

INTERRELATING NATURE, HUMANITY, AND THE WORK OF GOD: SOME ISSUES FOR FUTURE REFLECTION

by *Karl E. Peters*

Abstract. This essay suggests some future items for an agenda about human viability, defined as survivability with meaning and purpose, by exploring interrelations between nature, humanity, and the work of God. It argues for intrinsic and creative value in nature, so there is a value kinship, as well as a factual kinship, between humans, nature, and God-working. It considers humans as “webs of culture, life, and cosmos” and suggests some implications of this notion of human nature for viability. And it asks what human fulfillment can be in light of the awesome creative-destroying-recreative activity that seems to be the ground of an evolving universe.

Keywords: contingency; evolution; fulfillment; human; meaning; nature; survival; value; viability; work of God.

The theme “Human Viability and a World Theology,” discussed at the 1991 Templeton Foundation Symposium, was a catalyst for a rich array of constructive and fruitful thought.¹ One of the goals of the symposium was to make suggestions for shaping our future agenda regarding questions concerning the human niche in the scheme of things. In response to this goal, I want to explore how we might begin constructing a picture of the world or nature, of human nature, and of the work of God so as to see more clearly their interrelatedness. This is because my hunch is that human viability will depend on seeing more clearly than we do now how nature, human nature, and the work of God form a unified, complex, integrated system.² My discussion will first consider how humans might be regarded as

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embedded in nature, both factually and in terms of value. Then I will suggest how we might think of nature as embedded in humanity, thereby enlarging our conception of the human self. Finally, I will highlight how both nature and human history are the contingent, temporal results of an ever-creative God. As I do this, I will suggest some items we might put on our future agenda for thinking about human viability.

By human viability I shall mean, first, survivability and, second, having a sense of meaning or purpose as humans in the scheme of things.³ By the end of this essay, I hope it will be clear that, even if we do not survive as a species, human beings might still now have a sense of fruitful meaning or purpose—a niche in the larger scheme of things.

HUMANITY EMBEDDED IN NATURE

Some integration of humanity and nature has been achieved with the developing scientific picture of cosmic evolution. In this picture humans, human culture, and history are seen as arising out of a physical, chemical, and biological matrix of life on earth. Physically, we are a late development in the transformations of energy-matter that have been taking place since the beginning of the universe some 15 billion years ago. Biologically, we are a manifestation of a genetic heritage that begins with reptilelike mammals before the extinction of the dinosaurs 66 million years ago. That code has evolved so that we are biological cousins of other higher primates. There is little doubt among those who study human beings in relation to other creatures that we all are part of a unified system of evolving life on our planet. As Philip Hefner puts it: “On the basis of these scientific perspectives, there is no doubt that *Homo sapiens* is nature’s creature. How are we related to the rest of nature? We are kin. . . . Our kinship with nature is not a matter of our preference, nor is it an issue that calls for our acquiescence. It simply is” (Hefner 1991, 6).

However, the scientific picture also confirms that all species are unique. Human uniqueness is due in large part to a more elaborate development of certain neocortical brain structures and of their connections to older brain-stem structures, which have given us the capacity for creating, learning, and using complex languages to construct word pictures, mathematical portrayals, and stories of our world and ourselves (see Deacon 1990). These brain structures and connections have given us the capacity to reflect about the future and to envision how things might be different, thus giving rise both to technology that transforms much of our world and to moral reflection

that asks whether our activities are good or bad. Connected to older structures of the brain, the evolutionarily newer cortical developments also give us the capacity to imaginatively feel what it would be like to be in the position of others and hence to move empathically beyond individual interests to consider the interest of others.

The distinctiveness of humans raises an important issue concerning human viability. Often in the recent past, it has been thought that the distinctive features of the human brain give us unique abilities, not only to adapt to our surrounding environment, but also to change the environment for our own purposes. And scientific understanding has informed a technology that has given humans today more power over the rest of nature than ever before in human history.

