

THE IMAGE OF GOD AS A MODEL FOR
HUMANIZATION

by *Karl E. Peters*

I shall try to answer the question, What is it to be a human being? I hope to do this by bringing together in a new way four well-known areas of thought—process philosophy, evolutionary theory, relationships between the sexes, and ancient religious traditions. My thesis is that, if one assumes the framework of process philosophy, then ancient religious traditions, modern evolutionary theory, and relationships between the sexes all point to the same reality—a reality that is nothing less than the image of God in man and that provides a model in terms of which we can become more aware of both dehumanizing and humanizing trends in our contemporary situation.

INTERPRETATIONS OF THE “IMAGE OF GOD”

Judeo-Christian thought has sometimes found the model of humanity in the concept of man being made in the image of God, based on three passages in the priestly strand of the Pentateuch, Genesis 1:26–27, 5:1–3, and 9:1–7. The one most commonly discussed,

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Genesis 1:26–27, reads:

Then God said, “Let us make man in our own image, after our likeness; and let them have dominion over the fish of the sea, and over the birds of the air, and over the cattle, and over all the earth, and over every thing that creeps upon the earth.” So God created man in his own image, in the image of God he created him; male and female he created them.

The most important point made by this passage is the connection between man and God: to be a human being is to live in the image and likeness of God. This implies that, if one is to understand the nature of man, one must at the same time seek to understand the nature of God. According to the priestly strand of the biblical tradition, it is not appropriate to follow Alexander Pope’s dictum, “Know thyself, presume not God to scan; the proper study of mankind is man.”¹ Instead, if one is truly to know him- or herself, the proper study is the presumptuous inquiry concerning the nature of God.

However, once the point is made that man is created in the image of God, the difficult problem arises as to what exactly the image of God is. Here there is no unanimous agreement among religious thinkers, although there do seem to be a limited number of interpretations. Perhaps the most common kind of interpretation is simply to assume that the image of God in man is what distinguishes him from other creatures, such as man’s rationality—his ability to think and to plan; or man’s freedom—his apparent ability to make choices. These might then be connected with ideas of God as the ultimate rationality, or the ultimate free agent, not bound by any necessity. The major difficulty with these understandings is that they are really based on an Aristotelian manner of defining words in terms of the class of things to which something belongs (in this case the class called animals) and its differentiating characteristics (in this case rationality or freedom), but they are not relatable, at least in any very direct manner, to the biblical text. Even though rationality and freedom may express something important about human beings, as interpretations of the image of God they are not immediately helpful.

Biblical scholars, who attempt to understand what the priestly editors themselves understood to be the image of God, usually examine the meaning of two Hebrew words, *selem* or “image” and *demut* or “likeness.” Here at least three alternatives are open. James Barr contends that the image-of-God passages may be purposefully ambiguous about the exact nature of the image; they may intend to call attention to the similarity between God and man without specifying the exact nature of that similarity.² Such a view is worthwhile as a constant reminder of the limits of our ability as human beings to gain

knowledge, and it coincides nicely with the scientific spirit that regards all theories as tentative and subject to revision. Yet, in spite of this disclaimer, it seems that one must attempt to understand more fully the nature of the image of God if the concept is to be useful.

A second interpretation held by many biblical scholars is that the word "image," *selem*, probably indicates the corporeal appearance of God—a view that seems to have been common in the ancient Near East. In the biblical tradition, although descriptions are closely guarded so that God is never fully described as a man, still it is clear "that God's bodily form was understood to be essentially that of a man."³ This ancient ability to think of the divine in corporeal terms is an indication of predualistic thinking, which avoids the separation of matter and spirit. For us today it embodies the important insight that the divine is not separated from the physical world but may be intimately wrapped up with it. Yet, to say that God is corporeal and that man, as the image of the creator, has a body similar to God's really adds little to our understanding of what it is to be human.

A third interpretation of Genesis 1:26–27, probably the most common today, relates verses 26 and 27 to verse 28, to the blessing of God which confers on man dominion over all the other creatures. Gerhard von Rad, the highly respected German Old Testament scholar, says that the term *selem* refers to the kind of image that rulers in the Middle East erected to indicate their dominion: "Just as powerful earthly kings, to indicate their claim to dominion, erect an image of themselves in provinces of their empire where they do not personally appear, so man is placed on earth in God's image as God's sovereign emblem. He is really only God's representative, summoned to maintain and enforce God's claim to dominion over the earth."⁴ In spite of the seemingly biblical focus of this interpretation, there are two difficulties with it. The first is that, as J. Maxwell Miller points out, the inscriptions on the statues erected by the kings of the ancient Near East "seem to indicate that they were intended less as representatives of royal authority than as memorials to the kings and their mighty deeds."⁵ Hence, an important parallel between the Genesis account and Middle Eastern practices breaks down. The second difficulty is indicated by von Rad himself when he says that, while the commission to rule the world is a part of God's blessing on man, in the Genesis account "it is not considered as belonging to the definition of God's image." Rather, the blessing of dominion is a consequence of the image, that for which man is capable because he is created in the image of God.⁶ Thus, although there is a close relationship between man's rule of the world and his being made in the image of God, we are still left in the dark as to what the "image and likeness" of God in man really is.

To me there are two reasons why these interpretations by biblical scholars fail to illuminate what is meant by "God created man in his own image." The first is that they do not go into any prior discussion about the nature of God; it makes no sense to speak of man being in the image of God unless you first have at least a partial understanding as to what the nature of God is. Second, most interpretations fail to see two obvious aspects of the narrative that have a direct bearing on the problem. They fail to take sufficiently into account the significance of the entire Genesis 1 narrative being about God's creation of the world; if one is to make any statement about God, it must begin with the notion that God is creator, and it would follow that the image of God in man must somehow be the image of the creator. They also ignore the clause in verse 27 that seems to be parallel to "in the image of God he created him," namely, "male and female he created them." Perhaps because of a hidden bias against any discussion of sexuality in relation to the central points of the Judeo-Christian tradition, most scholars find it rather easy to connect the image-of-God phrase with the following verse, where God gives man dominion over the creatures, while at the same time they say nothing about the immediate parallel in verse 27. The one surprising exception is the neoorthodox theologian Karl Barth, who explicitly points out that, according to this verse, being made in the image of God involves being made in the relationship between man and woman.⁷ But, if this is the explication of the image of God, then it follows that the God who creates the world must have a nature that is expressible in terms of male-female relationships. These two points are what I will further elaborate in this essay in such a way that the image of God as a model for humanization involves both the notion of creation and the notion of masculine-feminine relationships.

EXPLORING THE NATURE OF GOD

This elaboration can be accomplished as a twofold theological task, one part being descriptive and the other part mythical-symbolic. Descriptively, our task is to gain an understanding of God as creator and of the consequent image of God in man that is consistent with current scientific understandings of how creation takes place in the world. One way to fulfill this task is to turn to modern evolutionary theory as offering the best understanding to date of the nature of creation. However, it is not only important to understand what it is to be human in terms of the model supplied by a theory of creation; it is also important to elicit a response to that understanding so that humans will act according to the cognitive model. The problem is the age-old one of the relation of understanding and will; we may understand what we have to do to be human and live the good life and still

not do it. This leads us to the mythical-symbolic task, the purpose of which is to represent the nature of God, and of man as made in the image of God, in such a way as to get people to live according to the understanding provided by the descriptive phase of our inquiry. In hopes of fulfilling this part of our task, I shall develop the notion of the image of God as involving the relationship between masculine and feminine.

