

THE SUMMA HEFNERIANA: MYTH, MEGAMYTH, AND METAMYTH

by Eugene G. d'Aquili

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In *The Human Factor: Evolution, Culture, and Religion*, Philip Hefner achieves what in my opinion is the most compelling synthesis to date of the scientific worldview and religious phenomenology. It is nothing less than a *prologomenon* to any credible future theologizing. Not having had the wit to write it myself, like most commentators, I shall now expand upon how I could have written it better.

In *The Human Factor*, Hefner essentially grounds the theological enterprise upon what looks suspiciously like a nascent metaphysics of evolution. In undertaking such a grand project he is standing on the shoulders of two giants: Pierre Teilhard de Chardin and Ralph Wendell Burhoe. However, he transcends both these exemplars in significant ways. First of all, Hefner does not fall into the teleological trap that Teilhard often does. His "teleonomy" is carefully worked out and is thoroughly compatible with contemporary evolutionary theory. On the other hand, he goes beyond Burhoe in that he demonstrates how religious doctrine from a specific religious tradition, in this case the Christian Mythopoeia, can be powerfully reinterpreted in terms of survival information compatible with biocultural evolutionary theory. In my opinion, Burhoe never adequately integrated the myth-ritual-praxis complex into his synthesis, although he clearly

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saw the importance of it. Hefner achieves this integration quite effectively, thereby smoothing out some of the bumps of Burhoe's theory of the biocultural origin and meaning of religious phenomena. More about the myth-ritual-praxis complex later, since its integration into a biocultural theory of religion forms the nub of Hefner's argument and is the cornerstone of the "created cocreator" theory.

The heart of *The Human Factor* is Hefner's theory of the "created cocreator." This theory begins with, and rests on, a profound respect for "what really is." "What really is" is Hefner's deliberately vague description of ultimacy (or God). "What really is" is characterized processually by physical and biological evolution (of the nonteleological sort) until a creature arises who is characterized both by freedom and by a myth-ritual imperative. For Hefner, genuine freedom arises paradoxically from a deterministic evolutionary model. Likewise, *Homo sapiens* must necessarily construct myths (and usually related rituals) both to motivate and to justify his actions. This psychobiological necessity for Hefner is no less imperative now than in our primitive past. What contemporary human beings can do, however, is to exercise their freedom in constructing myths which are biologically and psychologically wholesome and conducive to the survival of the human race and the entire ecosystem upon which human being depends. The development of human technology, which Hefner sees not as set over against nature but as an integral part of nature, has made it impossible to separate the future of the ecosystem from human decision making. Thus Hefner sees that human beings have an obligation to live harmoniously with the nature of which they are a part and out of which they evolve. However, the evolutionary situation becomes markedly complex with the advent of genus *Homo* and of culture properly so-called. With the development of culture Hefner sees a coadaptive process between the ancient biological evolution and the newer cultural evolution. Human being is at the point of intersection of biological evolution and cultural evolution. It has always been theoretically possible for human beings to volitionally influence cultural evolution, but with the evolution of high technology (a part of cultural evolution) not only can he or she interfere with the processes of biological evolution, he or she probably cannot avoid doing so. Given this immense power which has evolved over the last two hundred years, it is easy to see how human beings have the potential of becoming created cocreators. Obviously, human beings can also become created destroyers. Hefner's brilliant insight is that it is precisely in a human being's creation of his great worldview (the metamyth) that a human being is like God, that is, created in God's image and likeness.

Although a human being is psychobiologically determined (as a creature) to fashion some sort of myth, like God he or she is free to choose the sort of myth to be fashioned. Hefner's great existential wager is that human beings will fashion a wholesome life-giving megamyth based as much as possible on our metamyth, the overarching scientific worldview. In this great work, human beings become the created cocreators.