Yet, is the only significance of the human brain and human understanding to increase human manipulative power? A part of our future agenda in thinking about human viability should be to explore other alternatives for understanding the significance of the distinctive features of the human nervous system and their capabilities. One traditional alternative has been outlined by Gene d'Aquili. D'Aquili points out that one of the basic tasks of religion is to help humans maintain a sense of control in the context of their natural and social environments. Another task is to facilitate the possibility of achieving various levels of integration between human individuals and the larger world, with the greatest degree of integration being accomplished in a state of absolute unitary being (d'Aquili 1991). Such experiences help the individual gain a sense of control by trusting the larger realities, by trusting that they work for good. This is in contrast to a sense of control by human manipulation of aspects of the larger world.

Another alternative would be to say that the role of humanity with its distinctive capacities is to be a storyteller, to conceptually construct and share in the human community the story of some 15 billion years of creation, to connect human history to the history of the rest of nature. Storytelling has a long human tradition, as exemplified in numerous cultural myths passed down, developed, and integrated with one another through the centuries in various cultures. It is also one way to regard the task of some pure science: to understand and tell the story of nature in all its variety, at all levels of existence. And some scientists are very good storytellers. Lewis Thomas is widely known for *Lives of a Cell* and other books. Less well known is Eric Chaisson's *Cosmic Dawn*, a very readable history of the universe from the Big Bang up to the present. And I find that neurobiologist William Calvin is equally fine as he tells stories about the human

brain in *The Cerebral Symphony: Seashore Reflections on the Structure of Consciousness*.

Mihaly Csikszentmihalyi reports that the results of his research indicate that “people feel more happy, satisfied, strong and creative when involved in activities that require the use of skills (mental and physical). Work is better than free time because it has clearer goals, challenges, feedback” (Csikszentmihalyi 1991, 3). However, this does not need to be activity that changes the world around us. It could also be work that facilitates the activity of other species and the general sustaining and creative work of nature on the planet. Hefner suggests that the human niche may involve our understanding and enhancing nature’s processes and preparing their best possible future (Hefner 1991, 16). And storytelling and listening to stories being told—a distinctive human activity—can possibly be just as fulfilling as other kinds of work, because it gives shape to the chaotic stream of human consciousness by creating systems of meaning. The shape of our agenda should include further exploration as to how humans can fulfill that which makes them a unique species in harmony with other species of nature who are also seeking, in their own way, to realize their own unique biological potentials.

So far we have been viewing how humanity can be seen in relationship to the rest of nature descriptively. However, it is also important to be able to see the interconnectedness of humanity and nature, and also the work of God, in terms of value—of values in nature. For example, the idea of kinship with nature gives us a metaphor for seeing other parts of nature as just as valuable as we humans are. However, it would also be helpful to develop rational arguments for intrinsic value in the natural world.

In Western culture, it has often been thought that nature, apart from human beings, has no value at all, or has only instrumental value for human beings. Often nature has been portrayed by humans only as a neutral background for human history, a stage for religious dramas of human salvation. This has been the case even though in the biblical narratives human history is deeply embedded in the course of nature. Both humans and the rest of the created world are created, governed, and sustained by God (e.g., Psalm 104); and human salvation is intimately connected to the creation of a new heaven and earth in a peaceable kingdom that includes both human and nonhuman creatures (e.g., Isaiah 11 and Revelation 21).

Nature also has been seen as having only instrumental value for human beings. The resources of our planet have been viewed as material for human consumption and as tools for aiding humans in their quests for enjoyment and fulfillment. Even in the environ-

mental movement, often the system of values is anthropocentric. And a metaphor like "spaceship earth," as powerful as it is for promoting an attitude of care for the planet, still implies that nature is like a machine, primarily useful as a life-support vehicle for the human species. With such a metaphor, nature has only instrumental value; and only humans have intrinsic value.

