

Reviews

The New Evolutionary Timetable. By STEVEN STANLEY. New York: Basic Books, 1981. 222 pages. \$16.00.

Evolutionary theory is one of the least understood and most consciously abused of the major tenets of modern science. For reasons assignable only to extreme fundamentalist beliefs, it is pilloried, mistrusted, and given responsibility for truly remarkable aspects of societal decay. A brief perusal of the tracts produced by Jerry Falwell, Pat Robertson, the Institute for Creation Research, and similar sources will quickly show the determination to demonstrate that evolution is somehow anti-Christian, anti-American, and, curiously enough, anti-scientific.

One of the reasons for this assassination of a basic and central scientific principle is demonstrated by Steven Stanley's thoroughly readable book. The study of evolution, as is the case with all active and productive scientific disciplines, is continuously in flux; established ideas are assaulted by new evidence and new interpretations of old evidence. Within the study of evolution, recent new data and interpretations have suggested that science rethink its ideas about the rate and mode of the evolutionary process. None of this new data and new interpretations suggests that evolution did not occur, that the earth is not over four billion years old, or that natural, understandable processes can be invoked to explain the world as we currently know it.

Stanley, a distinguished teacher at the John Hopkins University, has devoted his life to study and analysis of the fossil record. He knows firsthand the tangible evidence for evolution and has spent many years unraveling the history of the mollusks, shelled invertebrate animals. Concurrent with these specialized studies, he has become conversant with most of the natural world. In this book he presents us with his view of how evolution produces our world and its inhabitants.

The first part of the book leads us through the history of the development of evolutionary thought. Charles Darwin, while enormously important in the popularization of evolution in the mid-nineteenth century, was only one of many European intellectuals who recognized the necessity for evolution. The idea then followed a Byzantine course through the late nineteenth and twentieth centuries. Evidence from animal behavior, paleontology, biogeography, genetics, microbiology, astronomy, anatomy, chemistry, physics, and numerous other sciences have contributed to the confirmation of evolution as we now understand it.

Later in the book, Stanley proves himself a strong and articulate advocate of a particular mode of evolution termed "punctuated equilibria." In essence, this process suggests that evolution proceeds by abrupt large steps, rather than as a steady, gradual process. This latter mechanism is that favored by traditional Darwinians, but Stanley suggests with substantial evidence in support that an irregular, episodic course is more realistic. The fossil record with its noted

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"gaps" (so dear to the creationist argument) is better understood in terms of unevenly paced evolution; biochemical data now is regarded as support for this concept.

Stanley extends this argument to the history of our own species. The fossil record here is controversial, at the very least. Nonetheless, Stanley produces an evolutionary scenario which is believable, if not at present supportable.

This book is well written and reads very easily. I heartily recommend it to anyone who is skeptical of both doctrinaire evolution and the shrill overstatements of the creationists.

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Sacred Sands: The Struggle for Community in the Indiana Dunes. By J. RONALD ENGEL. Middletown, Conn.: Wesleyan University Press, 1983. 352 pages. \$22.95.

Sacred Sands is a welcome contribution at once to religious studies, environmentalism, and American history. J. Ronald Engel narrates a great story, one of the longest and most bitterly contested environmental conflicts in history—the struggle to save the Indiana Dunes, which are adjacent to Chicago on Lake Michigan, from their almost inevitable destruction by the expanding metropolitan area. Nearly a century of conflict between advocates of the public welfare and private industry's trespass and usurpation of the dunes led eventually to the establishment of the Indiana Dune State Park and Indiana Dunes National Lakeshore.

The campaign involved some notable Americans: Carl Sandburg, Jane Addams, Jens Jensen, Stephen Mather, Harriet Monroe, Donald Culross Peattie, Edwin Way Teale, Henry Cowles, Senator Paul Douglas, and thousands of lesser known patriots who valued something more than urban sprawl: a vision of a great city and a great dunescape both in community, each with their integrity. A good historian, Engel not only has thoroughly researched his facts, but he also weaves them together for a connected account. *Sacred Sands* is not only a chronicle of events, but finds a worthy plot in this chapter of American history. Reviewing the decades, Engel asks not so much What next? as So what? He detects what is going on in events taking place.

Engel's thesis is that the struggle to save the Dunes is an instance of American civil religion. In a metaphor borrowed from Mircea Eliade, used repeatedly throughout the book, the Dunes became a *sacred center*. Here is his argument:

For those in Chicago who sought a new revelation of the God of democracy in the opening years of the twentieth century, the decisive manifestation of the sacred could be no other than social democracy in the making. In the variegated, ever-changing panorama of the Dunes landscape, they found a place that peculiarly exemplified and enriched their vision of the community-forming Power at the heart of existence. Here, in a remnant of wilderness that felt remote, yet was close by, the ultimate truth of the evolutionary adventure of life seemed dramatically apparent. The end of human striving was to achieve a co-creative community in partnership with a co-creative world. In the

twentieth century, the Dunes became a sacred center for adherents of the religion of democracy in the Midwest (p. 87).