To facilitate both aspects of this twofold task, it will be helpful to shift our most fundamental ways of thinking from substantive to process thinking: from thinking about everything as objects with certain attributes to thinking about everything as events. Many of us have been culturally conditioned to think about the world, ourselves, and even about God in substantive terms. With regard to physical phenomena, substantive thinking employs the categories of Newtonian science, in which atoms were regarded as indivisible entities that could be definitely located in space and time and were completely whole in themselves but externally related to other such entities. The Newtonian view of reality is the commonsense understanding of many in our world today. We conceive of individual human beings as discrete substances with attributes such as skin color, eye color, blood type, intelligence, and other personality traits. Religiously, in the Western world, we have also regarded God in terms of substantial thinking; God is some kind of personal being who is characterized as wise, loving, all-powerful and ever present, and who is ultimately the creator of all things, including man.

At first glance, thinking about God in substantive terms seems quite natural. It is a part of our commonsense way of thinking about everything else. To speak of God as if God were a personal being with various attributes seems to make him quite familiar to us. He is like us, or we are like him. However, speaking of God in substantive terms has two major difficulties. In terms of our descriptive task, which we wish to do in a manner consistent with modern science, we can ask, How are we to observe God when God is conceived of as a personal being? We may observe some of the so-called attributes of God in instances of his love, wisdom, and power, or in cases of creation. But all we observe are the effects attributed to God; at no time do we observe the being or entity to which we ascribe these attributes. Theologians generally claim that God is present but hidden and that he can indeed be observed only in his works or effects. However, the alternative can also be convincingly argued, namely, that there is no God at all, that is, no being or entity to which the so-called attributes may be predicated.

A second difficulty with the substantive thinking in theology appears in relation to our mythical-symbolic task. If we take seriously

the parallelism in Genesis 1:27 of "in the image of God he created him; male and female he created them," and if we try to speak of God in substantive terms, then what appears in our mind's eye is a picture of God as both a man and a woman. Of course, when we think mythically, the idea of the image of God being male and female is not to be taken literally, but instead only as pointing toward something in the nature of God. However, by thinking about God in substantive terms as some kind of being, it is extremely difficult to avoid overanthropomorphizing, even as the ancients did when they thought of the gods as similar to man in bodily form. The thought of God as both male and female in form appears visually ridiculous and is rightly rejected by most Western theologians. Yet, what most theologians substitute is equally unacceptable; most conceptualize God as a man, thus ignoring the parallelism of Genesis 1:27, as well as offending the current women's liberation movement in theology. The real problem here is not with the maleness or femaleness of God, but with the substantive way of thinking about everything, including God. This is what gives rise to the strange picture of a male-female being. If, however, we employ another manner of thinking, namely, process thought, both this problem of symbolizing God and the first problem of describing God can be resolved.

Process thinking, as Charles Hartshorne points out, is as old as any major religious tradition and as recent as twentieth-century science.⁸ It is found in classical Buddhism, which repudiated the Hindu idea of a substantial self or essence in man, because such a self could not be observed. It is also the thinking of the twentieth-century mathematician-philosopher, Alfred North Whitehead, and, in another form, of the recent Catholic paleontologist and religious thinker, Pierre Teilhard de Chardin. In what follows I will not elaborate the different forms of process thinking exemplified by these men but will present my own understanding.

Simply stated, process thinking involves three basic points. First, when one thinks in this manner, one views the world not in terms of objects but in terms of events. Second, one does not regard things as static entities but as events or systems that have a temporal dimension and are dynamic; as process thinkers put it, becoming is a more fundamental characteristic of reality than being. Third, when one investigates the nature of events in the process of becoming, one looks for repeating patterns or structures, and these are specified in terms of scientific laws. The laws in process thought do not specify the external relation of one object to another object, but rather they represent the structure of a set of relationships within a dynamic, interacting system.

Process thinking views the entire world in this manner. When it

considers the most basic forms of matter, for example, it does not view the hydrogen atom as some small object but, rather, as a type of event, a particular pattern of positive and negative forms of energy. Other types of atoms are not, in terms of the most fundamental analysis, other substances but are, rather, other patterns of the same energy forms. Molecules are more complex systems of these basic energy patterns called atoms, and a chemical formula, such as H₂O, does not indicate the nature of a substance as much as it indicates the relationship of two types of energy configurations in a system which we commonly call water. A human being, in process thinking, is regarded not as a static substance with various attributes but as a very sophisticated event or system of energy in a constant state of flux. If one is to look for the essence of a human being, one does not look for some underlying substance but, rather, for the fundamental patterns that are the recipes for biological and behavioral growth, namely, the genetic code and the patterns of societal values that are enculturated into a growing human being. A particular genotype and culturetype constitute the basic essence of each human event. In this sense, modern science is quite in line with process thinking. In theology, in contrast to substantive thinking which says, "God creates the world," process thinking asserts that "God is creation." The process of creation itself is God. It is a particular type of event that may be found in the physical, biological, and cultural realms of existence.

Such a way of thinking about God resolves the problems we encountered earlier with substantive thinking. First, the process of creation itself can be observed. One does not look for the unobservable being who creates but simply for a common structure in various instances of creation. Such an observable structure has been expressed by evolutionary theory, and further on I shall argue that, when God is conceptualized as the creative process, the nature of God is the pattern of random variation and natural selection. I shall also indicate how the second problem we had with substantive thinking can be resolved: when one speaks symbolically of God in process terms, it no longer is problematic to symbolize God as the interrelationship between feminine and masculine, which is actually the mythical counterpart to the descriptive understanding of creation as random variation and natural selection.

DESCRIBING GOD AS THE PROCESS OF CREATION—
EVOLUTIONARY THEORY

To describe the nature of God in terms of process thought, one might simply ask, How is the world, including man and society, created? Currently the most complete answer to this question can be given in

terms of a general theory of evolution, and some members of the Institute on Religion in an Age of Science, such as Harlow Shapley and Ralph Wendell Burhoe, have used evolutionary theory to develop a modern understanding of God.⁹ To this enterprise I would like to add a few reflections.

First, the process of creation described by evolutionary theory is essentially an interaction process composed of two aspects, the random emerging of the new and the rejecting and selecting of certain new emergences in the maintenance or reconstitution of the system in which the emergences occur. Both of these, however, take place as a particular organism or cultural pattern interacts with its environment. Hence, both are a part of a single, unified process.

This idea can be made clearer if we take a closer look at what is meant by "random variation" and by the "environment that selects." Randomness or chance in evolutionary theory does not mean without cause in space-time existence; thus, it is impossible to argue, as some nineteenth-century theologians did, that it is a supernatural, personal being who causes the variations which science attributes to chance.¹⁰ Any variation in the physical, biological, and cultural realms is due to some natural cause, whether it be a beam of high-energy radiation that displaces a nucleotide in the chain of DNA and thus causes a genetic change or a new idea from a foreign culture that upsets an individual's value system. What the term "random" means in this context is that it is impossible to predict what variations are going to occur when, but whatever new variation does occur is the result of the interaction between an organism and its environment.

What is an environment? It seems to me that many evolutionists talk about the environment as if it were some kind of monolithic unit which stands over against a particular organism; it is the rest of the universe apart from the individual in question. Although it may be necessary to talk this way in order to make conceptualization easier, it grossly oversimplifies the picture of the process of creation in its selective phase, because the particular environment that passes selective judgment on a new variation in an individual consists of a multitude of other individuals also involved in the same process. As Burhoe says, natural selection is "selection by the natural consequences of interacting systems."¹¹ Let us form a concrete picture of this at the cultural level. As a reader of this essay, you, along with other readers, are my environment, engaged in a selective process, passing judgment on my ideas, and this judgment will be what determines whether or not these ideas survive. However, at the same time you are an individual with his or her own environment. And a very important feature of your environment right now is what I am saying.