We need to move beyond the instrumental view of nature to explore more fully the extent to which our view of what is intrinsically valuable can be extended beyond the human sphere. I suggest this because human survival and flourishing depend on a rich, flourishing natural environment. In this sense nature is instrumental to human well-being. However, if we try to calculate through cost-benefit analysis the instrumental value of particular organisms, species, and ecosystems for long-term future human welfare, we not only face the difficulties of accurately doing such a calculus; we continue to distance ourselves from immediate interaction with our surrounding environment. More helpful, it seems to me, would be to consider preserving, conserving, and enhancing features of our environment because of their own worth. In this sense, we need to recover a sense of the sacredness of nature even though we cannot rationally allow, in a scientific age, some of the animistic personifications of nature that past cultures were able to use in expressing nature's sacredness.

How might we rationally argue for intrinsic value in the non-human natural world? I want to sketch three arguments.⁴ The first is, if it can value, it is intrinsically valuable. By valuing I mean making some kind of selection among alternatives, preferring some object or some course of action to others. Humans engage in this kind of choice-making with some degree of conscious reflection. And ethicists have tended to focus on human valuing as if it were all reflectively conscious, partly because we are interested in holding humans responsible for their actions and praising or blaming them. However, valuing need not always be reflective: Both humans and higher animals value nonreflectively, discriminating this object from that by immediate feelings of pleasure and pain. Nor is all valuing conscious: Our brains do all kinds of sorting things out, of selecting this rather than that, below our level of awareness (see Calvin 1990, 255-73). And other animals, plants, and bacteria also engage in some kind of valuing, of selecting this rather than that. They do not do it reflectively, or in terms of states of pleasure and pain, but they do it biologically and chemically at the molecular level; even one-celled organisms such as amoebas and paramecia are able to select and hence value what is nourishing and therefore life supporting and avoid or reject what is nonnourishing or even life threatening.

These different ways of valuing may allow us to make some fine distinctions between humans, higher animals, and lower organisms when faced with competing intrinsic values. Nevertheless, one might establish some intrinsic value for all life on the basis of the fact that each life form selects what is supportive or not supportive for its own life.⁵ If so, then we begin to see the interrelationship between the intrinsic value of humans and of other species more clearly: All are seeking their own kinds of viability. Complementing our scientifically based description of the kinship of humans with the rest of nature, we now can see that same kinship in terms of values.

The above argument applies to individual organisms. It does not apply to species as a whole or to ecosystems in which many species interactively exist. However, two other arguments can deepen the kinship between humans and the rest of nature by affirming the intrinsic value of the genetic heritage of any species, and the productive or creative value of ecosystems.

To affirm the intrinsic value of the genetic heritage of any species, we can look at DNA codes as recipes or blueprints for the creation of individual organisms. Let us consider these in analogy with recipes and blueprints in human culture, say, recipes for cooking food and plans for making a watch. And let us ask, which is worse, to spoil a batch of food or to lose the recipe, to break a watch or to lose the plans for making or repairing a watch? I think we would conclude that the recipe or plan seems to be of greater value than an individual or even a large number of products created according to plan. Similarly, while the destruction of any individual organism involves a loss of what is intrinsically valuable, an even greater loss is the extinction of the genetic code for a species of organism. This is why, in discussing human viability, we should put on our agenda how our actions affect the human gene pool itself. And we should also put on our agenda a more serious consideration of the increasing rate of extinction of species as a result of human activity. Many individuals can be lost only to be replaced by other individuals of the same kind. However, extinguishing a species means that we are destroying the possibility of that *kind* of individual continuing in the future. As environmental ethicist Holmes Rolston, III, suggests, when we extinguish a species of organism we become not just killers but super-killers, because we eliminate the biological basis of that species' existence—its DNA code (Rolston 1988, 145). DNA codes themselves have intrinsic value, greater intrinsic value than their individual phenotypic expressions.

Yet there is something of greater value still, of value so great that Rolston suggests we have to give it another name besides

instrumental or even intrinsic value. This is the value of that which generates the recipes and the plans, the DNA codes for the great diversity of life on earth. We can call it creative or productive value. According to Rolston, ecosystems are not valuable because they are individual organisms; and they are not valuable because they are plans or recipes for life. They are valuable because interaction among species and between species and nonliving matter and energy—both within and across ecosystem boundaries—is a creative matrix that gives birth to new forms of genetic codes and hence to new species and their individuals in what is called natural selection.