Lest this critique be perceived as a liturgy of praise, I will consider here some issues in *The Human Factor* which I found problematic. First, Hefner uses an inordinate amount of precious space, which could have been used to expand upon important issues of his theory, on getting his philosophy of science and epistemological credentials in good order. His obsessive locating of various elements of his theory into "hard-core" hypothesis and innumerable (correction—they were numbered) auxiliary hypotheses, and his painstaking demonstration of proper Popperesque falsifiability and Lakatosian fruitfulness for his auxiliary hypotheses, made me want to shout "stop fixing your uniform and play ball." I am sure all of this is a preemptive strike at potential predatory philosophers. It is as if Hefner were substituting methodological rigor for his self-admitted lack of conceptual rigor in defining the issue of ultimacy (the God concept). Such a compensation, if that is what it is, is certainly not required. *Rigor philosophiae* is usually remarkably similar to *rigor mortis*. In any case, these concerns about the nature of appropriate theory building would have found a better place in an appendix than in the body of the text.

My annoyance with Hefner's obsession with theory-building theory may be dismissed as a personal crotchet. Hefner's inadequate dealing with the issue of freedom, however, cannot be so easily dismissed. The problem with human freedom, whether it exists or not, is as old as philosophy itself. I did not expect Hefner to solve the problem, but in a book presenting a theory of the created cocreator in which the freedom of human beings is so central, one expects a more expanded treatment of the topic, particularly recent neuropsychological evidence inimical to the actual existence of free choice. In 1963 W. Grey Walter, a British neurosurgeon, performed decision-timing experiments on humans with electrodes implanted in the motor cortex (Walter 1963, 1973). He noted an electrical blip on the oscilloscope a significant period of time prior to the conscious intention of the subject to perform a motor task. The consistent appearance of this "contingent negative variation" (CNV) *prior* to the conscious decision to act caused great consternation indeed. More recently, Libet (1985, 1987, 1989) performed careful

experiments with “conscious intentions.” In these experiments, he asked normal subjects to make “spontaneous” decisions to flex one hand at the wrist while noting the position of a spot on a revolving disk. They were asked to note the position at the exact time that they formulated the intent. Subsequently, the subjects reported where the spot was at the instant they decided to flex the wrist. This allowed Libet to calculate the time down to the millisecond when subjects *thought* they had decided to flex their wrist. He then compared that instant with the timing of events going on concurrently in their brains. He found that these “conscious decisions” lagged between 350 and 400 milliseconds behind the onset of “readiness potentials,” which he was able to record from scalp electrodes. He claimed that these “readiness potentials” reflected neural events that determined voluntary actions (for example, Walter’s CNV). Libet writes, “Cerebral initiation of a spontaneous voluntary act begins unconsciously” (1985, 529). Needless to say, such findings have produced a furor, and many great minds have trembled before the contingent negative variation. Attempts at explaining these findings, while saving free choice, have been many and ingenious. So intense is the subjective *sense* of freedom that some very respectable neuropsychologists have even suggested that in this particular instance time and causality run backwards. The good news (I suppose) is that the 2,500-year-old debate of freedom versus determinism is certainly not over, and these results, for a lot of reasons, do not seem to be the final word. But if Hefner is right in that the essence of the game is a human being’s ability to make conscious free choices and to rationalize those choices within a mythic framework, then we had better at least have the capability of making free choice. If freedom is nothing more than an incredibly powerful *sense*, an epiphenomenon decorating a totally determined machine, then Hefner has wasted his time and ours, and we might as well all go to the beach and have fun. If Hefner had devoted half the space to the issue of freedom as he devoted to theory-building theory, *The Human Factor* would have been a much stronger work.

My third problem with Hefner’s work is that he sometimes confuses metamyth with megamyth. I use the term metamyth to signify any system of abstract cognitive elements rationally related to each other, usually by employing abstract causal sequencing. By this definition, all philosophies are metamyths, as is the philosophy of science itself and the “deep” structure of ordinary myths. I use the term metamyth because it emphasizes the relationship of these abstract systems to the more basic neurocognitive process of surface structuring of ordinary myths. Having defined what I mean by

