

HINDU AND CHRISTIAN CREATIONISM: “TRANSPOSED PASSAGES” IN THE GEOLOGICAL BOOK OF LIFE

by C. Mackenzie Brown

Abstract. Antievolution arguments of Christian and Hindu creationists often critique Darwin’s metaphor of the geological record as an ill-preserved book of life, while highlighting the problem of anomalous fossils. For instance, Bible-based young-Earth creationists point to anomalous humanlike prints alongside authenticated dinosaur tracks to argue for the creation of all life some few thousand years ago. But Vedic-based ancient-hominid creationists view the same sort of evidence as indicating the existence of all species, including the hominids, billions of years ago. I examine the roots of this Hindu Vedic creationism and its recent elaboration among scientifically minded members of the International Society for Krishna Consciousness (ISKCON). Similarities in the methods and rhetorical strategies of the two creationist groups are considered, as well as the underlying motives that have brought together such otherwise disparate religious worldviews.

Keywords: creationism; Darwinism; evolution; fossil prints; Hindu creationism; International Society for Krishna Consciousness; scientific creationism; young-Earth creationism.

PROBLEMS IN THE FOSSIL BOOK OF LIFE

For Charles Darwin the lack or rarity of transitional organic forms in the fossil record posed one of the major challenges to his “theory of descent with modification.” But in his view this difficulty was not insurmountable, because of the “imperfection of the geological record” ([1859] 1968, 205–6). Expanding on a metaphor from his great mentor, geologist Charles Lyell, Darwin likened the record of the rocks to a badly preserved, multi-volume history of the world, written in a slowly changing dialect, of which

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we possess only the last book.¹ Regarding this, Darwin wrote, “Of this volume, only here and there a short chapter has been preserved; and of each page, only here and there a few lines” ([1859] 1968, 316). Moreover, in Darwin’s time the systematic investigation of the geologic record had just begun, so that the one available volume covered only “two or three countries.”

Creationists of various persuasions have selectively embraced parts of Darwin’s metaphor in support of antievolutionary worldviews. The metaphor is elaborated, for instance, in a 1984 article entitled “The Record of the Rocks,” which argues that “a close examination of this geological history reveals the equivalent of missing pages, garbled transcriptions, and transposed passages. In the end, it’s not so clear that the record supports evolution at all.” The authors of the article use the metaphor of the book of life not to explain why the fossil record of transitional forms—forms expected to be abundant by the theory of evolution—is so incomplete but rather to point to the incompetence of evolution as a *scientific* theory. Although this is a common argument among Christian creationists, what is noteworthy about this statement is that it comes from a group of emerging Hindu antievolutionists, led by Richard L. Thompson and Michael A. Cremo (see Thompson, Drutakarma dasa, and Bhutatma dasa 1984c, 49).²

A frequent claim of both Christian and Hindu creationists is that evolution, far from being a scientific theory, is a *religious* hypothesis or belief. While they acknowledge, even insist, that the “religion of evolution” is atheistic, they argue that its faith dimension is revealed in its metaphysical assumption of materialist reductionism—that life, consciousness, mind, and emotion are reducible to, or mere epiphenomena of, material reality. Creationists stress that as a consequence of such a faith assumption, the beliefs of evolutionists are highly resistant to change even in the face of new and contrary evidence. So entrenched are the a priori assumptions of atheistic evolutionism that anomalous findings are ignored, dismissed, or even suppressed. A prime example, according to creationists, is that of humanlike prints appearing in geological strata of an age far older than that allowed by standard evolutionary reconstructions of hominid history. Let us look at a few such instances.