This creative matrix can be argued to be more valuable even than the DNA recipes for species or human plans in culture. For we can ask, which is worse, to lose the recipe or to lose the capacity for creating recipes or plans? To so act as to increase the rate of species extinctions contributes to the destruction of the earth's ecosystems, and this diminishes the earth's creative capacity. Diminishing the earth's creative capacity is worse than losing any particular species of organism.

If we can make a distinction between creative value and intrinsic value, between the value of the creative process and the products of that process, then it seems to me we have a way of relating nature and humanity to the work of God without identifying them (see Peters, in press, for an extended discussion of this). To see the value of the creative matrix of nature might be one way of understanding the sacredness of nature without having to affirm the divinity of creatures. Yet the work of God is not independent of nature because it involves interactions between creatures, including human creatures, in the natural world. Thus, from the perspective of nature, descriptively and valuationally, we can begin to see how human viability might be interrelated with the viability of the rest of nature and also with the work of God on our planet.

NATURE EMBEDDED IN HUMANITY

Let us now turn to look more directly at human nature. Instead of beginning with the idea that humanity is embedded in nature, I want to suggest that nature is embedded in each one of us. It is often said that humans are a part of a wider web of life; I want now to suggest that each of us human beings also can be understood as “a web of life”—not just of life but of life, culture, and energy-matter or cosmos. Out of this metaphor will come some implications for human viability.

In developing this metaphor we will move beyond a subjectivist

concept of the individual human being to a social-ecological understanding of what it means for each one of us to be human. In slightly different terms, we will move beyond focusing on the phenotype as the locus of what it is to be human to what Ralph Wendell Burhoe calls the culturetype, the genotype, and the cosmotype. Such a move is one possible way of avoiding what James Gustafson refers to as a “classic Christian understanding of sin,” having interests that “are curved in on themselves, that limit [our] moral visions and constrict [our] moral sensibilities” (Gustafson 1991, 10).

In considering the idea of the human soul in terms of what scientifically can be said to be more enduring or permanent, Ralph Burhoe writes: “The real core of human nature is not any particular body but an enduring pattern of flow. The flow pattern is generated by the interaction of the energy and boundary conditions set by habitat (or cosmotype), genotype, and culturetype, resulting in unending successions of ever-evolving levels of living forms” (Burhoe 1981, 140). Let’s unpack this idea and its implications for viewing nature in humanity and for thinking about human viability. At the risk of oversimplifying and separating the different aspects of humanity that Burhoe weaves tightly together in this quotation, I will refer to these flow patterns as our cosmic self, our genetic self, and our cultural self—which all produce our phenomenal self.

Generally speaking, our phenomenal self, our phenotype, consists of our bodies and brains, our inner perceptions, feelings, and thoughts, and a sense that we are a subject capable of observing and to some extent directing our attention to feelings, thoughts, and body observations. If we think of this phenomenal self and ask what it means to be viable, two things follow. First, the phenomenal self does not last much beyond one hundred years. Second, if we think in terms of the immortality of the phenomenal, subjective self as soul from a moral point of view, that kind of immortality often appears to be portrayed as one of egoistic self-satisfaction. One exception, of course, appears in those traditions in which the individual ego is thought to dissolve into divinity, like a stream into an ocean, in permanent “absolute unitary being” (d’Aquili 1991).

What I want now to suggest is that, if we can move our concept of the self beyond the subjective, phenomenal self to include our cultural, genetic, and cosmic selves, we have a much more interesting and richer concept of human viability—one that is certainly worth exploring as a part of our agenda. We can do this by asking how our phenomenal self is created and how it can continue in ways other than subjective states of consciousness, in a kind of “objective immortality” or viability.