metamyth, let us return to Hefner. It seems to me that Hefner is doing two things. First, he is setting up a metamyth or general theory. As noted above, he is at great pains to set it up properly according to the best available criteria of the philosophy of science. In structuring his metamyth (general theory), he brings the whole apparatus of biocultural evolution to bear as its foundation. But Hefner is up to something else as well. He wishes to create an ordinary myth for our times. This is, of course, a religious purpose that is both legitimate and daunting. In his attempt to make it credible for us, Hefner constructs his ordinary (religious) myth in such a way as to approximate the metamyth or general theory as closely as possible. Thus although he is constructing an ordinary myth, it is a very big one indeed. In short it is a megamyth. It is almost coextensive with the metamyth, but not quite. Insofar as human beings impose purpose on aspects of the metamyth, they deviate from it and are indulging in a genuinely religious enterprise. Insofar as the element of ultimacy (the way things really are) in the metamyth is further specified and characterized, Hefner also deviates from the basic metamyth. There is nothing wrong with all of this, and Hefner tells us openly that this is what he is up to. Indeed, the formation of ordinary myths by human beings is required by his metamyth or general theory. The problem is that the metamyth and Hefner's religious megamyth so closely approximate each other that the language pertaining to each is sometimes used with respect to the other. Occasionally, especially toward the end of the book, Hefner allows the language of his religious megamyth to spill over into explanatory sequences that should be part of the metamyth. I am sure that when the basis of a religious myth is a scientific worldview itself, it is very difficult to keep language pure. Nevertheless, this is essential if Hefner's system is to maintain its explanatory power in an age of science.

A fourth issue which was somewhat problematic for me is the subject of transkin altruism. First, let me state that Hefner's treatment of transkin altruism is generally compelling and his use of this as the basis of a mythology of self-sacrifice is insightful and creative. Following Burhoe, Hefner sees trans-kin altruism as the core of human culture, "in the sense that trans-kin altruism is the behavior par excellence that marks the emergence of the *human* being, in contrast to *hominid* being (Hefner 1993, 248). In this respect, he cites Burhoe's conclusion that since religion is the bearer of the tradition of altruism, it (religion) is the core of human culture (Burhoe 1981, chaps. 6, 7). But like most serious students of transkin altruism, including the evolutionary theorists, geneticists, and anthropologists

he cites, Hefner gets bogged down in trying to explain how transkin altruism can possibly exist. This is a classic problem in evolutionary biology. Almost all evolutionary theorists agree that natural selection is for the individual, not for the group. If this is true, and all contemporary evidence points in this direction, then the question is, How is it possible to select for a behavior that can lead to the extinction of the individual (self-sacrifice) and the failure to propagate one's genes into the next generation? Kin altruism, as opposed to transkin altruism, is quite explainable because of the perpetuation of the self-sacrificer's genes through the kin whom his sacrifice spared. But transkin altruism is a thorny problem which, until now, has never been adequately explained. It seems to me that for anyone proposing so portentous a scheme as Hefner's, it is essential to present at least a tentative model to explain transkin altruism in a scientifically credible way. If such a model is not proposed, a potentially serious flaw presents itself in Hefner's metamyth. It is the perfect opportunity for religious traditionalists to plead for a special case with respect to transkin altruism, that is, a special grace from another world or a warplike suspension of the laws of nature. Such a special case would render Hefner's grand paradigm pointless.

With respect to this crucial issue of transkin altruism, I would like to offer Hefner a friendly suggestion which I hope may be helpful. It strikes me that there is powerful selection for abstract problem solving. I doubt that any evolutionary theorist, geneticist, or physical anthropologist would disagree with this statement. As I have pointed out previously (d'Aquili 1979, 1983, 1986), this trait is related to, among other things, the ability to form abstract categories or concepts and to the ability to relate elements of cognition in abstract causal sequencing. These functions, in turn, derive from the evolution of certain brain structures: the prefrontal cortex, the inferior parietal lobule, their interconnections, as well as other structures. Now, the point of my argument is that once this problem-solving equipment is in place, it must solve problems. It perceives the first cause of any series of events that occurs in the external environment, whether or not that first cause is given in the sensorium. If that first cause *is* given in the sensorium, then a human being has solved a problem empirically and can act on that solution in an adaptive way. If the first cause of a sequence of events is not given in the sensorium, then, as I have argued, this machinery necessarily generates a cause which tends to be personal in the form of gods, demons, or other personal causal agencies. Without pursuing the argument in detail, as I have done elsewhere (d'Aquili 1979, 1983, 1986), suffice it to say that myths, whether personal or social, arise from the *obligatory*

functioning of this and related neural machinery. Furthermore, this same machinery requires *Homo sapiens* to construct classes of objects.