ZYGON

In the very same interaction process in which some of my ideas are being selected out by you, those same ideas may be emerging in your own minds as new variations in your thinking. Together we are parts of an interacting system, and in this system random variation and the selection of variations are simply two aspects of a unified interaction process.

When looked at from the point of view of an interacting system, the natural consequences of variations (random or intended) and natural selection may be simply different ways of viewing the same process. However, when looked at from the point of view of a part of the system over against all other parts, or its total environment, they appear to be somewhat distinct, one following the other. We can get at their distinctness if we ask, How does one recognize when random variation and natural selection have occurred?

Variation can be recognized as the disruption of a state within an individual organism or between the individual and other organisms that make up its environment.

There seem to be two kinds of disorder in evolutionary thinking. One kind is actually a part of a normal homeostatic state and has been selected out as having survival value. Alfred Emerson points out that "homeostasis is not static but dynamic. Functional differentials and unbalance may be homeostatic."¹² This kind of disorder is also described by Van Rensselaer Potter as "ordered disorder," something which species often exhibit and which has survival value. As an example, Potter cites the work of J. L. Kavanau with white-footed mice, which would not always press a lever that would reward them with food pellets, even though they were conditioned to do so. Kavanau saw this as evidence of "a certain degree of variability built into many of [the mice's] behavior patterns" which "is adaptive to conditions in the world, where there are many relationships that are not rigidly prescribed."¹³

The second kind of disorder is not a part of this homeostatic state but, rather, upsets it. It is more properly what biologists seem to mean by random variation—a new, unpredicted alteration within an individual system or between systems. Such disorder is not itself homeostatic but, rather, offers the possibility of a system reaching a new homeostatic state. J. Bronowski speaks of this kind of disorder when he discusses the role of errors in genetic copying, which may cause the death of the organism in which the error occurs but which on rare occasions may be a part of a new evolutionary development. He writes that life is "essentially an evolutionary process, which moves forward only because there are errors in the copy, and every so often one of these errors is successful enough to be incorporated as another step or threshold in its progression."¹⁴

The second aspect of the creative process, natural selection, is the emergence of a new order or homeostatic state following a random variation. According to Burhoe, " 'Natural selection' is another way of saying 'the naturally stable configurations reached by open systems of the matter of the universe through random trial-and-error motions.' This is equivalent to 'survival of the fittest'. . . ."¹⁵ A stable system is one that is not easily broken up or altered in the interaction with its environment, that is, it *fits* within a larger system.

At the biological level of existence, to fit in this manner requires, as Emerson points out, a combination of competition and cooperation.¹⁶ A new organic system resulting from a random variation must be able to compete, to use its environment to sustain itself long enough to be able to reproduce itself. Those types of new systems that cannot do this are selected out. On the other hand, the same organism must cooperate with other systems; it must not use its environment and reproduce itself at such a great rate that it destroys other organic systems upon which it depends. If it destroys other systems, it will in the end destroy itself. This is what happens, for example, with cancer cells in a particular human being; they are so successful in reproducing themselves that they destroy their sustaining human environment and themselves. When one considers the population explosion, one cannot help but think that the success of man in populating the world and subduing it may simply be the success of cancer-like growth on our earth; unless humans learn better to cooperate with other organic and inorganic systems that compose their total environment, we too may be selected out. For in order to survive, any organic event produced randomly in the interaction with its environment must enter into a larger competitive yet cooperating system of organisms. Whether or not a particular event accomplishes this integration, the general dynamics of the overall system exerts a "selection pressure" to that end. If a new cooperative order or stable state in which the new variation is included does not emerge, then the new variant pattern tends to be eliminated. In this way, the continual interaction between events judges or selects new variant events as to whether or not they will survive.

The second basic point I wish to make in describing the process of creation in evolutionary terms is that the basic functional pattern of random variation and natural selection may be found at three levels of existence, the physical-chemical, the biological, and the cultural levels; however; the mechanisms of variation and selection seem to develop from one level to the next.¹⁷

At the physical-chemical level, random variation, or the emergence of the new through disorder, can be seen in the death of a star. After the fusion of most of its hydrogen into helium during its main se-

quence, a star enters a state of relative disequilibrium, expanding into a red giant, then collapsing into a white dwarf, and finally exploding as a nova or supernova. Through the rapid release of energy (indicated by increasingly higher temperatures) generated by this expansion and contraction, the basic chemical elements more complex than helium are formed and often spewn out of the final explosion only to coalesce as a second-generation star with an accompanying planetary system. Our own solar system was probably created in this way.¹⁸ At the biological level, disorder is found in genetic variations, in the copying errors which usually lessen the effectiveness of the individual and may even lead to death but which, if passed on and retained by its offspring, may be precisely what allows the species to survive in a new environment. At the social level, the disorder or emerging new variations can be found in the new ideas and behavioral patterns of an individual or society. Such variations may indeed be disruptive, entering into a competitive struggle with other ideas and forms of behavior. However, this disruptiveness can also lead to more comprehensive and accurate systems of thought and to more adequate patterns of action. At these various levels of existence, random variation or the disruption of a homeostatic condition may be seen as a part of the creative process.

It may be objected that there appears to be a significant difference between the disorder at the physical-chemical level and at the biological and cultural levels. The breakdown in the death of a star out of which new cosmic bodies containing new basic elements are generated does not seem to be a random process but, according to astronomical theory, is lawlike and hence predictable. In contrast, at the biological and cultural levels it seems appropriate to consider the disorder as unpredictable and therefore appropriately called random variation. However, while at the cosmic level the dissolution of a star may follow a predictable pattern, at the atomic level in which particular helium atoms combine to form other elements we may not be able to predict. One can perhaps predict that at certain temperatures a certain amount of carbon or iron might be formed, but this is a statistical law; from the point of view of individual atoms, which atoms combine would still be unpredictable. At the biological and cultural levels the same situation holds. While individual genetic variation is unpredictable, still it may be quite possible to establish statistical laws that under certain conditions, such as exposure to atomic fallout of a certain intensity (which is analogous to the rise in energy level of a star), the rate of mutation will increase a certain amount over its normal level. At the cultural level, when one is speaking about the variation in ideas, one can also discover certain lawlike patterns, such as the one

discovered by Donald Taylor and his associates that brainstorming in groups produces fewer new ideas than when the same number of individuals brainstorm alone.¹⁹ Yet, while one can perhaps develop certain laws involving the conditions under which new ideas and behavioral patterns are generated, still the nature of the new ideas cannot be predicted. Hence the process is appropriately called random. In the final analysis it seems that when one considers the nature of disorder in the creative process, depending on the level of analysis, it can be regarded either as lawlike or random; nevertheless, the disruption of the existing homeostatic state and the emergence of the new occur at all levels of existence.

At all levels of existence one can also find the selective aspect of the creative process or the establishment of a new homeostatic state. A star after a long life on the main sequence dies; it expands, contracts, and explodes. But out of this state of disequilibrium a new order emerges, perhaps even a new solar system with possibilities for the development of further systems that were not present in the original star. At the biological level, a small number of the random variations or disturbances in the homeostasis of a living organism are selected and a new species of life is created. Likewise, at the social level a few of the new ideas or behavior patterns that are disruptive of current ways of thinking or acting may lead to a new synthesis of thought or action. Einstein's theories of relativity are one example of this; the American Revolution and the rise of Western democracy, another. Thus, at various levels of existence one can observe the same general pattern of creation; one way of characterizing the creative process is in terms of a general theory of evolution involving the emergence of unpredictable disorder or random variation followed by the emergence of a new order or homeostatic state.