A key to the creation and growth of our phenomenal self, especially its subjectivity, is what Burhoe calls the culturetype and what Solomon Katz terms “the socio-cultural information system” (Katz 1991). One ingredient (here we return to recipes) of the cultural self is language, including grammar and syntax, that helps structure how we think. Language helps shape our minds. Thus, a language of a particular society is part of the recipe for the human minds in that society, a recipe encoded into the physical brains of children as they grow up.

Not only does the recipe or culturetype include language. Along with ways of thinking embedded in language, it also includes ways of doing things: ways of gathering, growing, processing, and eating food; ways of building houses and other structures of human habitation; ways of getting around with transportation; ways of playing; ways of being religious. And underlying all of these ways of doing things, manifested in them, and programmed into the brain through them, is a society’s value system. At the heart of the cultural recipe lie the values, goals, and purposes that shape our actions. The culturetype shapes both thinking and acting (it even shapes feelings). It helps shape our personalities and attitudes.

However, culture is not the only thing that shapes our minds, personalities, and attitudes. According to the contemporary scientific picture, our biology, governed by another recipe, the DNA or genotype we inherit from our parents, also plays a major role in how our phenomenal selves come to be. If we follow the results of the work of Lindon Eaves and his colleagues, this recipe also is largely responsible for shaping our personalities and is an important factor even in our social attitudes (Eaves 1991; Eaves, Eysenck, and Martin 1989).

There is still a third source of what we are—beyond culturetype and genotype—without which we would not be born and would not continue to exist. Our cosmic self includes the atoms and molecules, organized via amino acids as proteins, that provide the material for our biological selves. This material is organized according to our genetic recipes, which also are created out of atoms and molecules (organized via nucleic acids, sugars, and phosphates into deoxyribonucleic acid, DNA). Furthermore, our cosmic self includes the laws of nature that organize energy-matter at the atomic and molecular level. This third kind of information system (underlying our genetic and sociocultural information systems) consists of the same laws that govern such phenomena as the formation and functioning of stars, the relations between earth and moon that affect the tides, and the functioning of all kinds of physical and chemical

phenomena on our planet.⁶ Present throughout the universe, laws of gravity, electromagnetism, atomic interactions, and chemistry are also present in us. They provide a kind of cosmic recipe or *cosmotype* for the functioning of all things, including ourselves, at the atomic and molecular levels. Nature is in us as much as we are in nature. We are webs of reality, woven out of the threads of culture, biology, and cosmos according to recipes (structures of language and values, DNA codes, and laws of nature) in each. As webs of reality each of us is a manifestation of a large part of the universe as a whole.

By discussing the cultural, genetic, and cosmic sources of our phenomenal selves, we can greatly expand our picture of what it is to be human. What are the implications of this for human viability, for the viability of each of us as individuals?

If viability means in part continuation, then we can ask how we humans continue beyond the one hundred-year existence of our phenomenal, subjective selves on earth. And we can also ask how long have we existed prior to the emergence of our phenomenal selves. In short, how old are we and how long will we live? In terms of our cultural selves, each of us is at least as old as our language and the value system that shapes our living and acting. We are from five hundred to three thousand years old. If we ask how long our DNA recipes and other features of human biology exist, then we are millions of years old. If we ask how long our cosmic self has existed, then we must answer that we are as old as the universe itself. According to the first law of thermodynamics, energy-matter is neither created nor destroyed. It is only transformed from one pattern into another. We contain in us—in all of our selves—after many cosmic, biological, and cultural transformations, the radiation that was present at the origin of the universe.