MISPLACED FOOTPRINTS IN THE CRETACEOUS AND CAMBRIAN

Near Glen Rose, Texas, in and along the Paluxy River there are a number of dinosaur trails embedded in Cretaceous rock, known since early in the twentieth century (Shuler 1917).³ The Paluxy site gradually became a cause célèbre among scientifically minded biblical creationists following a 1939 report in *Natural History* showing “mysterious, 15-inch man-like tracks” in rock slabs that came from the Glen Rose area (Bird 1939, 256; quoted by Numbers 1992, 121).⁴ Were such prints in these Cretaceous slabs con-

firmed as truly human, the whole modern reconstruction of geological history and biological evolution would be called into serious question. The Seventh Day Adventist Clifford L. Burdick (b. 1894), one of the earliest creationists to investigate the Paluxy phenomenon, felt no uncertainty about the human identity of the track-makers. In a 1950 article in the Adventist periodical *Signs of the Times*, accompanied by his own photograph of the mysterious slab prints, Burdick confidently declared, “Finding human tracks and dinosaur tracks in the same formation prove[s] them contemporaneous, rather than separated by from 60,000,000 to 120,000,000 years, thus collapsing the geological age theory. . . . [W]ith the collapse of the geological age theory, the generalization of organic evolution also collapses” (1950, 9).⁵

Unfortunately for the creationists, the Paluxy man-tracks have proved highly problematic. On the one hand, at least some creationists were concerned about the implications of Burdick’s conclusions for their own (and Burdick’s) Mosaic version of geologic history, the “flood geology” propounded early in the twentieth century by the Seventh Day Adventist George McCready Price (1870–1963). From the perspective of flood geology, it was unclear how human beings could have been walking about or have left footprints in the midst of the Noachic flood, when the sediments were supposedly deposited (Numbers 1992, 121–22, 265). On the other hand, the tracks on loose slabs have turned out to be carved imitations (Godfrey 1985, 16, 19–21), and the humanlike tracks that are still *in situ* are obscured and indefinite.⁶ While noting that the Paluxy tracks may be inconclusive, many creationists have insisted that the Paluxy principle—of footprints geologically misplaced according to modern evolutionary theory—is sound: one authenticated instance would prove devastating to accepted geologic dogma.⁷ Accordingly, they have sought better and even more startling evidence from other sites.

Two more recent antievolutionists, the Hindu creationists Thompson and Cremo, for instance, call our attention to the findings of humanlike prints in the Upper Carboniferous (320–287 million years ago) on a once-sandy beach in Rockcastle County, Kentucky. Citing three specific measurements of the size of the prints and a general description of the overall shape of the Rockcastle tracks, the two creationists conclude, “These humanlike tracks are thus quite distinct, unlike the more famous but indistinct Paluxy ‘man tracks’ . . .” (Cremo and Thompson 1998, 455). Such humanlike prints, if genuine, would bridge over some 300 million years of the standard geologic column. The same authors point to perhaps the ultimate evolution-smashing piece of misplaced-footprint evidence: an apparent shoe imprint found in the Wheeler Shale of Utah, contemporaneous not with the relatively recent Cretaceous dinosaurs or even with Carboniferous amphibians but with denizens of the much earlier Cambrian period. “Clearly visible within the imprint,” Cremo writes, “were

the remains of trilobites. . . . The shale holding the print and the trilobite fossils is from the Cambrian, and thus would be 505 to 590 million years old” (1998, 810).

Imagine human beings walking along ancient ocean shores over half a billion years ago, and with at least some rudiments of culture, as evidenced by their shoes—an astonishing prospect for mainstream evolutionists. It is perhaps more astonishing for young-Earth biblical creationists like Burdick, for whom the earth is a mere 6,000 to 10,000 years old. For Cremo and Thompson use the misplaced footprints not to collapse, that is, eliminate, millions of years in the geologic column but rather to bridge or span hundreds of millions of years and three major geologic eras, from the early Paleozoic (the Cambrian) to the most recent periods of the Cenozoic. They accept and emphasize the enormous stretch of time involved as construed by modern science but simply deny any significant evolutionary development from one era to the next in support of what may be called an ancient-hominid view of terrestrial history. Nonetheless, both young-Earth and ancient-hominid creationists agree that the fossil record—the geologic book of life uncovered by scientists over the last two centuries—testifies against the Darwinian theory of naturalistic evolution.