However, it is also important to note that the pattern we are discussing is a pattern of functional resemblances between various levels of existence. As Emerson and Burhoe point out, the similarities between the evolutionary process at the cultural, biological, and physical levels are analogues.²⁰ Another way of stating this is that the similarities of order and disorder we have been discussing are similarities of results but not similarities in the mechanisms or causes of either the unpredictable variations or the new states of equilibrium. When one looks for selective mechanisms of evolution at the physical-chemical, biological, and cultural levels, one finds some dissimilarity. This, too, has important consequences for our understanding of the creative process or the nature of God as the basis of a model for humanization.

If one takes a close look at the occurrence of disorder at the physical, biological, and cultural levels of life, one can see a kind of de-

velopment in the way in which variations occur at different levels. At the physical level, fed by energy from stars and exploding stars, the variations that result in new stable events or atoms seem to be caused by the interaction between simpler events; the collision between any four hydrogen nuclei to form a helium nucleus, or between any three helium nuclei to produce a carbon nucleus, is a matter of accidental encounter. At the biological level, an analogous chance encounter occurs when a particular quantum of energy hits a particular nucleotide in a strand of DNA, thus producing a small genetic mutation; however, the result is not simply a combination of interactive events but, rather, the alteration of one by the other. Furthermore, variation at the biological level occurs much more effectively in many cases in another way, through sexual recombination, and this may be regarded as a development in the process of creation itself. At the cultural level, still more mechanisms develop to facilitate the process of variation. Much of our creative thinking involves simply the chance encounter with other ideas, analogous to the process at the physical level. It also involves unintentional or intentional recombinations of ideas or behavioral patterns, analogous to sexual recombination. But there are still more specific and perhaps more facilitative mechanisms. One such mechanism is a dialectical heuristic of affirming the opposite: one simply says no to a present idea, affirms its opposite, and works out the logical consequences, as Einstein did when he denied the theorem of the addition of velocities, assumed the constant velocity of light in a vacuum, and worked out his theories of relativity.²¹ Another mechanism that facilitates variations in ideas is one which we all use, the making of suggestive analogies, or transferring an idea from one area of life to another. (This particular mechanism is generative of much of the thought of this essay.) William J. J. Gordon and his associates in the synectics group at Cambridge, Massachusetts, have empirically demonstrated that there are four types of analogy which may be used to facilitate the production of random variations in thought. Gordon calls these mechanisms "personal analogy," in which the thinker assumes he is that which he is thinking about, even if it is a physical phenomenon; "direct analogy," or the simple transference of a concept from one area of thought to another, for example, the elastic billiard ball model employed in the kinetic theory of gases; "symbolic analogy," in which a metaphor is employed, for example, the group of men who used the Indian rope trick as the basis for designing a jacking mechanism that fit into a box not bigger than four by four inches, rose to a height of three feet, and supported four tons; and "fantasy analogy," based on Freud's theory of wish fulfillment in which the best of all possible

worlds is imagined, from which one moves toward the generation of ideas that fit with what is possible in the real world.²² All this suggests that as one moves from the physical, through the biological, into the cultural sphere of existence, the mechanisms that produce new variations become further elaborated, and this elaboration of new mechanisms seems to increase the effectiveness of the disordering aspect of the creative process.

The same elaboration of mechanisms seems to take place in the ordering aspect of the process if one considers the nature of the criteria for selection at the various levels of life. At all levels of existence the basic criterion is survival, but as we move up through the various levels of existence created by the evolutionary process, we see the development of further secondary requirements. At the physical level of atoms and molecules, the basic requirement is that of being a stable system held together by nuclear and molecular bonds.²³ At the biological level, a new requirement for survival emerges. It depends on the organisms of a particular species being able to use their environment (feed themselves) long enough to be able to reproduce their kind. However, a species must not use its environment too effectively or reproduce itself so rapidly that it outdistances its environment. At the cultural level, one finds still more criteria related to survival. With the advent of the human brain a species emerges that, as B. F. Skinner says, becomes "more sensitive to the consequences of [its] action."²⁴ This involves the foreseeing of consequences, which in turn is based on the development of a brain that can generate a large number of different types of symbols for its experiences, that can elaborate the logical connections among symbols, and, hence, can reason from one idea to another idea or from one set of experiences via ideas to another set of experiences. This ability is often expressed in terms of two basic criteria according to which new ideas are selected as fit in science: coherence with other ideas and the ability to predict accurately future experiences. If an idea conforms to these two criteria, it becomes at least tentatively true; it acquires the status of being a part of a system of thought called knowledge. And knowledge based on observation, reasoning, and the prediction of the future is a basic mechanism that enhances the possibility for survival of the human species.²⁵

Thus, as we move from the physical, to the biological, to the cultural level of existence and consider both the mechanisms of variation and the criteria associated with selection, new mechanisms and criteria emerge. Most thinkers simply present this as a development in the world that is created. But if one assumes the framework of process thought and considers evolutionary theory as an intellectual descrip-

ZYGON

tion of the creative process, then, it seems to me, one must conclude that these new mechanisms and criteria are evidence of a development not just in the world but of the creative process itself. The creative process does not just create the world, but in the creating of the world it also creates itself. And if we speak of God as the process of creation, then God, at least in part, is a process that is becoming. Although one can see a functional pattern of random variation and natural selection at various levels of creation and hence a certain stability in God, in terms of the mechanisms of variation and selection one must, it seems to me, conclude that God "grows," that God is not static but dynamic.

WHY CALL EVOLUTION "GOD"?

Perhaps some readers are beginning to wonder why I am using the term "God" in reference to the creative, evolutionary process. And you would not be alone, for there are many who are content simply to speak of evolution and its implications for human living without raising the question of the existence or nature of God. There are others who believe that the term "God" is so strongly tied up with the notion of a supreme supernatural being that, whether or not they believe in such a being, they find it difficult to use the word "God" for anything else.

I would like to respond to this questioning and argue for the appropriateness of calling the creative process of random variation and natural selection "God" by making two points. First, it seems to be perfectly legitimate in the development of thinking in any discipline, whether the discipline be one of the sciences or that of theology, for key terms to specify new content without changing their fundamental meaning. For example, if one reads Isaac Asimov's book on the history of astronomy, *The Universe: From Flat Earth to Quasar*, one becomes aware that the content signified by the word "universe" changes considerably from the very limited notion of a flat patch of earth lying beneath a heavenly dome, to a vast system of galaxies "26 billion light-years in diameter and pulsating in a vast period of 82 billion years."²⁶ Yet the word "universe" still retains its basic meaning as the "totality of things." Likewise, the word "God" may change in the content it specifies from the primitive concept of *mana*, to that of a personal supreme being, to that of an evolutionary process, but the basic meaning of the word "God" remains the same. If we understand this basic meaning, we can see why it is appropriate to call the evolutionary process "God."

Formally speaking, the word "God" signifies that which is comprehensive, related in some way to everything else in the universe,

and that which is also most important or of highest value for man.²⁷ Whatever the specific content of any developed notion of God might be, it must meet the criteria implied in the fundamental meaning of the word. First, that which is designated as God must be related to everything else in the universe. In what I have just been saying about the process of random variation and natural selection, I have tried to show how the creative-evolutionary process is related to all existence—existence at the physical-chemical level, at the biological level, and at the cultural level. It is to substantiate the comprehensiveness of the process that one must show that creativity has a basic pattern present in all realms of existence. If one can do this, as I have tried to do, at least partially, then one of the criteria for calling the evolutionary process God is satisfied. Second, that which is called God must be valued as the most important thing in the universe. It seems to me that one can argue that the creative process, as I have partly described it, is indeed the most important thing in the universe because without it nothing else would exist. Hence such a process is worthy of our utmost commitment, both in terms of seeking to understand and in terms of acting in accord with it. In short, as related to all existence and as that upon which all else depends, the evolutionary process is worthy of religious devotion and appropriately called God.