All good symbols, especially those at sacred centers, have layers of meaning. I will isolate two at the Dunes, to register appreciation for the one and some puzzlement (but not without appreciation) for the other. The Dunes undoubtedly served to generate religious experiences in those who loved them. Even among those whose visits were more explicitly recreational, the religious dimension was often tacit. Engel has ample documentation of this power in the Dunes. Further, since I myself have experienced the capacity of pristine nature to provoke religious experience, I find this eminently plausible, especially since Chicagoans, immersed in the built environment, had otherwise so little opportunity to confront spontaneous nature. All the more then, that they should value contact in the Dunes with "some creative force beyond human ken" (p. 120).

This sacred center was a place of refuge from the artificiality and excesses of the city, a place to encounter the aboriginal "Power at the heart of existence" (p. 87, 109). "The primordial *act of creation* goes on continually in the Dunes" (p. 121). One wants winds, water, sand, sky, a living evolutionary ecosystem, not only for scientific study, not merely for recreation, but as a sacrament of God. One wants "a primeval wilderness" side by side with "seething civilization" (p. 237), and the more seething the civilization the more valuable the primeval wilderness. It provides religious experiences for which there are no substitutes in town, not even in the Chicago churches. So, at the time of the Dunes' greatest peril, Sandburg pleaded, "They constitute a signature of time and eternity: once lost the loss would be irrevocable" (p. 117).

When we turn to the Dunes as a symbol of civil religion, beyond their signature of time and eternity, Engel's claim is also to be commended, but somewhat amended. The fight to save the Dunes was a fight against rampant, triumphant industrialism, not against industry as such but against industrialization of the last acre, as if humans had no other modes of interest and encounter before the natural world than to eat it up in the name of economic growth. This was a citizens' against a consumers' vision of the world, a fight for public welfare against private interests, a fight for multidimensional persons rather than one-dimensional ones, for community within capitalism. In this sense, the struggle to establish the social good (including those values associated with wildness in the Dunes) was, in the words of Engel's subtitle, "the struggle for community in the Indiana Dunes." Though a wild ecosystem, the Dunes became also a cultural symbol. Saving them represented the civil will in conflict with the industrial will, and it is possible to interpret the Dunes as a cultural symbol of social democracy. Edwin Way Teale accurately observed, "The long fight to save wild beauty represents democracy at its best. It requires citizens to practice the hardest of virtues—self-restraint" (p. 213). Engel wants to establish "an ethic that links the imperative of social justice with the imperative of environmental preservation" (p. xviii). In this he is impressively successful.

But this second layer of meaning goes further. It is not merely in the *struggle to save the dunes* that social democracy is exemplified, but the *Dunes themselves* are taken to manifest a communal virtue—they reveal something to humans about community. There is some genuine connection between community found naturally in the Dunes and community forming socially in the American democracy. The Dunes are "a manifestation of the *community-forming* Power at

the heart of existence" (*italics added*) (p. 87) evidenced naturally in the wild, evidenced socially in the building of a democratic Chicago.

By the argument of Henry Cowles, who helped found the science of ecology with the study of plant succession in these Dunes, "The struggle for community in the world of plants was like the struggle for community in the world at large" (p. 149). By the account of A. F. Knotts, who "articulated the perception of the Dunes as the image and axis of the world," they were "the place where the sacred history of participatory democracy was symbolically represented in the landscape" (p. 109-10). The Dunites "conceived the meaning of democracy to be equal freedom in community, or the 'cooperative commonwealth,'" and this became their primary interpretive category for interpreting all phases of existence, from the natural landscape to Chicago society. "The authentic vision of community inherent within the democratic experience was larger than human community alone. They yoked the revolutionary ideals of freedom, equality, and fraternity to the ecological principles of unity and interdependence among all forms of being." A "prophetic" and "comprehensive vision of community . . . was associated with the Dunes landscape" (pp. xviii-xix).

Many of us know the social model as applied both to ecosystems and to society. I have used it myself, I hope with discretion and profit. Both the dunescape and America are communities, and there are relevant analogies between the two. In both ecosystem and society there is succession, struggle, pluralism, independence amidst interdependence, give and take, novelty, experiment, adventure. But is there equality? Is there freedom? Perhaps. Wild animals are free, uncaged. They do what they please, and there are no prohibitions of traditional class and status, nor privileges of wealth, although there are sometimes dominance hierarchies. But neither does anything grant nor respect another's right to be free or equal. Is there cooperation? Is there a commonwealth? The members of an ecosystem operate together willy-nilly, blindly; their functions and roles are interwoven. But they do not deliberately cooperate for the common good, as must the members of a human society.