One such essential classification is "our group." An important determinant of this essential category, although by no means the only one, is probably "those who share the same myth." Since myths are endowed with transcendent origin via existential mystical experience usually emanating from the incarnation of myth in ritual, the category "myth-group" is not only an important one to be *necessarily* generated by the brain, but is actually determinative of both individual and group identity. In such a set of circumstances, myth-group members are perceived as just as close as kin, if not closer. It is this which allows for transkin altruism and self-sacrifice, usually in the context of a mythic imperative which derives from the determinative myth of the myth-group. The important point to keep in mind is that all of this, myth formation, myth-group formation, and myth-group identification with the resultant possibility of transkin altruism, all necessarily and obligatorily arise from the same neural machinery which underlies empirical abstract problem solving. Indeed, the entire complex can be seen as an extension of abstract problem solving. If this connection between abstract problem solving on the one hand and the generation of myth and myth-group on the other hand is seen as essential and inherent in the functioning of brain structure, then what is selected for is abstract problem solving. Myth, myth-group, and transkin altruism may be seen as epiphenomenal. But what incredibly important epiphenomena they are! Thus, so long as the biologically maladaptive consequences of transkin altruism are less than the biologically adaptive consequences of abstract problem solving, then transkin altruism will ride on the coattails of abstract problem solving. I hope that such a model may be helpful to Hefner's thesis and help to place transkin altruism firmly within the scientific metamyth.

This critique brings us finally to Hefner's myth-ritual-praxis complex, which is at the heart of how any human being responds to his or her world. His treatment of this complex, although perceptive, needs to be further unpacked if one is to appreciate the full power of his theory. Hefner states that myth is a compelling motivator because it reflects what "really is." He also maintains, along with Burhoe, that myths carry information for the survival of human beings in adapting to their world. This sounds good but needs further explication. If one does a functional analysis of myth, one sees that myth-making is adaptive for *Homo sapiens* along several dimensions.

First of all, it orients human beings toward a meaningful perception of their world. That is a powerfully adaptive function of myth separate from any content, whether superficial or deep. Without some perception of a meaningful and coherent world, human beings tend to become depressed, dispirited, and lack the initial energy of activation to generate vigorous, practical problem solving. Given how the machinery of the brain works, human beings have no choice but to structure their worlds in meaningful and coherent patterns. Second, over and above the general orienting function of any myth, each myth has specific content. It has content in terms of its surface structure and content in terms of its deep structure or abstracted relationships. The deep structure at least must be consonant with "the way things really are" or the myth bearers would soon suffer extinction. However, the surface structure of a myth may have little to do with "things as they really are." In spite of this, paradoxically, it is at the level of the surface structure that individuals must *perceive* the myth to represent "the way things really are." It is this perception of the myth surface structure which allows myths to be motivators of behavior. Perception of the essential truth of a myth's surface structure always arises from validation by a power perceived to be greater than the human being. In primitive cultures, this validation of the myth's surface structure usually arises from the gods. It is the sense of the mystical and transcendent which must adhere to a myth for it to become a motivator of human behavior, even to the point of giving up one's life for a myth-related idea, for a belief, or for a myth-bearing human being not related as kin. The question of how the sense of the mystical or transcendent validation of myth occurs is a complex one. To some extent, a ritual which incarnates a myth can produce such a sense. We should note here the paradox, *not* brought out by Hefner, that insofar as myths are truly adaptive in terms of their content, it is usually in terms of their deep structure, which is an expression of "the way things really are." But insofar as myths are motivators of behavior, they are so through the perception that they represent "the way things really are" at the level of surface structure where, in fact, they rarely approximate reality.

In addition to the general adaptive function of myths by providing orientation in the world, and to the adaptive function of the reality representation of their deep content, and to the adaptive function of their divinely validated surface content as motivator for behavior, there exists yet a fourth level at which myths may be adaptive. This occurs when part of the mythic surface structure either prescribes or proscribes certain behaviors that are physiologically adaptive or maladaptive. Thus the prohibition of eating pork for Jews (and

certain other peoples) and the requirement to cook corn with alkali, releasing lysine, among certain native American groups are clearly adaptive, but coincidentally so. The proscription of pork and the prescription of cooking corn with alkali had nothing to do with a primitive understanding of trichinosis or the necessity of lysine in the diet. These practices were prescribed or proscribed for other purposes, but were powerfully adaptive incidentally. Seriously maladaptive mythic prescriptions or proscriptions will result in the extinction of the group bearing the myth and hence of the myth itself.