The second point in responding to the question of why call evolution God is that many religious traditions have indeed referred to ultimate reality in terms compatible with our evolutionary description. Of course, they have not used evolutionary concepts explicitly; they have not even described in a scientific sense that which creates and continues to create the world. But sometimes they have symbolized this process in mythical terms of what I like to call divine sexual dynamics—the creative relationship between the feminine and the masculine.

SYMBOLIZING THE PROCESS OF CREATION—DIVINE SEXUAL DYNAMICS

It is important to recognize that in what follows I will be speaking mythically. Although, in the biological realm, it is possible to describe a part of the creative process in terms of sexual recombination of genetic characteristics, which perhaps gives some natural base for understanding divine creation in terms of sexual images, what I wish to focus on is the mythical and connotative aspects of the feminine-masculine relationship. If we do this, we can arrive at a cogent, contemporary interpretation of what it means to say, "God created man in his own image, in the image of God he created him; male and female he created them."

Getting at the mythical meaning of God as the creative process can be initiated by anyone with a simple game in a small group. Simply write the words "feminine" and "masculine" on a blackboard or large sheet of paper and, as a group, brainstorm all the ideas you associate with each of these words. I have done this on different occasions with different groups and find very similar lists of words. Associated with the word "feminine" are such words as soft, round, space, openness, fluid, intuitive, irrational, passive, warm, moist, affectionate, loving, receptive, supple, willow tree, dark, and earth. Associated with the word "masculine" are such words as hard, angular, linear, orderly, rational, critical, objective, active, thrusting, forceful, arrow, driving, sturdy, oak tree, athletic, light, and sun. Now what we actually have here are the common stereotypes of what is implied in being a man or a woman. While we often regard the stereotyping of people as bad, perhaps even dehumanizing, it just might be that the stereotypes are a part of a human culturetype, which has a long history and reveals some important insights into the nature of God and man.

I am led toward this second alternative by the fact that the noted psychologist Carl Jung has a similar, what he calls symbolic, analysis of feminine and masculine, which is presented by Ann Belford Ulanov in her study *The Feminine in Jungian Psychology and Christian Theology*.²⁸ Associated with the feminine are many of the above characteristics and also such ideas as eros or love, psychic relatedness, joining or reaching out, being in the midst of, value, relating to people, concrete and particular, and giving oneself to the world. Associated with the masculine are such characteristics as logos or reason, objective interest, discrimination, judgment, insight, relating to nonpersonal truth, abstract and theoretical, and making the world for oneself. However, Jung, according to Ulanov, makes an important addition to the usual distinction between feminine and masculine with his notion of contrasexuality. The feminine characteristics we have just presented are not to be linked solely to women; neither are the masculine characteristics to be linked solely to men. Rather, both women and men possess the characteristics symbolized by feminine and masculine. Indeed, each individual must possess both kinds of traits if she or he is to be fully human.²⁹

Now we are in a position to see what might possibly be dehumanizing about the usual feminine and masculine stereotypes. The dehumanizing comes not from the two sets of characteristics themselves, but from the applying of one set or another exclusively to either sex. If this is so, then dehumanization can be regarded as a distortion in the normal balance of feminine and masculine in every human being.

Jung's symbolic analysis of feminine and masculine serves as a

bridge between our description of creation in terms of evolutionary theory and some ancient religious, mythical understandings of the divine. In relation to scientific thinking, it seems to me that Jung's ideas make many of the same points I made earlier about creation. Many of the traits associated with the feminine seem to support the idea that the feminine can be associated with that aspect of the process in which new variations are generated. Characteristics such as passivity and receptiveness may be taken as simply affirming the status quo, but they also indicate an openness to the environment and to the future. This second implication is supported by other traits, such as fluidity, warmth, moistness, darkness, and earth, all of which may be associated with the generative power of nature or the human mind. And, of course, intuitiveness and irrationality signify the disorderliness in thinking which many believe to be associated with the emergence of new ideas. On the other hand, some of the masculine characteristics, such as orderliness, rationality, criticalness, and activity may be associated with those processes which select out certain variations in the establishment of a new homeostatic state. This aspect of the creative process is figuratively represented by the characteristics light and sun. Finally, Jung's notion of contrasexuality, the dynamic interaction of the masculine and feminine as aspects of a unified whole, echoes what I said earlier about the unity of random variation and natural selection.

In relation to ancient religious understandings, the same interaction process, as an important part of the ultimate, creative reality, is represented as a unified but dual process and is sometimes symbolized in sexual terms. The ancient Chinese notion of yin and yang represents the two fundamental principles of passivity and activity, which are aspects of a higher unity, sometimes call the Tao, and which pervade everything in the universe.³⁰ Yang, or activity, is the sun, heaven, dryness, goodness, and, for our purposes most important, the masculine. Yin, or passivity, is the moon, the earth, wetness, evil, and the feminine. These two principles, in terms of the characteristics they represent, are basically the same as my earlier description of masculine and feminine. Furthermore, a most important point of yin and yang is that they form a unity that is dynamic; according to ancient Chinese thinking, the cyclical interaction of the two, in which first one is dominant and then the other, accounts for the seasons of the year. During the hot, dry summer months yang is dominant, and during the cold, wet winter yin is dominant.

The same unity occurs in the relation between good and evil, in the association of good with the active, masculine principle and of evil with the passive, feminine principle. This association should not sim-

ply be ignored because it might offend our current cultural taste. At the same time, one should investigate whether or not ancient Chinese thinking itself is a reflection of a cultural situation in which men were considered superior to women. However, if one brackets the question of cultural influence, one way to resolve the problem of identifying good with the masculine and evil with the feminine is to stress Jung's notion of contrasexuality, which in the symbol of yang and yin is expressed by there being a little bit of yang in yin and a little bit of yin in yang. Perhaps a still better way to resolve this question today would be to inquire how those characteristics symbolized by the masculine and those symbolized by the feminine may be either good or evil, depending on the context in which they occur. There may be times when activity and critical orderliness are good and times when they are evil; the same might hold true for the passivity and generative disorderliness symbolized by the feminine. Regardless of whether or not such an inquiry, for which we do not have time now, could be carried out, the Chinese association of good with the active, masculine principle and of evil with the passive, feminine principle does make an important point. It does not imply that the masculine, heaven, or dryness should overcome the feminine, earth, or wetness; instead, in the context of the unity of yin and yang, it implies that both good and evil are a part of the creative whole. This seems to be the same point I made earlier—that randomness and disorder are just as much a necessary part of creation as selection and order. In both the scientific and religious pictures, good and evil, insofar as they are identified with order and disorder or the masculine and the feminine, transcend common understandings of morality reflected in cultural taste to the point where both are seen as important elements in the divine process of creation.

