the two great social philosophies of the twentieth century—democratic capitalism and communist socialism—both value persons on the basis of what they produce and what they consume, in materialist terms. Production is conceived in terms of what can be done with the natural resources at hand, and consumption is synonymous with how much can be taken out of nature and put into human possession so as to enable the possessor to live a life as unlike the world that is untouched by human hands as possible. Our rituals of cosmetizing the living and the deadwhich have spawned and supported two very considerable industries, to be sure—clarify our fear of being only natural creatures. Our technology speaks powerfully of our sense that leaving nature in its prehuman state is somehow a betrayal of our genius. With our technology we continually redesign our current artifacts, thereby rendering every previous achievement obsolete. We then proceed to make the current design essential to our life-style, leaving the "natural state" always further behind in the past.

Our Western religious traditions are more ambivalent about nature (Santmire 1985, esp. ch. 1 and 10, 216-19). On the one hand, they have most often been interpreted to be harmonious with the secular spirit. The exalted sense of human status as expressed in Psalm 8 is an example:

> What are human beings that you are mindful of them? Yet you have made them a little lower than God, and crowned them with glory and honor. You have given them dominion over the works of your hands; you have put all things under their feet.

The creature who in the first chapter of Genesis was created in the image of God and given dominion over all things is echoed in this psalm. Islam holds similar traditions, which may be summarized under the phrase "God is, and man is his caliph" (Cragg 1968, ch. 2). Nature belongs to God, and it exists for humans, in their effort to serve God (Rahman 1980, 78-79).

In addition, our Western religious traditions also include perspectives on life that easily can be interpreted dualistically, urging upon us the view that our destiny lies not in nature's world of flesh, but in some other world of the spirit. These traditions are represented in substantial numbers of individuals and communities who have graced the pages of history prior to and after the first century of the common era. These communities have in effect questioned whether the natural order and its viability should even be given consideration, since our final destiny is to be with God, quite independently of our natural life on planet earth. Better to burn, if that hastens the journey into Abraham's bosom.

In contradistinction to these traditions that discourage us from identifying our career with nature's history, there are those that lay the basis for understanding that God's historical work with humans is articulated within the larger history of nature (Sittler 1977, 30–32). At best, however, these traditions attain only an ambivalence toward humans as kin with the rest of nature. We read, for example, in Psalm 90:

You turn humankind back to dust, and say, "Turn back, you mortals."

For a thousand years in your sight are like yesterday, when it is past, or like a watch in the night.

You sweep them away; they are like a dream, like grass that is renewed in the morning; in the morning it flourishes and is renewed; in the evening it fades and withers.

In the Psalmist's context, this naturalness of the human is a cause for puzzlement and anxiety. In Jesus' Sermon on the Mount, we are asked to understand that our career, no less than that of the transient grass, is the object of God's concern and love.

There are equally venerable traditions that do speak of our kinship with nature. These include the Jewish liturgies, particularly the recital of the Kiddush and the sense of the Sabbath as depicting not simply rest and re-creation, but the harmony that exists primordially between Yahweh, humans, and the rest of creation. Humans join the rest of nature in being God's possession (Hertz 1975, 108-9).

Some Islamic scholars speak of all of nature as muslim, that is, within the fundamental structures operating as God created and intended. Human free will is to extend this natural islam by volition in a way that nature cannot (Cragg 1968, 34, 38-39; Rahman 1980, 65). Nature and the Qur'an thus bear the same message (Rahman 1980, 71). The notion of human kinship with the rest of nature is approached when we consider the words of a contemporary Islamic philosopher, Seyyed Hossein Nasr:

In fact man is the channel of grace for nature; through his active participation in the spiritual world he casts light into the world of nature. He is the mouth through which nature breathes and lives. . . . Man sees in nature what he is himself and penetrates into the inner meaning of nature only on the condition of being able to delve into the inner depths of his own being and to cease to lie merely on the periphery of his being. Men who live only on the surface of their being can study nature as something to be manipulated and dominated. But only he who has turned toward the inward dimension of his being can see nature as a symbol, as a transparent reality and come to know and understand it in the real sense. (Nasr 1968, 96)

The second chapter of Genesis pictures the human being in terms of dust that has received the spirit or breath of God. A substantial segment of the Christian tradition has taken this as a model for conceiving of God's work throughout the natural realm. Sacraments have been defined as natural things with the addition of the spirit or promise of God. One may read from this definition in either direction: that the human being is the paradigm for conceiving of how God is present throughout nature and history, or that humans fit under the sacramental paradigm which applies to all of nature. Christian understandings of the Holy Spirit have often moved in the same direction. The Spirit hovers over the waters at Creation, just as it gives life to the desert plants and animals, raises up charismatic leaders, accompanies the birth of the Savior, and is poured out upon entire communities.