There both is, and is not, a commonwealth. Jensen's council ring, where equals come together in dialogue (pp. 200-206) may be a fine symbol of human society, but it really has no analogue in the dunes ecosystem. The equal freedom in community, the "brotherhood of all living things" (p. 201), if such there is in the wild dunes, is not illuminating about what equal freedom in community in a metropolitan society should mean. It is as discontinuous as continuous with it. There are many limitations to the social model of a "cooperative commonwealth" alike in the dunes and in Chicago, and I wish that Engel and/or his Dunites had better recognized the limits of the symbolic connections.

Natural objects which become cultural symbols express the qualities they bear with mixed authenticity and analogy. Thus the eagle is a symbol of American strength and freedom, and there is some legitimate sense in which the eagle itself is strong and free. But the alligator is a symbol of Florida and the connection is hardly more than accidental. Are there qualities in the alligator that Floridians seek to emulate? Horsetooth Mountain provides the logo for Fort Collins, Colorado. It is a local preserve and park as a result of a citizens' fight against development there, but the city fathers do not expect to learn from the mountain, or from the ecosystem it supports, anything about the conduct of the city government.

Sometimes natural objects actually bear in their own objective way some form of the reality they come intersubjectively to symbolize for a culture; sometimes

they are simply assigned the value they embody. The Dunes are a complex and mixed case. There is perhaps something to be learned in the Dunes community struggle that is transferable to Chicago social affairs—concepts of interdependence, recycling, parts-in-wholes, homeostasis, reciprocity, adaptedness, pluralism, openness, experiment, succession, associational life, and the like. Engel wants to claim that ecological science, emerging in the Chicago area, helped influence the vision of the open, progressive, experimental democratic society; and, vice versa, the social vision fed into the science of ecology at Chicago, with its stress on succession, struggle, cooperation, pluralism, and so on. In this Engel has given us much to ponder.

Still, the disanalogies between ecological communities and sociological communities are as significant as the analogies. In the Dunes biological community there is no social policy, no government, no intentional cooperation or lack of it, no interpersonal relations, no moral capacity, and therefore no moral culpability, neither egoism nor altruism. There is neither justice nor injustice, no civil law, no evil grafted onto power, no one to have visions of what ought to be beyond what is. The forces that bind the Dunes organisms together are merely biological even when they are ecological; the forces that bind Chicagoans together are social in a much richer sense. Human community, with its vision of social democracy, is a marvelous emergent over anything known in plant or zoological communities.

Thus to say that Chicagoans looked to the Dunes for a manifestation of “the community-forming Power at the heart of existence” is true but only within limits. Let us grant that the Dunes did indeed become a sacred center for the civil religion of democracy. But the Dunes were assigned more value than they actually carried. In an ecosystem, there is simply not enough manifestation of the Divine community-forming power to guide a democracy. Though a symbol of civil religion, the Dunes are in fact an uncivil place. Such wildness is precisely part of their beauty, in contrast, not alliance, with the civility desired in Chicago.

Let us indeed appreciate ecosystems. Let us love water, sand, wind, and sky. These experiences give us a sense of proportion and place, of awe and grandeur, of time and eternity. But they are not sufficient to civilize us. Chicagoans needed more and genuine civilization, as much as encounter with primeval nature. Here the civilizing forces, opposed (in part, not in whole) to the industrial forces, found their focus in the struggle to save the Dunes, more than in the Dunes themselves. At the same time, the Dunes did provide a place for Chicagoans, incited to religious experiences there, to become something more noble than merely economic human beings. Engel knows these things, but one could wish that the analysis had faced this issue more directly.

Nevertheless, *Sacred Sands* is eloquent and powerful, a story of Chicagoans past and their landscape, but with present moral message and vision for Americans in their landscapes everywhere.

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The Cosmic Serpent. By VICTOR CLUBE and BILL NAPIER. New York: Universe Books, 1982. 299 pages. \$17.95.

At the end of the prologue to this book, the authors caution us that "there is something here to outrage everyone" (p. 5). Indeed, when I initially examined this volume, my first impression was that it was unworthy of review in *Zygon*. However, when I plunged in nonetheless, what I found, despite the awful title, jazzy cover, and prefatory warnings, was quite an interesting though controversial book on a timely subject.