Whereas creationists accuse scientists of ignoring or suppressing such evidences as the Cretaceous, Carboniferous, and Cambrian humanlike prints that raise doubts about the slowly changing dialect of Darwinian evolution, suppression can be practiced by all sides. The Hindu creationists, well aware of this possibility, often go to great lengths to avoid incurring similar charges against themselves, charges that have often been made against Christian creationists. While openly admitting that they emphasize the “merits of the anomalous reports” and tend to stress the faults in the accepted or establishment interpretations of the data, Cremo and Thompson assert that “we have not suppressed evidence indicating weaknesses in the anomalous findings. In fact, we extensively discuss reports that are highly critical of these findings, and give our readers the opportunity to form their own opinion” (1998, 25).

Thus, in the case of the misplaced “shoe print” with embedded trilobite, Cremo and Thompson quote from several scientists who dismiss the print as an accident of weathering and spalling. Some of the scientists quoted, by their own admission, had not directly examined the print. Thompson, however, personally inspected the print and found “no obvious reason why it could not be accepted as genuine” (Cremo and Thompson 1998, 812). Cremo concludes that many scientists are guilty of jumping to conclusions without looking at the evidence, a “sin” that they often charge against the creationists. While not necessarily accepting the print as genuine, he concludes, “Some scientists have dismissed the print after only cursory examination. Others have rejected it sight unseen, simply because its Cambrian age puts it outside the realm of what might be ex-

pected according to evolutionary theory. We suggest, however, that the resources of empirical investigation have not yet been exhausted and that the . . . print is worthy of further research” (1998, 812–13). Left unstated are Thompson’s qualifications as a geologist to assess the genuineness of the print. The argument also seems to assume the ability of readers—the average person using simple common sense—to judge the quality of the evidence.

It is not my aim in this essay to debate the merits of the claims of Hindu creationism but rather to explicate its basic premises, methodological approaches, and substantive ideas. To gain insight into Cremo and Thompson’s antievolutionary views, it will be fruitful to explore the source of their theories. Like its Christian counterpart, Hindu creationism is derived from an ancient and venerable spiritual tradition. The convergence of the two traditions in their opposition to naturalistic evolutionary theory may at first seem quite surprising, given the seemingly irresolvable conflicts between many of their fundamental doctrines. Yet, in view of their shared moral concerns about the modern secular world, perhaps the convergence was almost inevitable.

THE ROOTS OF ANCIENT-HOMINID CREATIONISM

Cremo and Thompson have always been open about the source of their theoretical outlook. In the introduction to his 1981 book *Mechanistic and Nonmechanistic Science: An Investigation Into the Nature Of Consciousness and Form*, Thompson reveals the mainspring driving his attack on evolution: “I argue that this theory has never been given a substantial scientific foundation, and that the idea of creation by an absolute intelligent being still provides the most reasonable explanation for the origin of biological form. This is in accordance with the philosophy of *bhakti-yoga*, which holds that all manifestations of form are generated by the Supreme Person” (1981, 9).

The term *bhakti-yoga* in general refers to various Hindu schools of devotional theism. Thompson’s own particular explication of *bhakti-yoga*, he tells us, is based on the teachings of his guru, A. C. Bhaktivedanta Swami Prabhupada (1896–1977), founder in 1966 of the International Society of Krishna Consciousness (ISKCON), popularly known as the Hare Krishnas (Thompson 1981, 7). The Supreme Person in the quotation above is thus none other than the Hindu god Krishna, the ultimate object of devotion and highest reality as revealed in such Vedic scriptures as the *Bhagavad Gita* and *Srimad Bhagavatam*, and as interpreted by Prabhupada. Cremo is even more explicit regarding the idea of an ancient-hominid creationism. He discloses that their spiritual master Prabhupada “encouraged us to critically examine the prevailing account of human origins. . . . From the Vedic literature, we derive the idea that the human race is of great

antiquity . . . we expressed the Vedic idea in the form of a theory that various humanlike and apelike beings have coexisted for a long time” (Cremona and Thompson 1998, xxxvi).