Another similar symbolic pattern can be seen in Indian thought in the relationship between the male creator god, Shiva, and his consort, Kali. Kali is the *shakti* or the energy of Shiva; she represents both the dynamic "life-giving creative force of the cosmos *and* its destructive and violent potency, with now one, now the other aspect emphasized."⁸¹ This dual nature of the feminine goddess is similar to the ambiguity in the idea of random variation: variations are errors that often result in impotency or death of the individual; yet such errors also contain the promise of new systems that may be more fit than old ones for survival in a new environment. The meaning of the male god, Shiva, in contrast to that of Kali, is not always expressive of the notion of masculinity as we have sketched it. Shiva is characterized as the fierce lord of the beasts, the ascetic Great Yogi who sustains the world through the power of his meditation, a fertility god, and the lord of the dance who dances out the creation of the world as an

expression of his personality.³² Yet, in spite of this multiple nature, which seems to be characteristic of many of the gods of Hindu religion, it is possible to see Shiva as the symbol of the stability of pure existence in contrast to the dynamic force of his consort. The modern Indian philosopher Sri Aurobindo, who perhaps more than any other Hindu thinker takes modern science into account, sees this relationship. Although he maintains that the absolute or ultimate reality is beyond what he calls "stability and movement" (while I have argued that order and disorder, homeostasis and random variation, are the basic nature of the ultimate), he still writes: "But as we cannot describe or think out the Absolute in itself, beyond stability and movement, beyond unity and multitude,—nor is that at all our business,—we must accept the double fact, admit both Shiva and Kali and seek to know what is this measureless Movement in Time and Space with regard to that timeless and spaceless pure Existence."³³ Although Aurobindo has a metaphysical system in which the spatial-temporal world is in the final analysis illusory and my view accepts it as real, still the fundamental place of stability and change, of being and becoming, of order and disorder, of natural selection and random variation, or, symbolically speaking, of masculine and feminine, is recognized by both of us.

In the ancient Middle East, the creative relation between order and disorder, symbolized by masculine and feminine, appears in the Babylonian creation epic, the *Enuma Elish*. Although the epic is rich with religious symbols dealing with the relationships between many gods, partly as epitomizing the conflict between generations, a crucial part of the story presents the cosmic battle between the god Marduk and the goddess Tiamat and the ensuing creation of the world. With the winds as his chief weapon, Marduk inflates the primordial goddess like a balloon and then sends an arrow through her gaping mouth into her heart. He splits her dead body "like a shellfish" and out of the two halves forms heaven and earth.³⁴ The clue to the meaning of this anthropomorphized creation story is the nature of Tiamat. She is not only a goddess but more specifically the goddess of salt water, the primordial mother, and the symbol of chaos. Once her watery, fluid nature is understood, then Marduk's use of the winds, which blow the waters and dry up wetness, becomes clear. Also the division of her body is really the division of the waters into the waters of the earth and the waters in the heavens, from which both the fertile rains and destructive floods come. Thus Marduk, the creator of the world, creates order out of a feminine, watery chaos.

Furthermore, although the story depicts a creation of the world at the beginning of time, the ancient Babylonians saw it as representing a repeating cycle of events, so that every year, during their annual

new year's festival, the story of creation was reenacted. The first act of the ceremony expressed the dominance of Tiamat: through the humiliation of the king and the reversal of other relationships in the social order, chaos reoccurred. As Mircea Eliade remarks, "We witness, one might say, a 'deluge' that annihilates all humanity in order to prepare the way for a new and regenerated human species."³⁵ The regeneration comes through the reenactment of the primordial cosmic battle with two groups of actors representing Marduk and Tiamat, a ceremony deciding the "fate" of each month and day of the new year, and a hierogamy or sacred sexual union produced by the king and a sacred slave in the chamber of the goddess, Sarpanitu, which was "a concrete realization of the 'rebirth' of the world and man."³⁶

The cosmic creation struggle between Marduk and Tiamat in ancient Babylonian religion is important because of the light it sheds on the story of creation in Genesis 1 and on man's being created in the image of God.

The exact relationship of the Hebrew, priestly account of creation and the Babylonian epic is difficult to discern. Certainly, as J. Maxwell Miller points out, because the priestly stratum, with its complex literary history incorporating many old traditions, most probably reached its present form "during or soon after the Babylonian exile . . . we must take very seriously the possibility of direct Mesopotamian influence."³⁷ However, anyone who compares the anthropomorphic mythology of the *Enuma Elish* with the relatively austere and straightforward account in Genesis 1 must conclude that the influence is definitely veiled, although one does not have to go as far as Gerhard von Rad and say that "the actual mythical meaning . . . has been long since lost."³⁸ According to Nahum Sarna, the lack of mythology in Genesis 1 may be accounted for as a part of the reaction of Israel against her neighbors and her enemies at a time when she was struggling to survive as a national and religious unity.³⁹ Although the priestly editors employed some of the same mythical traditions as the Babylonians, they divested these traditions of all anthropomorphic myth in order to set Israel apart as the unique, chosen people of God.

However, we live in different times, when survival perhaps depends not so much on separating as on drawing out basic similarities between science and religion, between various religious traditions, and between the Babylonian and Judeo-Christian accounts of creation—especially when those similarities might lead us to a better understanding of the basic creative structures of existence and to symbolize them in a way that is perhaps powerful in our own time.

The most important similarity revolves around one word, the Hebrew word *tehom* in the second verse, which means "formless" or

“without form,” and which most scholars agree is the Hebrew cognate of Tiamat. This gives us a clue that the first half of verse 2, “the earth was without form and void, and darkness was upon the face of the deep,” is actually a description of a primordial, watery chaos. Further, if one recognizes that the phrase “the Spirit of God was moving over the face of the waters” can also be translated as the “wind of God,” a possible parallel with the winds used by Marduk also becomes clear. Thus, even though the Genesis account appears quite different from the Babylonian on the surface, part of its message is basically the same, the creation of the world by a divine being out of chaos; and the rest of Genesis 1 details the priestly understanding of how the ordering of disorder took place.

There is, however, a basic dissimilarity between the two Middle Eastern creation stories and the Chinese and Indian accounts of the relation of order and disorder. While the Far Eastern accounts present the integral relation between order and disorder, symbolized by the dynamic interaction between masculine and feminine, in the Babylonian account it is a case of a male god destroying the evil feminine force of chaos to create order. And, in Genesis, there is no explicit recognition of the formless waters as a deity; instead creation is the work of a masculine God acting on a chaotic natural state. This had to be the case in the thinking of the priestly writers as they interpreted ancient Near Eastern myths in terms of Israel’s monotheism. One could not have a pantheon of deities; instead of the symbolization of order and chaos as divine beings, in Genesis one finds the relationship between order and chaos conceptualized as God over against the world.

This is the logical course of those who think of ultimate reality as “one God”—if their thinking is done in terms of substantive categories, if they conceive of everything as entities and beings. There must be the strong separation between order and disorder, so that, as Van R. Potter points out, these religious traditions do not always see the constructive part of disorder in creation.⁴⁰ However, what happens if one thinks in terms of process thought, in terms of events or systems rather than entities or beings? Then one can talk about the interaction between order and chaos in the creation of the world in such a way that both are aspects of the divine creative process. One might thus be tempted to reinterpret the statements in the second verse of Genesis about formlessness, the void, and darkness on the face of the deep as a part of what theologians sometimes call the “dark side of God.” And one might further be tempted to make explicit ties to other religious accounts in which the dark, disordered, generative waters are symbolized by the feminine and the ordering aspect of creation by the masculine.