The discipline of paleontology is now in the midst of a possible paradigm shift. During the last few years it has become fashionable to look to the cosmos for solutions to the great mass extinctions documented by the fossil record. In particular, ever since the Berkeley physics group, led by Luis Alvarez, published in 1980 some intriguing data suggesting that the dinosaur species perished in the aftermath of an impact of an asteroid with earth some 75 million years ago, many researchers have come forth with a variety of cosmic proposals for disaster and destruction on our planet.

The scenario is thus: an extraterrestrial object collides with a landmass on earth, kicking up a huge amount of dust into the upper atmosphere, thereby terminating photosynthesis, various food chains, and ultimately certain species of life. Depending upon the model, the object can be an asteroid or a comet, while the collision can hypothetically cause havoc in any number of ways in addition to raising dust, including heating or cooling the climate, altering earth's internal spin, and even collapsing the Van Allen belts.

These notions are not science fiction; astronomers know of, and carefully monitor, at least two dozen stray bodies of rock (called the Apollo asteroids) that routinely cross earth's orbit and that are therefore statistically certain to collide with our planet at some time in the future. Presumably, at earlier times, when our Solar System was more abundant in debris left from its formative stages, collisions between earth and such stray bodies would have been relatively common. Indeed, if we think big enough, namely over large enough timespans, such collisions are still relatively common.

Among many problems plaguing the asteroid-extinction idea of Alvarez and others, two come to mind. First, the sedimentary deposits of the rare element iridium found at the Cretaceous-Tertiary boundary are not uniformly abundant at every location sampled; if the iridium rode in on an asteroid, was lofted into the atmosphere, and thereafter rained back down to the (nearly iridium-free) ground, why are not the iridium deposits uniform? (When Mount Saint Helens erupted and sent dust particles to high altitudes, the ash became uniformly distributed across the entire northern hemisphere very quickly, much as we expect even a limited nuclear exchange to create a widespread winter throughout the hemisphere.) Second, no one has found a crater having an age of roughly 75 million years; satellite photographs have revealed dozens of huge craters on earth, most of them heavily eroded, and some of them are older than 75 million years. If the dinosaur-killing asteroid more probably "landed" in one of the oceans of our planet, then how did it manage to raise enough dust to shut down photosynthesis, let alone play havoc with whole species of animal life forms?

In the present volume, Edinburgh astronomers Victor Clube and Bill Napier propose that, instead of an asteroid, the culprit was a comet. In fact they claim

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that comets have regularly visited catastrophe on earth, thus causing massive, rapid, and evolutionary changes on a global scale. They further suggest that such extraterrestrial bombardments have been so spectacular as to initiate myths, inspire prophets, and generally affect the ancients; aspects of their book therefore challenge established scientific thought, mythological and Biblical interpretation, as well as historical, archeological, and anthropological consensus.

As a scientist I can only realistically comment on the first half of the book wherein Clube and Napier discuss the astronomical perspective. To be sure, I found many problems here. The authors apparently feel the need to set the stage for their unorthodox cometary model by spending much time criticizing such standard astrophysical topics as big bang cosmology and star formation, while trying to resurrect yet again notions of a steady state universe. No doubt, their intention is to plant some seeds of doubt in the mind of the reader regarding the fabric of modern astrophysics. Unfortunately, only a professional astronomer is likely to appreciate the detail of their arguments and to understand their often brief alternative ideas (which I usually found unconvincing). Frankly, the authors weaken their case for the novel comet hypothesis because, by the time we get to the later chapters on the potential roles played by comets in earth's history, the reader is likely to have tired of incessant speculation.

The crux of their idea is that interstellar space—not just interplanetary space—is abundant in those dirty snowballs known as comets. Clube and Napier present some nice evidence for interstellar fragments, but I dare say that, if the objects they speak of were to hit the earth, our entire planet would likely be destroyed, not just a few species of life. They claim that, roughly every 50 million years, the number of cometary impacts should increase as our Solar System passes through those parts of our galaxy's spiral arms where their proposed comets are most abundant. Yet, when we look to the moon for uneroded evidence of such episodic bombardments, we find none. Nor does the 50-million-year interval of their proposal agree with the approximately 26-million-year interval now known to separate major periods of life's extinction on earth.

Criticisms aside, this book is interesting if only for its central theme: the modern astronomical setting in which we now find ourselves probably has profound consequences for our understanding of earth history. Biological evolution has likely operated in response to sudden, drastic, irreversible upheavals—much in keeping with the emerging view of punctuated equilibrium as an alternative to gradualistic Darwinism. Alas, it seems that George Cuvier and his catastrophist colleagues may have contributed something meaningful after all. To be sure, few can now deny that astronomical objects have made an earthly impact and will continue to do so; NASA has made it official by recently convening a conference that brought together astronomers and paleontologists under one roof—a rare feat.