In dealing with ritual, Hefner happily expands on my work and that of others in emphasizing the quality of ritual which incarnates, or in some sense acts out, the content of myth. In Hefner's paradigm, this is an essential stage in the transition of myth to praxis, ritual being seen as a sort of formalized acting out and reinforcement of the myth content on the way to the informal application of the myth to everyday life (praxis). Hefner's expansion of the understanding of the function of ritual is crucial to his thesis if his position, following Burhoe, is that myths must bear adaptive information if the myth-group is to be maintained. There must be some kind of mechanism by which a psychologically powerful tale can motivate behavior and be translated into everyday life. The idea that ritual is a sort of template for praxis is dealt with in such a way by Hefner that it genuinely advances myth-ritual theory and our understanding of the function of myth. I was disappointed, however, that Hefner almost totally ignored another aspect of the myth-ritual relationship, one which would have advanced his thesis significantly. I am referring to the mechanism by which ritual provides a mystical and transcendent validation for the myth it incarnates. The proper performance of ritual can, and usually does, produce "mini-mystical" experiences (d'Aquili 1979, 1983, 1986). These may range from brief periods of ecstasy all the way down to brief adrenergic surges. In any case, such experiences surround the myth which the ritual incarnates with a direct and immediate sense of transcendent validation. Obviously, there are other factors which help validate the transcendent status of a particular myth, such as the "unbroken" tradition from the ancestors (*mos maiorum*), but there is little doubt that ritual provides the immediate existential transcendent validation of myth. It seems to me that Hefner never adequately explains how one can come to believe the literal content of the surface structure of myth to such an extent that one is willing to accept moral imperatives deriving from the myth even to the point of dying for them. Hefner is very right in stating that Moses did not come down from Sinai with ten suggestions. He came down from Sinai with ten commandments.

Such moral imperatives, sometimes requiring even death, if necessary, to maintain them, must derive from a living myth, that is, from a source perceived in some way as transcendent and therefore ultimately authoritative.

For Hefner, the myth-ritual-praxis complex is the nub of his theory at least insofar as it represents a program both for theologizing and for living. Since human beings must create myth in order both to motivate and to justify their actions, it is incumbent upon us, according to Hefner, who live at the end of the twentieth century, to fashion a great or general myth (what I have called a megamyth) in such a way as to be commensurate with our scientific knowledge of the way things really are (the metamyth). Hefner's purpose in this is to help fulfill our unavoidable and inevitable myth-making nature in such a way that we can adapt to our own knowledge, to the consequences of our knowledge (technology), and to the ecosystem. The great hope of this intrinsically human act is that human beings may survive and live wholesomely with the nature out of which they evolved and of which they are an integral part. As we have seen, Hefner's megamyth is fully comprehensive in that it includes myth theory itself as an integral part. Although Hefner asserts, correctly I think, that myth-making in general is inevitable, being derived from the genetically programmed functioning of certain parts of the neocortex, nevertheless the *content* of myth is certainly not pre-programmed. Hence, to some degree at least, human beings have a choice in structuring the content of myth. Hefner maintains that in choosing a megamyth which approximates the metamyth as closely as possible, human beings may save themselves from the consequences of original sin.

This brings us to the most impressive aspect of Hefner's carefully crafted megamyth. His demonstration that traditional myths can be reinterpreted meaningfully in terms of the megamyth is remarkable. Thus, concepts such as original sin, salvation, grace, and justification, all derived from the Judeo-Christian myth lineage, are reinterpreted in ways compatible with the megamyth. These reinterpretations, arguably at least, do not do violence to the traditional core meanings. Hefner's megamyth represents a tour de force. In considering a model that can reconcile our scientific worldview with traditional religious doctrines, I suspect this is about as good as it is likely to get.

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