Although these traditions still lack precise conceptual expression, they do predispose us to receive the scientific suggestions that *Homo* sapiens is to be understood as part of nature's process, not only ecologically, but in terms of kinship with all that has appeared within the processes of nature's evolution. However, they are balanced, at best, with the traditions that speak rather dualistically of the human being as quite a different order from the rest of nature. Our traditions are genuinely ambivalent.

The Islamic sense that nature represents the words or logoi of God—that there is a "parallel (or even identity) between the revelation of the Qur'an and the creation of the universe" (Rahman 1980, 71)—may serve us well to characterize our situation today with respect to understanding how humans are intended to relate to the rest of nature. The sciences bear nature's message, that we literally stand in a kin relationship—in terms of our origins—to all living things. Put in nonreligious terms, our deficiency lies in our inability at present to understand either the fundamental indicative or imperative of that message. We are unable to relate that message to the most basic values of human life. In religious terms, our deficit lies in the fact that we cannot represent to ourselves how the scientific

message of our kinship with nature can qualify as the Logos, the word, of God.

The challenge to our discernment is quite clear. To understand our kinship with nature, that we are part of nature's process and that our niche is within that process, and to discern the fundamental significance of that kinship, would be to make at the same time both a constructive and a prophetic contribution to the soul and mind of our culture that is painfully needed. Such discernment would be constructive, because it would at least set the stage for thinking through some of the greatest dilemmas that face us. It would be healing to a culture whose political confusion and social trauma are exacerbated because it is not certain just why its spirit hurts. Such discernment would be prophetic, because it would unmask the ignorance and arrogance that reinforce our unwillingness to see our niche as part of nature's process.

THE KNOWLEDGE THAT SERVES LIFE

In order to qualify as knowledge that genuinely serves life, our discernment of our niche as part of nature's process will have to give expression to a number of basic considerations.

1. This knowledge will have to teach us how to talk about ourselves as intrinsically part of the processes of nature. We speak uncertainly at the present time, because we fear that being part of nature's processes will diminish us. We misconceive that the distinctively human will be reduced to the prehuman. Here Nasr's insights are necessary: that penetrating into the inner meaning of nature and our relation to it requires that we at the same time delve into the inner depths of our being (Nasr 1968, 96). We are what the processes of nature can and have become. We are to be construed as part of nature's probing to determine just what it can become. This does not diminish the creativity that marks the human creature due to its cultural dimensions, but it rather clarifies what that creativity is and what its natural function is. Nature is illumined as much when we scrutinize and gain insight into what it has become in *Homo sapiens* as when, conversely, we seek to understand the human being by studying nonhuman nature. Our knowledge of nature, far from diminishing human nature to the laws of biochemistry, illuminates the significance of nature as the progenitor of *Homo sapiens*, who in this context we would want to name as the diviner of ultimate meanings within the natural processes.

2. We must understand that what we are, what we do, and what we aim for, as humans, is to be referred to the processes of nature and to their Our very existence illumines what the processes of nature can become, precisely because we truly are what the processes of nature have become. We must begin to recognize that that is our chief significance as creatures and the most decisive guideline for the motivation and directing of our actions. A very great transformation in our conception of values must take place in this connection, because we do not generally consider the enhancement of nature's processes to be an adequate object of our motivations and actions. A decidedly noninstrumental valuation of nature is called for.

Iesus' life and death as the Church interprets them serve as a model at this point. His life and death were not instrumental to his gaining any particular value for himself. They constituted his career trajectory (if we may use that term), and as the Temptation stories tell us, his life and death were rather of intrinsic value. He lived and died for the benefit of those with whom he came in contact: he did what he did for the sake of benefiting the world by witnessing to and obeying what he believed was fundamental truth. In the community where I worship on Sundays, after we present the gifts of bread and wine and money prior to the Holy Communion meal, we often pray as follows: "With these gifts we offer ourselves and dedicate our lives to the care and redemption of all that you have made" (Inter-Lutheran Commission on Worship 1978, 68). In that prayer, we articulate the intention to accept the model of Jesus' life and death as normative for our own.

We must learn that this is what our lives, as part of nature's processes, are reckoned against: how they appear when measured against the ultimate well-being of the natural process from which we have emerged and which has shaped us to become what we are.

3. We must recognize that, in light of our status as a phase of nature's processes, our niche can also be understood as one of preparing for the best possible future for those processes. In their cultural life, humans fully implicate the rest of nature in the human adventure. At the same time that we define this human project, we are also defining the rest of nature and molding it to the contours of that project. The shaping of human culture must now take as one of its primary considerations what is the best possible future not only for humans but for the naturehuman complex. The model of education or child rearing may be pertinent here, although it serves only as a limited analogy. The emphasis is not so much on molding the children to become what we want them to be, but rather contributing to them that which will

provide the greatest possibility for a wholesome future, so far as we can make such judgments. Such is the character of our responsibility toward the rest of nature.