Clube and Napier go on to speculate about how a hypothetical desert dweller, trying to formulate a sensible view of the world, would have been faced with the terrible phenomenon of cometary vision in the sky; surely, they argue, such celestial events would have dominated his or her theorizing, particularly with the darkened skies of nonlight polluted antiquity. In short, the authors claim that mythology can be considered as a history of comets and that, furthermore, the subject of astronomy and the literature of antiquity can benefit from mutual illumination. Interestingly enough, while speculating about the origins

of modern science and of modern religion, Clube and Napier suggest that "the supreme irony is that religion, in throwing away its multiplicity of gods, may have caused astronomy to lose sight of its multiplicity of comets" (p. 165).

In summary, this book is well written, although it is more a semitechnical volume than a trade book *per se*. I suspect that perspective is crucial in evaluating the final product. The wealth of controversial cosmic detail in the first half of the book might well overwhelm some readers of *Zygon*, whereas I found the back half abundant in intriguing speculation about myth, religion, and the like. Perhaps if a theologian or philosopher were reviewing this book, they would conclude much the opposite: the back end is somewhat flawed in detail whereas the early chapters are indeed thought provoking. In any event, Clube and Napier do attempt to speak to the two grand endeavors addressed by this journal and, in this respect, might well rate more than a casual glance.

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Boiling Energy: Community Healing Among the Kalahari Kung. By RICHARD KATZ.
Cambridge, Mass.: Harvard University Press, 1982. 348 pages. \$25.00.

The subtitle of this study accurately sets it apart from other writings on healing among hunting and gathering peoples. All Kung have the potential to become healers. Many of them do—some fifty percent of the men and ten percent of the women in the area where Katz worked. These persons heal themselves and others, especially within the medium of a communal dance that is attended by persons who, at the time, are resident in the sponsoring camp, as well as by neighbors. For the Kung, healing together is more than a metaphor for community. It is, in practice, a holistic version of community and of the social relationships of community, experienced often without competing intrusions that are produced by the social and instrumental exigencies of everyday life. Through their healing dance the Kung monitor themselves in a continuous sense, as individuals and in concert, in relation to personal ills and social crises. Katz, a psychologist by training, frequently lets them speak in their own name throughout the book. They do so with eloquence, dignity, and humor.

The Kung of this book live in the Kalahari Desert, in an area that straddles the border between Botswana and Namibia in Southern Africa. They almost are a prototypical hunting and gathering people. Local camps are organized around extended families. But the boundaries of kinship, like those of territory, are quite permeable; and Kung join with and depart from camps with relative ease. Kung have no formal institutions of leadership, of adjudication, or of the organization of work and production. Each family is responsible largely for its own subsistence needs. Yet, in a wider sense, all Kung in an encampment are responsible for one another's welfare. If social tensions cannot be resolved amicably, then the families of an encampment prefer to split up and go their separate ways, rather than to come to blows. Ownership of property is minimal and the sharing of resources is widespread, in keeping with the logic of generalized reciprocity. Those that have more share with those that

lack more, and there are few requirements of equivalency or of time in such exchanges. If some status accrues to givers of resources, this is temporary, for they likely will become receivers as the vagaries of hunting and gathering shift within short periods. All of the above attributes are consistent with an insistent persistence of egalitarianism that marks interpersonal conduct and activity among these people.

Katz remarks that the Kung have no tradition of shamanism. But what is fascinating about the Kung is that while their culture has many of the attributes of shamanism—as anthropologists understand this to be found among numerous hunting and gathering peoples around the world—the Kung product is quite different. Instead of locating the power of healing especially in the individual healer, as tends to be the case in such societies, the Kung expand on the epistemology of power to insist that its magnitude and efficacy increase when persons dance and sing in concert and when the activated power of the individual is shared for the benefit of the collectivity.

If Kung healing is comparable in many ways with shamanistic traditions among other hunting and gathering peoples, then one wants to know what it is about this culture that makes Kung healing quite different. The following attributes of Kung healing are all consistent with such shamanistic traditions. Although every Kung has the potential to become a healer, this power must be sought actively. In this search the novice is helped by a teacher who trains him in the activation, the control, and the use of power. To be in the mode of power is always an extraordinary or transcendental experience, one that the Kung equate with death. The experience is painful and to be feared. The control of power in this condition is equivalent also to one's being in command of oneself; and therefore it is the overcoming of death. Healers die time and again, and are reborn. In the transcendent condition, the soul of the healer journeys to the gods and to the ancestral spirits, who are prime causes of illness, and with whom the accomplished healer bargains and battles for the health of the patient. An experienced and powerful healer can see the sickness within others, can pull out this sickness, and can take it into his own body before banishing it beyond the circle of community. The power that heals can be used also to injure and to kill. A powerful Kung can shoot this power into another and sicken him. Apparently the most powerful healers of the past (and perhaps of the present) could change into lions that stalked humans. Moreover, there are hints in Katz's account that a person's power can kill without his being aware of this. In anthropological terms, the Kung conception of power allows both for sorcery and for witchcraft. What then distinguishes the place and power of healing among the Kung from that of many other hunting and gathering peoples? Katz is adept at describing Kung healing, but he does not address the question of how it is that, as a hunting and gathering people, the Kung have their special form of healing. Since he considers that this tradition is necessary to Kung survival (p. 199), and since Kung ecology, social organization, and aspects of healing are not dissimilar from other hunting and gathering peoples who lack certain crucial attributes of Kung collective healing, the query is important.