ZYGON

THE IMAGE OF GOD AND HUMANIZATION

Now we are in a position, in terms of process thought, to give a fresh, cogent, contemporary interpretation of Genesis 1:26–27. First, we can understand the use of the first person plural pronoun in verse 26, “Let us make man in *our* image, after *our* likeness” (italics added). There are two interpretations usually given to this verse. One is that the use of the plural pronoun is a reference to a realm of divine beings ruled over by God. If this interpretation is correct, it would mean that the monotheism of the priestly editors was not pure at the time of the Babylonian exile, a relatively late period in Israel’s thought. The other interpretation is one given by Karl Barth, who sees the plural pronouns as referring to the essence of God and presenting a view of God that is a forerunner of the Christian doctrine of the trinity. Barth writes: “The saga undoubtedly speaks of a genuine plurality in the divine being, but it does not actually say that it is a Trinity. On the other hand, it may be stated that an approximation to the Christian doctrine of the Trinity . . . is both nearer to the text and does it more justice than the alternative suggested by modern exegesis in its arrogant rejection of the exegesis of the Early Church.”⁴¹ However, if one follows Barth’s interpretation, it seems to be nearer to the text not to view the plurality of God as an approximation of the Trinity, which is essentially a masculine, father-son relationship, but in terms of what is in verse 27, that God created man in his image—male and female. Barth himself, in contrast to almost everyone else, has the courage to see this rather explicit connection, for he writes that, concerning human beings, “the only real differentiation and relationship is that of man to man, and in its original and most concrete form of man to woman and woman to man. . . . In this way he is a copy and imitation of God. In this way he repeats in his confrontation of God and himself the confrontation in God.”⁴²

Barth does not see the mythical-symbolic meaning of the terms “male” and “female” as I have sketched them in my analysis of cultural stereotypes and Jung’s thought, of Chinese, Indian, and Babylonian traditions. Therefore, he does not go any further than saying that the image of God as male and female gives a particular dignity to the sex relationship and to marriage. The dignity of humans being created by God as men and women is, indeed, one appropriate way to understand the meaning of Genesis 1:27. However, if one takes a mythical approach to religious language and goes behind the relatively straightforward Genesis account to uncover its latent meaning in relation to other religious traditions, as I have done, then it becomes possible to see the connection between the obvious fact that God is creator and that man in God’s image must also be creator, and the interpretation that the image of God is the

feminine-masculine dynamic operative in all creation and embodied explicitly in the relations between women and men. It becomes possible to see that these are two ways of saying the same thing: the process of creation, which is described in evolutionary theory as the unified interaction of random variation and natural selection, or disorder and order, is symbolized religiously as the unified interaction of feminine and masculine. These are simply two different ways of speaking about the divine process of creation, a process of which each human being in his relationship with others and within himself is an image.

Therefore, in a process interpretation of Genesis 1, to say that humans are made in the image of God means that they are a part of the creative process. Any one person is a participant in the divine insofar as he or she interacts within him- or herself, and with other persons, organisms, and nonliving systems in the production of new patterns of life and at the same time in the selection of which new patterns form competing yet cooperating systems, systems that serve not just human beings but the rest of creation as well. As the embodiment of evolution at the cultural level, humans also have the responsibility to sustain the work of the creative process at the physical-chemical and biological levels of existence. In mythical-symbolic terms, any one person is a child of God when he or she has the feminine fluidity, receptivity, and openness to the new, and at the same time the masculine orderliness, criticalness, and selection of what is fit to survive.

This understanding of the image of God in human beings can be used to shed some further light on the illuminating ideas of other writers in this issue. To me, it seems that they and the other discussants at the 1973 IRAS conference on Star Island enunciated two basic themes; these were not always clearly expressed but were woven into much of what was said and done, and they may be stated in terms of the basic concepts I have enunciated.

The first theme is that in our present situation we can move away from dehumanizing and toward humanizing ourselves and our world by emphasizing the importance of randomness and disorder; these aspects of life, symbolized by the feminine, must become a greater part of ourselves. This is necessary if we recall what Lisa A. Richette⁴³ says about a basic cause of dehumanization in justice being the masculine dominance of certain religious and scientific structures that are implicit in the present legal system—namely, the institution of the monastic cell as an environment for repentance or turning to what is good, and the scientific dogmas of normalcy that label people as criminal or sick and isolate them from the rest of society. These structures are dehumanizing in that they really block personal growth and development in the children trapped in them, and the continued rigid

adherence to them prevents a more humane administration of justice.

At the conference, Chaplain B. Davie Napier, in talking about political structures, diagnosed the chief ill of man as idolatry—the elevation of finite political institutions to the position of absolute reality.⁴⁴ The worship of order, of the masculine, by dogmatic adherence to existing institutions is the essence of idolatry, and Richette argues that our idolatry extends not only to political but also to religious and scientific institutions. In this situation Judge Richette, who in her own analysis represents the critical orderliness of the masculine, urges us toward humanization by emphasizing the feminine through her own examples of listening to the stories of those being tried before her bench and by allowing young children to be an audience in her courtroom.

The law-and-order people view what she does as an evil thing—and in a sense they are right. For Richette is departing from the established order; she is an agent of disorder, trying out practices which are actually cultural variations. But this kind of evil needs to be supported, for it is the evil that leads to the creation of new alternatives that allow for what Emerson calls the freedom to make choices, alternatives that in turn can be selected as a new order of good in the movement toward a fuller humanity.

In relation to another issue, our relation to those who are dying and our own death, Elisabeth Kübler-Ross⁴⁵ enunciates the same theme—not just in what she says but in what she has done and continues to do. The very act of a scientifically trained person going to dying patients to find out about dying exhibits the same feminine openness that Richette exhibits in learning from young criminals the realities of their situation. And this going to the dying with the attitude of a listener and with nonverbal expressions of love, such as hugging and holding, breaks down the dehumanizing barrier of isolation and aids the dying person in the transformation from denial, through anger, bargaining, and depression, to the acceptance of one's own death.

Kübler-Ross's challenge to the existing medical practices is regarded by many traditionalists as evil. However, this evil and disorder are not the same disorder that Solomon H. Katz⁴⁶ speaks of when he talks about the breakdown in culture manifest in such symptoms of cultural distortion as increased crime, suicide, and drug abuse. Such symptoms are perhaps actually a reaction to the idolizing of the existing steady state. The evil exhibited in the challenging of existing institutions, on the other hand, seems to be a part of the search for a new code, not in the formal sense of code, but in the creation of new, experimental life-styles that might lead to a fuller humanity.

In our time, the way toward a more nearly complete humanity may

be through the disorder symbolized religiously by the feminine, through the fuller realization of the dark side of God, which is not only destructive but also generative. However, we must not forget that it is also possible to commit idolatry here. If many of our present ills come from the elevation of the order of existing personal and social structures, in reaction we must not fall into the trap of allowing future ills to emerge from the elevation of disorder to a position of being the sole ultimate reality. The divine is neither order nor disorder, but the unified interaction of the two. This seems to me to be the second basic theme of the 1973 IRAS conference. It is exemplified in Emerson's and Burhoe's contention that one finds dignity in the face of death if one recognizes that the individual human being is a part of a larger system, and that the death of the individual permits a certain degree of breakdown in established structures so that new, perhaps better, structures might emerge.⁴⁷ It is also exemplified in Katz's suggestion that we emphasize a synthetic method in a new science of man that understands man not just as an objective reality but as a subjective reality as well. Finally, on the theme of the ultimate unity between disorder and order, feminine and masculine, it seems to me that John Platt's four-legged belief system represents not only what is necessary in the future planning for survival but also what it means to be human.⁴⁸ On the one hand, the ecological need to see the world as a continuous web, a unified network, is a reflection not only of the scientific presupposition that the world is rational but also of religious beliefs in a divine order or wisdom. In contrast to this masculine orientation toward structure, his second and third legs—the human-potential movement, manifested in the interest in oriental religion, new humanist psychology, and the simple act of touching; and the existentialist theme of continual creative change and a mystical unity with the cosmos—are a feminine orientation that allows in cultural evolution for the emergence of the new. His fourth leg, the cybernetic one, unifies both aspects of the creative evolutionary process as participated in by humans. The establishing of proximate goals for survival is really the emerging of new variations, while the feedback that tests the means to reach the goals and even the goals themselves are actually the masculine, selective phase of the process. At the same time, looked at in another way, the sense of goal directedness and the projecting of means to reach projected goals are an ordering process, while the emphasis on experimentation and openness to new information may be symbolized as a feminine component of this total, unified interaction.