How old, then, are we? Phenomenally, a few decades; culturally, a few centuries or millennia; biologically, millions of years; cosmically, about 15 billion years. How long will we continue? Phenomenally, a few more decades or less; culturally, maybe a few more centuries; biologically, millions of years or, if we do not destroy ourselves first, perhaps until our sun dies 5 billion years from now; cosmically, until the universe ends, which may be never. It all depends on how we think of our selves. In Burhoe's thinking, the real core of our human nature, our "soul," is what endures beyond the grave of our phenomenal bodies and minds. Our particular web of reality, woven out of cultural, biological, and cosmic threads, contributes back to culture, biology, and cosmos more threads—out of which other phenomenal selves can be woven. Even if many

human beings can no longer believe in a self-conscious phenomenal immortality, a resurrected body or substantive soul, we might believe on scientific grounds in something just as significant if we do not make our phenomenal egos the be-and-end-all of everything. We have a social-ecological-evolutionary kind of viability as a part of the fabric of an evolving universe—and the kind of continuation we have will depend on decisions our phenomenal selves now make regarding how we should live.

If one recognizes the importance of a social-ecological-evolutionary kind of immortality, then an important question is not just how long we will live, but how well we live in the sense of contributing further to human culture, biological well-being, and the ecosystems of the earth. This is the primary responsibility of our phenomenal self. The phenomenal self is not as long-lived as our other selves. However, it is a critical, symbiotic weaving together of them. It also is the means through which the other selves are reproduced and continued into the future. Furthermore, the phenomenal self is the means by which the other selves can be self-consciously modified, so that the cultural-biological-cosmic “souls” of each of us—which come together to form us as we are now—can be changed for better or worse in light of how we live and die.

This gives to each of us right now—in our daily living—considerable responsibility for our own future beyond the death of our “bodies”—the future of our other selves in relation to the larger culture, life, and cosmos in which we live, move, and have our being. Martin Luther King, referring to his phenomenal self, once said that it is not how long we live that is important, but the quality of our lives. If we move beyond the viewpoint of phenomenal individualism, the same holds true of our other selves. It is not the fact that we will continue for hundreds, thousands, millions, and billions of years that is most significant; it is *how* we will continue in our various ways. In responding to this question, our current, individualized morality must change. In Burhoe’s communal-social-ecological concept of self, significant moral issues must also include what is good for our society, environment, and cosmos—not as issues that might bring us into conflict with our self-interest, but because it is in our interest to consider various ways in which each of us continues beyond the “grave.”⁷ Such issues should become a part of our agenda not just because we are concerned about others, but also because we are concerned about how we, ourselves, will continue to be viable.

HUMAN VIABILITY AND THE WORK OF GOD

In "Human Viability? A Western Religious and Ethical Response," James Gustafson effectively raises the question of whether the work of God is beneficial to human beings (Gustafson 1991). His theist and atheist alternatives seem to hinge on the answer to this question, because being able to see the ultimate workings at the core of the nature of things as beneficial to humans provides a ground for human hope. Gustafson's own proposed resolution is that "God (through nature) is the source of human good, but does not guarantee it" (Gustafson 1991, 16).

In what follows, I want to propose something a little different: The work of the reality system that continually creates and recreates the universe may be both beneficial and not beneficial to humans. It may have been beneficial for humans (at least for some humans) up to now and may be beneficial for some time to come, but this does not necessarily mean that the work of God will be beneficial to humans forever. Yet, I also will suggest that we still can live meaningful lives and therefore be humanly viable in relation to the work of God.

One reason for suggesting these ideas for reflection in our future agenda is our expanded understanding of the contingency and temporality of the created order, as Gilkey (1991) suggests. The fundamental nature of contingency and temporality is highlighted by Karl Schmitz-Moormann's emphasis on becoming rather than being as fundamental to our current understanding of reality. This entails the recognition that our inability to deduce the present from the past is "a consequence of the very structure of an evolving world, of a world in which new things appear in an unpredictable way" (Schmitz-Moormann 1991, 9).

In past Western thought, it has been recognized that individuals are contingent, coming into being and passing away. The same has been seen to be the case with societies, even civilizations. And, in the myth of the flood, the story of Noah's ark, it has been recognized that God can bring about the destruction of almost all of life on earth, and then establish a new creation.