The Kung have *num*. This translates roughly as "energy." *Num*, located around the base of the spine, is dormant until it is heated. Dance and song help to do this. This energy boils, vaporizes, and rises up the spinal column to the head. The experience of boiling energy is called *kia* by the Kung. *Kia* is the altered state of consciousness that allows the healer to perceive sickness, to pull this out and to dispose of it, and to perceive and relate to gods and spirits.

Although it is usually the women who sing and it is the men who dance within the circle of women, all support the entry of healers into *kia*, and in the doing of healing. The group goal is the controlled release of as much *num* as possible, within the singing circle, for the benefit of all. In this regard the use of *num* has a multiplier effect: its presence on behalf of others stimulates the release of still greater and more intense amounts of this energy. The sum of *num* is much greater than the contributions of this energy by individual healers. Healing is not done only for persons who are evidently ill. Healers “pull” sickness (in terms of its widest physical and psycho-social referents, in Western parlance) wherever they perceive its incipient presence. Therefore, through the dance the collectivity heals itself as both a transcendental and a social entity. Katz calls the dance an “organic event” and refers to traditional Kung healing as “synergistic”—the generation of a gestalt that is greater and more powerful than the sum of its parts.

The dance of healing is a microcosm of the Kung world: a version that selects out themes that embody Kung values of egalitarianism and sharing; and that integrates these without the necessary inclusion of other competing themes that mediate the experience of such values in everyday living. There is no need to insist, as Katz sometimes seems to imply, that the dance is a direct reflection of Kung culture. Instead, it is more akin to a model of aspects of Kung life that operates on people as they participate within it. The systemic relationships, that my use of “model” connotes and that I think inform the synergistic gestalt, likely are better understood in more cybernetic-like terms. The dance appears to be a complex arrangement of positive and negative feedback-loops that are regulated, in an abstract sense, by the parameters of the dance itself. Participation in the dance, healing, and being healed in ways that monitor closely the life-situations and social relationships of persons, are of great importance to Kung. Healers dance very much as individuals, while their achievement of *kia* and their use of *num* is, generally speaking, a matter of individual adeptness and accomplishment. More advanced healers can regulate their own entry into *kia* and the use of *num* to a greater degree; less adept healers need more help. The mechanisms to help dancers to reach *kia*, and then to control their boiling energy for the good of the collectivity, are embedded in the structure of the dance, as this is put together, primarily by the women. They sit in a closed circle that contains, reinforces, and magnifies the release of energy, which is done primarily by the male dancers within the circle. The rhythm, pitch, and tempo of their singing raise dancers to *kia*, prevent them from entering this condition too quickly, and take them out of this condition, when necessary for their own welfare.

In other words, the women contribute both positive and negative feedback, as these are required, in order to help, to protect, and to regulate the dancers. As the singing of the women acts on the dancers, so their dancing acts on the collectivity that includes the women. Such feedback integrates an event that then transcends individual participants, and that therefore can act on them as a collectivity. A more systemic approach to the dance may help to explain why so few women become healers, since their activity is primarily that of orchestration and regulation. In general, the women seem to be the most aware of moments that require the positive feedback of the intensification of energy, as well as those that need the negative feedback of control. This kind of activity seems more difficult to accomplish when one is in the transcendent condition of *kia*.

Katz documents, in a valuable chapter, what happens to this kind of healing as Kung are drawn into wage-labor and the cash economies of their Herero, Tswana, and white neighbors. The key terms here are individuation and hierarchization. The Kung healer, as an individual, becomes a relatively autonomous unit. To such persons prestige continuously accrues. These healers begin to treat individual patients, rather than a collectivity, on a fee-for-service basis. These healers then are tempted to withhold and to conserve their energy if there are no immediate rewards. As the balance of labor in hunting and gathering is upset, women become relegated to household chores. Likewise, their roles in the dances of autonomous healers become subordinate and supplementary: they take their orders of performance from the healer. The dance format is no longer circular, but more open and linear. In effect, the individual healer, as a profit-making being, becomes a kind of little system in himself: one that is relatively self-regulatory and autonomous of the collectivity. The synergistic gestalt of the collectivity evaporates, the residuum of the boiling energy of the individual healer remains.