Prabhupada’s Vedic creationism is founded upon a very traditional Hindu theistic perspective. Swami Prabhupada—born as Abhay Charan De in Calcutta—was brought up in a devout Gaudiya Vaishnava family, followers of the medieval mystic Caitanya, a devotee (and according to his disciples, an incarnation) of the Lord Krishna. Prabhupada’s exposure as a youth to Western philosophy and science, as well as to Christianity, left him largely unmoved and apparently provoked no doubts about his family’s religious beliefs or about the literal truth of Krishna’s words revealed in the ancient Hindu or Vedic scriptures (cf. Goswami 1980, 26). When Prabhupada came to America in 1965, he brought with him the traditional Gaudiya-Vaishnava teachings, rooted in the mythology and theology of the ancient Vedic scriptures as filtered through the ecstatic mysticism of Caitanya.

Prabhupada presented the Vedic texts to his disciples in the West as accurate historical and scientific accounts providing a more or less literal description of the universe, even if the accounts are not always understood by or accessible to those with undeveloped spiritual consciousness. Philosophically, Prabhupada explicated the Vedic scriptures in terms of a profound theistic dualism that assumes a radical disjunction between body and soul, matter and spirit. Material reality, although created by Krishna, is the realm of delusion and imperfect sense knowledge, within which individual souls become entrapped.

This dualistic Gaudiya-Vaishnava perspective of Prabhupada is radically at odds with the more impersonalistic and monistic (Advaitin) school of Hinduism that, at least until recently, has been much better known in the West.⁸ While Advaita-inspired movements in the West, such as Transcendental Meditation, have openly embraced much of modern Western science, the radical dualism of ISKCON theism—with its extreme distrust of the senses and fundamental dismissal of the material world as a product of *maya*, or delusion—has made any genuine rapprochement with science much more difficult (Rothstein 1996). This difficulty is frequently manifested, for instance, in Prabhupada’s contemptuous caricature of scientists and their theories, especially Darwin and his evolutionary ideas:

Darwin and his followers are rascals. If originally there were no higher species, why do they exist now? Also, why do the lower species still exist? For example, at the present moment we see both the intellectual person and the foolish ass. Why do both these entities exist simultaneously? Why hasn’t the ass form evolved upward and disappeared? Why do we never see a monkey giving birth to a human? The Darwinists’ theory that human life began in such and such an era is nonsense. *Bhagavad-gita* says that you can directly transmigrate to any species of life you like, according to your efforts. (1979, 48)

It is not clear whether such caricatures were simply part of Prabhupada's rhetorical strategy to persuade the scientifically illiterate among his followers of the evils of Darwinism, or if they were due to his own lack of familiarity with evolutionary theory, or both. Certainly part of the underlying motivation was his perception that any theory of organic evolution undermined or even contradicted his conviction that the universe and all its parts, including all species of life, were created by Krishna as vehicles for spiritual transformation. In any case, his rejection of Darwinian evolution often led him to interpret the Vedic scriptures as asserting the simultaneous creation of all species: "The activities of the different species of living beings are begun from the very moment of the creation. It is not that all is evolved. The different species of life are created immediately along with the universe. Men, animals, beasts, birds—everything is simultaneously created" (Prabhupada 1972, 456).

Whether Prabhupada's Vedic creationism insists upon an anti-Darwinian simultaneous creation of all species is perhaps open to question. At times Prabhupada speaks of the possibility of development, as in his evolutionary sequence of fishes and other aquatics to plant forms, to insects, reptiles, birds, beasts, human beings, and then civilized human beings, at which point finally "they can make further evolutionary progress in spiritual life" (Prabhupada 1972–80, canto 4, part 3, 1058). Commenting on this passage, Thompson (2000) affirms that Prabhupada sometimes insisted on simultaneous creation but at other times allowed for "the possibility of successive creations," and that Prabhupada's sequence above "is quite close to the paleontological picture." Thompson asserts that the Vedic views of creation/development, and thus the views of his spiritual teacher, are consequently complex, and that Prabhupada was prone to simplify issues for the sake of easy comprehension on the part of his disciples.