4. We must learn how to discern the dimension of ultimacy in nature's processes and how to conceptualize them. Humans are the discerners and the conceptualizers of ultimacy, and this is both our being and our office in nature's processes, as they have brought us to this point in time, and also in their future unfolding. We are not natureworshipers as some ancient peoples were. We distrust the term survival, if it refers simply to the biological perpetuation of life, because we suspect that if that is what nature is up to, it is not enough for us. We also know that the phases of the natural process do not last forever. Extinctions are the rule in nature. Species die out, grass flourishes and dies, to be thrown into the oven. But the process of nature's continual changing or evolving does not. In the Western religious traditions of Judaism, Islam, and Christianity, the creation of the natural order is the greatest project toward which the divine creativity and energies have been expended, so far as human knowledge can ascertain. These processes are intricate and marvelous. They are, apparently, what God wanted to do. And redemption of all sorts is, after all, another—perhaps the humanly most significant—large outpouring of divine energy and intentionality toward the natural order.

If this is the case, that nature is God's great project, then devoting ourselves to its care and redemption is but pouring our resources into the same effort into which God has poured the divine resources. Can we learn to think such thoughts, articulate them in words, and permit them to guide our actions?

Paraphrasing Nasr, I would propose that the challenge facing us is first of all to recognize that the study of nature and the discoveries that we achieve from that study are a form of theological enterprise. Secondly, when that study and discovery are turned to an examination of human viability (that is, the question of the human niche), since they touch upon questions that literally pertain to our being or nonbeing, they are directly theological. The message or communication that we receive from nature is parallel to the communication that we receive from our canonical sacred scriptures. This parallelism, of course, is conveyed in part by the image of the Two Books, an image that is several centuries old in the West, figuring in an important way, for example, in the founding of the Royal Society of London in 1660.

The significance of this image for our present cultural situation,

however, is far from appreciated in its depth. Briefly put, the challenge to the sciences and the critical reason that builds upon the sciences is to recognize that the knowledge attained by scientific research forms the matrix and the substance for some of our most fundamental values. We would do well to recognize that when devoted to these questions, the sciences are dealing with issues of ultimacy. Such an awareness will have great impact on how we perceive some of the questions now under discussion, of which perhaps the definition and exploration of survival is the most central. For religious communities and their theologians, the challenge is to recognize that since the natural world is indeed God's greatest project, true and profound knowledge of God involves the attempt to discern what niche or niches are most fitting for Homo sapiens. For theology, this entails the conclusion that theology is not on track unless it can interpret the traditions of the religious community as revelation about the natural order. (We reiterate that we understand the natural order always to include human beings and their culture.) Therefore, spiritual life has not been properly understood nor has God been rightly obeyed until the believing community pours the quality of effort into the processes of nature and their future that parallels what God has committed to those processes.

REFERENCES

Burhoe, Ralph Wendell. 1981. Toward a Scientific Theology. Belfast: Christian Journals. Cragg, Kenneth. 1968. The Privilege of Man. London: The Athlone Press, Univ. of London.

Csikszentmihalyi, Mihaly. 1987. "On the Relationship between Cultural Evolution and Human Welfare." Paper delivered to the American Association for the Advancement of Science, Chicago, February 1987.

-. 1991. "Consciousness for the Twenty-first Century." Zygon: Journal of Religion and Science 26 (March):13-14.

Hertz, Joseph H. 1975. The Authorized Daily Prayer Book. New York: Bloch Publishing

Inter-Lutheran Commission on Worship. 1978. Lutheran Book of Worship. Minneapolis: Augsburg Publishing House.

Nasr, Seyyed Hossein. 1968. The Encounter of Man and Nature. London: George Allen and Unwin.

Ode, Philip E. 1991. "Past and Present Views on the Unity of All Life on Planet Earth." Paper delivered 24 October 1991 at the Chicago Center for Religion and

Rahman, Fazlur. 1980. Major Themes of the Qur'an. Minneapolis: Bibliotheca Islamica. Santmire, Paul. 1985. The Travail of Nature: The Ambiguous Ecological Promise of Christian Theology. Philadelphia: Fortress Press.

Sittler, Joseph. 1972. Essays on Nature and Grace. Philadelphia: Fortress Press.

———. 1977. "The Sittler Speeches." CSCM Yearbook, 1977-78. Valparaiso, Ind.: Center for the Study of Campus Ministry.

Tillich, Paul. 1957. Sytematic Theology. Vol. 2. Chicago: Univ. of Chicago Press. Wilbur, Richard. 1988. New and Collected Poems. New York: Harcourt Brace Iovanovich.