These effects place a question mark next to Katz's discussion of what we westerners can learn from the Kung approach to healing. He singles out the community psychiatrist as the closest counterpart that we have to the traditional Kung healer. Katz is well aware of the radical differences between the two. However he persists in perceiving the community psychiatrist as a professional and professing individual, who is defined, trained, and paid as such, but who nonetheless treats collectivities and so who can be compared, more or less, to the traditional Kung healer. However, the western community psychiatrist exists as part of an individuated cosmology and social order—one in which, despite all the rhetoric about the functional interdependence of persons in daily life, the individual also is understood to be a little system in itself whose autonomy is limited, first and foremost, by the objectivization of hierarchy, expressed as abstract ideology, of whatever persuasion. The systemics of western social setups tend to be understood either as intrapsychic or as extrapersonal, but rarely as interdependent in ways that simultaneously make a difference both to the individual and to the maintenance and renewal of social order. Almost all of the evidence that Katz presents for traditional Kung healing points to the converse. Therefore Katz begs the comparison, and one asks whether it should have been part of the book.

The book is an intriguing and useful contribution to our knowledge of healing, but it makes one aware of the extent to which professional persuasions influence the discourse of question and understanding. With all the recognition of culture that this study espouses, it still is the product of psychologistic sensibilities that perceive the individual as the significant unit of social order. The latter then becomes an abstraction of only limited relevance to daily life, instead of an index of existence that continually informs the lived-in realities of persons.

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Beyond the Post-Modern Mind. By HUSTON SMITH. New York: Crossroads Publishing, 1982. 201 pages. \$14.95.

The essays collected in this volume represent Huston Smith at his best. They are vintage efforts which display that rare admixture of profound erudition expressed in the pleasant and engaging manner that affords accessibility to diversely literate audiences. Undoubtedly Smith's background contributes to this facility. He was born in China, the son of parents serving there as missionaries. He is a recognized scholar in comparative religion who did graduate studies at the University of Chicago, and he is an educator who has taught the humanities at Washington University, the Massachusetts Institute of Technology, and Syracuse University where he was the Thomas J. Watson Professor of Religion and Distinguished Professor of Philosophy until his recent retirement. Smith has written these essays with the inviting challenge of a committed believer, from the depth and breadth of his comparative scholarship, and out of his educative concern for the human and the humanities; and he has presented them at a time when few, if any, of these values are held in high esteem either in academe or in our culture at large.

Even though these essays were written over a period of two decades and for varying audiences, they possess an inner coherence insofar as they defend an underlying thesis and promote a correlative vision of reality. The thesis is that contemporary Western cultural assumptions, the "Post-Modern Mind" of the book's title, are madly askew because of the loss of transcendence. The vision of reality is the "perennial philosophy" or, as Smith termed it in his *Forgotten Truth* (New York: Harper & Row, 1977), the "primordial tradition." The latter, in addition to being the inspirational source for his reading of the contemporary scene, serves as the context wherein Smith finds his prescriptions for curing the ills of the post-modern mind. The former is more profitably understood as a diagnostic tool, enabling Smith to offer us illuminating analyses that penetrate to some of the fundamental causes of our contemporary cultural malaise.

In my estimation these two facets of Smith's essays, that is, their thesis and vision of reality, are separable and should be kept distinct. My reason for this judgment is that many, as I do, may find his arguments in support of the primordial tradition a bit weak. Nevertheless, if my contention is valid, his thesis regarding the deficiency of the post-modern mind can still stand to the extent that it is not dependent upon the support of specific elements of the primordial tradition. A closer examination of his work should clarify this claim.

Evoking the opening lines of Dante's *Inferno*, Smith entitles the first section of the book "Dark Wood." By this he means to convey the sense of loss and the need for guidance in our present cultural situation. The first essay aims to do this by contrasting assumptions of the post-modern mind with those of the earlier classical, Christian, and modern-scientific world views. At its core the post-modern mind seems to hold that reality is not ordered in any objective way discernable by human knowledge (p. 15). The traditional notions of a cosmic or moral order have been lost. All this is reflected in much of our contemporary literature, art, and philosophy. In an essay originally written for a Charles Hartshorne *Festschrift*, he further argues that some comprehensive, metaphysical vision is necessary for human survival.