However, even this last example of contingency and becoming does not go as far as we know we must go today. For even in the flood of Noah, God preserves the *kinds* of organisms then understood to exist; it is not the extinction of species. This is quite different from the common estimate one hears from biologists, that 98 or 99 percent of all the species that have existed are now extinct. Since it is now estimated that there are some 30 million species of organisms existing today, the fact that this represents only 1 or 2 percent of all that have

existed on earth is testimony both to the prodigious creativity at work on our planet, and also to the tremendous destruction not just of individuals but of types of organisms. And eventually, just as they were “born,” even our sun (like all stars) and our planet will die. What does this mean for our consideration of the work of God as the ultimate creator of all existence? And what does it mean for humans when we consider our niche, our place, in the overall scheme of things?

Let me highlight these issues by quickly reviewing some basic concepts of God’s work put forward by three contemporary theologians: Gordon Kaufman, Sallie McFague, and Arthur Peacocke. Of course I will be oversimplifying their rich mental constructions of divine activity and its apparent purpose. However, taken together they present interesting alternatives for considering the work of God in relation to long-term viability of humans and other forms of life on earth.

Kaufman’s understanding of the work of God is related to the creation of humanity and the furthering of humanity toward greater humaneness—even as he also stresses that the concept of God relativizes and calls into question all human life and history. Although Kaufman recognizes that God creates other trajectories of life, his religious focus is consistently on humanity, on human viability, on human fulfillment: “God should today be conceived in terms of the complex of physical, biological and historico-cultural conditions which have made *human* existence possible, which continue to sustain it, and which may draw it out to a fuller *humanity* and *humaneness*” (Kaufman 1985, 42, emphasis mine).

Sallie McFague seems to conceive the work of God in relation, not just to humanity, but to all of life. Her metaphoric theology, with its developed relational models of God as mother, lover, and friend, applies not just to human beings but to all life forms. She writes: “If the heart of Christian faith for an ecological, nuclear-threatened, age must be a profound awareness of the preciousness and vulnerability of life as a gift we receive and pass on, with appreciation for its value and desire for its fulfillment, it is difficult to think of any metaphor more apt than the parental one. There are three features basic to the parental model which will give flesh to this statement: it brings us closest to the beginnings of life, to the nurture of life, and to the impartial fulfillment of life” (McFague 1988, 256).

While Kaufman sees the work of God in relation to continuing human viability and greater fulfillment, and McFague sees God as the creator, nurturer, and fulfiller of all life, biochemist and theologian Arthur Peacocke, in response to Jacques Monod’s *Chance and Necessity*, proposes that the work of God is much broader. God’s

work may be the fulfillment of God—of the possibilities for existence envisioned by God that are actualized sequentially in space-time, much like the notes and themes of a symphony come to life and then fade away so that other notes and themes may fulfill other possibilities conceived by the composer. Peacocke suggests that in this way “might the creator be imagined to unfold the potentialities of the universe which [God] himself has given it” (Peacocke 1979, 316).

How are we theologically to understand contingency—not only in our own lives, not only in life on earth, but in the universe? How are we to understand the extinction of species, including five mass extinctions (Raup 1991, 64–87), the last being the extinction of the dinosaurs some 66 million years ago that created the possibilities for the rise of the chain of life that led to humanity? If the Alvarez (1980) hypothesis is correct, how are we to understand the work of God in relation to the extinction of the dinosaurs and millions of other species as a result of an asteroid colliding with the earth, unleashing the hellish conditions of global fire storms, of deep freezes, and their resulting catastrophes for hundreds of thousands of years?

It seems to me that, in considering such possibilities, one must set on the agenda the notion that the awesome creative-destructive-recreative processes of nature and history are a part of the ongoing work of creative divinity, which, in carrying out its own “will,” may at times favor human viability and at other times may not. For the human species—even life on this planet—may not be the ultimate goal of creation in our universe. The ultimate goal may simply be, as Peacocke suggests, the fulfillment of God.