At the beginning of this essay I said that I would try to show how four well-known areas of thought come together—how, if one assumes the framework of process thought, then evolutionary theory,

ZYGON

ancient religious traditions, and relationships between the sexes all point to the same reality. Now we have seen what that reality is. It is nothing less than the ultimate creative source of the universe—God. And I hope we have gained a better understanding of who we are as human beings, for we are nothing less than the image of God, an important participant in the creative process. Insofar as we live our lives in such a way as to allow both random variation and natural selection, both the feminine and the masculine, to occur as aspects of a single dynamic unity, and insofar as we promote this interaction within the larger systems of the society and physical universe to which we belong, we fulfill the divine image within us and are worthy of being called “children of God.”

NOTES

1. Alexander Pope, *An Essay on Man*, in *Pope: Poetical Works*, ed. Herbert Davis (London: Oxford University Press, 1966), epistle 2, line 1, p. 250.
2. For a presentation and critique of Barr's position, see J. Maxwell Miller, "In the 'Image' and 'Likeness' of God," *Journal of Biblical Literature* 91 (1972): 297-98.
3. *Ibid.*, p. 292.
4. Gerhard von Rad, *Genesis* (Philadelphia: Westminster Press, 1961), p. 58.
5. Miller, p. 296.
6. von Rad, p. 57.
7. Karl Barth, *Church Dogmatics*, trans. J. W. Edwards, O. Bussey, and Harold Knight (Naperville, Ill.: Alec R. Allenson, Inc., 1958), 3 (1): 182-206. For a critical discussion of Barth's views, see below after the section "The Image of God and Humanization."
8. Charles Hartshorne, "The Development of Process Philosophy," in *Process Theology*, ed. Ewert H. Cousins (New York: Newman Press, 1971), pp. 47-66.
9. Harlow Shapley, "Cosmic Evolution," *Zygon* 1 (1968): 275-85; and Ralph Wendell Burhoe, "Natural Selection and God," *Zygon* 7 (1972): 30-63.
10. E.g., James McCosh, *The Religious Aspect of Evolution* (New York: Charles Scribner's Sons, 1890), p. 7.
11. Burhoe, p. 44. B. F. Skinner also hints at this when he writes, "Man himself may be controlled by his environment, but it is an environment which is almost wholly of his own making" (*Beyond Freedom and Dignity* [New York: Bantam/Vintage Books, 1972], p. 196).
12. Alfred E. Emerson, "Dynamic Homeostasis: A Unifying Principle in Organic, Social, and Ethical Evolution," *Zygon* 3 (1969): 142.
13. J. L. Kavanau, "Behavior of Captive White-footed Mice," *Science* 155 (1967): 1628, as quoted in Van R. Potter, *Bioethics: Bridge to the Future* (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971), p. 97.
14. J. Bronowski, "New Concepts in the Evolution of Complexity: Stratified Stability and Unbounded Plans," *Zygon* 5 (1970): 24.
15. Burhoe (n. 9 above), p. 34.
16. Emerson, p. 150.
17. The following discussion is my own presentation based on the work of Bronowski, Burhoe, and Emerson that has already been cited, and Herbert A. Simon, "The Architecture of Complexity," in *The Sciences of the Artificial* (Cambridge, Mass.: M.I.T. Press, 1969), pp. 84-118.
18. Isaac Asimov, *The Universe: From Flat Earth to Quasar* (New York: Avon Books, 1966), pp. 161-83.
19. Donald W. Taylor, Paul C. Berry, and Clifford H. Block, "Does Group Participation When Using Brainstorming Facilitate or Inhibit Creative Thinking?" *Administrative Science Quarterly* 3 (1958): 23-47.

20. Emerson (n. 12 above), pp. 133-39; and Burhoe (n. 9 above), pp. 44, 58.
21. Albert Einstein, *Relativity: The Special and General Theory* (New York: Henry Holt, 1920).
22. William J. J. Gordon, *Synergetics: The Development of Creative Capacity* (London: Collier-Macmillan, Ltd., 1968), pp. 34-56.
23. Simon (n. 17 above), p. 105; and Bronowski (n. 14 above), pp. 30-31.
24. Skinner (n. 11 above), pp. 136-37.
25. Cf. Burhoe (n. 9 above), pp. 48, 50-51.
26. Asimov (n. 18 above), p. 302.
27. This formal definition of "God" is based on Frederick Ferre's definition of "religion" as "the conscious desiring of whatever (if anything) is considered to be both inclusive in its bearing on one's life and primary in its importance" (*Basic Modern Philosophy of Religion* [New York: Charles Scribner's Sons, 1967], p. 69). It is also consistent with Henry Nelson Wieman's formal criteria for the object of religious commitment, that it be both "metaphysically ultimate" and "valuationally (axiologically) ultimate" (*Man's Ultimate Commitment* [Carbondale, Ill.: Southern Illinois University Press, 1958], p. 92).
28. Ann Belford Ulanov, *The Feminine in Jungian Psychology and Christian Theology* (Evanston, Ill.: Northwestern University Press, 1971), pp. 154-57.
29. For the rest of the essay I shall use the terms "feminine" and "masculine" rather than the terms "women" and "men" or "female" and "male" as a constant reminder that the feminine and masculine, and all that each involves, are to be considered as two aspects of a dynamic unity within every man and woman.
30. Cf. Winston King, *Introduction to Religion* (New York: Harper & Row, 1968), pp. 190, 198, 273; and Wing-tsit Chan, "The Story of Chinese Philosophy," in *The Chinese Mind*, ed. Charles A. Moore (Honolulu: University of Hawaii Press, 1967), pp. 50-52, 57-62.
31. King, p. 321.
32. Ninian Smart, *The Religious Experience of Mankind* (New York: Charles Scribner's Sons, 1969), pp. 118-20.
33. Sri Aurobindo, *The Life Divine* (New York: Greystone Press, 1949), p. 74.
34. Mircea Eliade, *From Primitives to Zen* (New York: Harper & Row, 1967), pp. 97-109.
35. Mircea Eliade, *Cosmos and History* (New York: Harper & Bros., 1959), p. 57.
36. *Ibid.*, p. 58.
37. Miller (n. 2 above), pp. 290-91.
38. von Rad (n. 4 above), p. 46.
39. Nahum M. Sarna, *Understanding Genesis* (New York: McGraw-Hill Book Co., 1966), pp. 3-4, 9-10, 12-13, 22-23.
40. Potter (n. 13 above), pp. 83-100.
41. Barth (n. 7 above), p. 192.
42. *Ibid.*, p. 186.
43. Lisa A. Richette, "A Special Savor of Nobility: Confronting the Dehumanization in Children's Justice," this issue.
44. Cf. Paul Tillich's formulation of the "protestant principle," which is "the divine and human protest against any absolute claim made for a relative reality . . ." ("The Protestant Principle and the Proletarian Situation," in *The Protestant Era*, abridged ed. [Chicago: University of Chicago Press, 1957], p. 163).
45. Elisabeth Kübler-Ross, "Humanizing Terminal Care" (Twentieth Summer Conference, Institute on Religion in an Age of Science, Star Island, New Hampshire, July 28-August 4, 1973).
46. Solomon H. Katz, "The Dehumanization and Rehumanization of Science and Society," this issue.
47. Alfred E. Emerson and Ralph Wendell Burhoe, "Evolutionary Aspects of Freedom, Death, and Dignity," this issue.
48. John Platt, "The First World Century: Optimizing Man on Earth" (Twentieth Summer Conference, Institute on Religion in an Age of Science, Star Island, New Hampshire, July 28-August 4, 1973).