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In the second part of this book, entitled "A Clearing," Smith introduces the notion of the perennial philosophy. Substantially this is the view that the metaphysical, psychological, and ethical perceptions of Vedantic philosophy are universal to humanity. Some of its specific elements include the beliefs that reality is hierarchically ordered, with all levels of beings dependent upon the highest being, that the human person is a microcosmic mirror of the larger cosmic hierarchy, and that the point of life is to effect a return to the absolute ground of all reality. Functionally what the notion of the primordial tradition does for Smith is to provide a coherent system for encompassing all of reality, including spiritual reality, into an experientially meaningful and intellectually satisfying whole.

Upon these two footholds Smith has established a perspective that provides him with "an angle on our times" (in part three) and (in the last part of the book) permits him to suggest a "way out." Some insights in these essays are provocatively and boldly stated as when he claims that the basic problem of the post-modern mind is that it has placed its faith in science (p. 68)! By this he seems to mean that our belief in science has effectively cut off our openness to transcendence because the very limitations inherent in the scientific methodology do not permit such a thing as a scientific world view (p. 109). Smith, it must be emphasized, is not an antiscientific obscurantist. Such brash assertions are mitigated somewhat when he makes the standard distinction between *science* and *scientism* (e.g., pp. 68, 110) and offers a suggestion for taking science symbolically (p. 122). But I suspect that Smith's provocative language has caught something about our culture we normally overlook—namely, the belief our culture places in the scientific enterprise tends to make all of us restrict knowledge and reality to the empirically observable. Perhaps the hidden agenda in Carl Sagan's *Cosmos* (New York: Random House, 1980) is a good example of what Smith is pointing to.

Another suggestion of a different sort illumines academe's concern with the movement among our students toward "vocationalism." While many reasons may be adduced for this tendency, Smith argues that a fundamental reason is that the loss of the primordial tradition in the West has effectively shrunk our consciousness to the point that knowledge becomes that which facilitates control. To the extent that education conforms to what we think knowledge and reality are, to that extent has vocationalism grown and the "impractical" (or even "unreal") humanities withered (pp. 79-83).

A final illustration of the value of Smith's analysis may be found in his contention that science (again because of its pervasive cultural form as scientism) and religion are still in great tension (pp. 108-22). The attempt to study religion from the vantage point of scientific methodology tends to work to the detriment of religion. Smith fears that what usually occurs in this case is that religion must accommodate itself (in H. Richard Niebuhr's sense) to the loss of transcendence (pp. 118-19). Again, Smith proposes this tentatively, but an examination of the assumptions and practices of many departments of religion (not to mention sermons) might support his claim.

These are merely a sampling of the perceptions Smith offers to his readers on the character of our contemporary world view. They urgently call for some way of moving beyond this post-modern mind. As we have already indicated, his suggestion consists in accepting the teachings of the primordial tradition, variations of which he believes lie at the heart of all the great traditions of humanity, so that our consciousness might be enlarged to encompass reality in

all its richness and sublimity. The weakness of such claims to universality have been exposed by Steven Katz in his groundbreaking essay, "Language, Epistemology, and Mysticism" (in *Mysticism and Philosophical Analysis*, pp. 22-74. [New York: Oxford Univ. Press, 1978]). To be sure, Smith is aware of the difficulty and offers a half-hearted response (pp. 35-36). The efficacy and power of this position in his own life have probably made this a less pressing issue than the crucial one of offering an alternative to our present defective state of consciousness. This may have the unfortunate effect of leading some readers to miss Smith's point.

To understand his point more clearly, it may help to recall my earlier contention that the specifics of the primordial tradition are separable from Smith's thesis and then to consider this incident from the recent past. When Karl Rahner first proposed his notion of the anonymous Christian to the Roman Catholic theological community, it was a catalyst for a major breakthrough because of its capacity to allow thinkers to take the beliefs of other traditions seriously. In time the notion itself was judged to be defective, and new systematic formulations were sought; but the notion itself had served its purpose. I believe Smith's position can be judged in an analogous way. He has not quite been successful in making the case for the universality of the primordial tradition as the way out—a judgment which he is quite willing to accept (p. 158). What Huston Smith has disclosed for us in a rather convincing manner, however, is that the fundamental issues of our time are spiritual; and for this we may all be grateful.

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Notice

The Institute on Religion in an Age of Science will conduct a symposium on RELIGION AND IDEOLOGY IN THE FUNCTION AND MANAGEMENT OF AGGRESSION AND COOPERATION IN BIOCULTURAL EVOLUTION at the annual meeting of the American Association for the Advancement of Science, May 1985 in Los Angeles, California. Details of the AAAS program will be published in *Science*. The IRAS symposium is being chaired by Kenneth E. Boulding, Department of Economics, University of Colorado, and Solomon H. Katz, Department of Anthropology, University of Pennsylvania. The symposium continues an IRAS series on this topic held at AAAS meetings, and it is also related to the topic of the 1985 IRAS Star Island Conference (see Announcement, this issue of *Zygon*).