What, then, is our niche? How are we to conceive our own viability? If we can recognize the intrinsic value of all forms of life; if we can recognize that we ourselves are not limited to our individualized bodies, brains, and subjective states and processes but are webs of culture, life, and cosmos that can help give rise to quite different, even nonhuman, new possibilities for existence, then we might say that part of our viability, of the meaning of our existence (along with that of all creation) is to be worked over by God for the fulfillment of divine ends. It may be that we are in the position poetically portrayed by Nikos Kazantzakis in his *Report to Greco*:

Blowing through heaven and earth, and in our hearts and the heart of every living thing, is a gigantic breath—a great Cry—which we call God. Plant life wished to continue its motionless sleep next to stagnant waters, but the Cry leaped up within it and violently shook its roots: “Away, let go of the earth, walk!” Had the tree been able to think and judge, it would have cried, “I don’t want to. What are you urging me to do! You are demanding the impossible!”

But the Cry, without pity, kept shaking its roots and shouting, "Away, let go of the earth, walk!"

It shouted in this way for thousands of eons; and lo! as a result of desire and struggle, life escaped the motionless tree and was liberated.

Animals appeared—worms—making themselves at home in water and mud. "We're just fine here," they said. "We have peace and security; we're not budging!"

But the terrible Cry hammered itself pitilessly into their loins. "Leave the mud, stand up, give birth to your betters!"

"We don't want to! We can't!"

"You can't, but I can. Stand up!"

And lo! after thousands of eons, humans emerged, trembling on their still unsolid legs.

The human being is a centaur; our equine hoofs are planted in the ground, but our bodies from breast to head are worked on and tormented by the merciless Cry. Humans have been fighting, again for thousands of eons, to draw themselves, like a sword, out of their animalistic scabbards. We are also fighting—and this is the new struggle—to draw ourselves out of our human scabbard. Humans cry in despair. "Where can we go? We have reached the pinnacle, beyond is the abyss." And the Cry answers, "I am beyond." (Kazantzakis, quoted in Cobb 1969, 53)

When I think of my own viability, I know I want to exist as long as I can in a healthy way in my present state, fulfilling the possibilities of my own existence and contributing positively to my culture, species, and environment. Recognizing Gilkey's point that justice is an essential ingredient for political viability (Gilkey 1991, 13), I also hope others can fulfill their possibilities, and that my culture can fulfill its possibilities as a just and caring democratic society. I hope for the fulfillment of latent possibilities for other species and even for the planet, because I see that part of the human place in the scheme of things is to allow for human fulfillment in a way that also supports the enhancement of life for other species. However, I also think that part of our place in the scheme of things is to celebrate the ongoing work of a creating-destroying-recreating God fulfilling potentialities for existence throughout the universe. And as humans with brains and the cultural information for constructing stories, we can, for the time being, draw on the best knowledge from the sciences and human scholarship today, as well as from cultural traditions, to tell ourselves as best we can a story about the mighty work of God. Such a story will probably make us humble—but perhaps also grateful—for the contingent existence we have been given.

NOTES

1. A report of this symposium is in Busse (1992).
2. In a similar vein, Langdon Gilkey stresses the dependence of human history on nature: "However much history may be more than nature, its dependence on nature

remains inviolate. Hence it is that the issue of survival appears in this ultimate form in history. A threat to nature's viability becomes a threat to history" (Gilkey 1991, 11-12).

3. In light of Langdon Gilkey's discussion of justice as a necessary ingredient for the viability of a social system, we might also suggest that viability means justice (Gilkey 1991, 13). However, I shall not pursue this idea in this paper.

4. Here I am following Holmes Rolston, III (1988, 45-232). I also am reflecting the thinking of Charles Birch and John Cobb, Jr. (1981, esp. 176-202) and Henry Nelson Weiman (1964, 54-83).

5. My discussion complements that of Ralph Burhoe concerning the primary value of life. See Burhoe (1981b, 50-53).

6. I wish to thank Karl Schmitz-Moormann for the suggestion that the laws of nature, as well as the DNA code and cultural information, are a third kind of information system underlying the evolution of the universe, including human evolution.

7. For further elaboration of humans as social-ecological selves and the implications for morality and religion, see Peters (1992).

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