My reading of Prabhupada's statements on Darwinian evolution, however, suggests to me that simultaneous creation was the master's fundamental view, not a pedagogical simplification. Furthermore, Prabhupada's own use of the term *evolution* refers rarely, if ever, to *organic* evolution but rather to *spiritual* evolution by means of the karmic process of transmigration. Such spiritual evolution may at times parallel the organic, but the parallelism is not essential to it. This interpretation seems fully justified in view of the following statement of Prabhupada. The statement succinctly delineates Prabhupada's particular meaning of evolution in regard to the allegedly paleontological sequence mentioned above, using the traditional three qualities or modes of nature (*prakṛiti*) common to many Hindu schools of thought:

By fulfilling the process of evolution from the aquatics to the animal platform, a living entity eventually reaches the human form. The three modes of material nature are always working in the evolutionary process. Those who come to the human form through the quality of *sattva-guna* [the best quality of goodness and

virtue] were cows in their last animal incarnation. Those who come to the human form through the quality of *rajo-guna* [the quality of passion, courage, and activity] were lions in their last animal incarnation. And those who come to the human form through the quality of *tamo-guna* [sloth and ignorance] were monkeys in their last animal incarnation. In this age, those who come through the monkey species are considered by modern anthropologists like Darwin to be descendants of monkeys. We receive information herein [in the *Bhagavata Purana* passage on which Prabhupada is commenting] that those who are simply interested in sex are actually no better than monkeys. (1972–80, canto 5, part 2, 45; cf. Prabhupada 1979, 7)

THE EMERGENCE OF ANCIENT-HOMINID SCIENCE IN ISKCON

According to Prabhupada, “Though scientists are not expert in science, they *are* expert in bluffing others and juggling words.” An infernal fate, the master declared, awaits Darwin and other such materialistic rascals: “scientists are going to hell. . . . At home, in the street, at the nightclub, at the theater—wherever he [any rascal] is, sex in its different varieties is his only pleasure” (1979, 92–93). Whether such pronouncements were rhetorical excess or even poorly transcribed tapes of Prabhupada’s informal conversations with devotees, as Cremona once suggested to me, their appearance in officially sanctioned publications of ISKCON could hardly induce outsiders to take the master’s “scientific” views seriously. Yet given the prestige of modern science in today’s world, some sort of rapprochement was deemed necessary, or at least desirable, even by Prabhupada himself. Fortunately for ISKCON, Thompson arrived early on the scene to help rectify the situation. Thompson brings to ISKCON’s confrontation with modern science a sophistication and nuancing of issues lacking in his teacher’s pronouncements. Nor does he insult and vilify scientists the way Prabhupada was prone to do. And perhaps most significantly of all, Thompson asserts his claims about the world without constant appeal to the authoritative statements of Vedic scriptures.

Thompson’s academic credentials are solid. He received a Ph.D. in mathematics from Cornell University in 1974—the same year in which he formally became a member of ISKCON.⁹ He has carried out research in the fields of probability theory, statistical mechanics, and mathematical biology and has published scholarly articles in such refereed journals and series as *Journal of Mathematical Geology*, *Remote Sensing of the Environment*, *Biosystems*, and *International Review of Cytology*. He was a founding member in 1975 of the Bhaktivedanta Institute, the scientific branch of ISKCON with parallels to flood geology’s research associations like the Creation Research Society and the Institute for Creation Research, but dedicated to examining the relationship of modern scientific theories to Prabhupada’s Vedic worldview. Of particular interest to the Bhaktivedanta Institute are the fields of cosmology and—of special relevance to this paper—the origins and history of life. Thompson, who adopted the spiritual

name Sadaputa dasa when he joined ISKCON, soon established himself as “the leading figure” in the movement’s critique of modern science in the light of Vedic spiritual (or “higher dimensional”) science (Rothstein 1996, 122).

Representative of Thompson’s ability to refurbish and render accordant the seemingly discrepant notions of his master is his explication of a new model of evolution that turns Darwinism on its head. Whether Prabhupada taught an uncompromising simultaneous creation of all species or some modified form of successive creations, his views remained inexorably opposed to Darwinian evolution with its bottom-up progression from simpler to more complex life forms and its naturalistic explanations of apparent design by the mechanisms of variation and natural selection. Thompson accordingly proposes a model of Vedic creationism that extends Prabhupada’s basic ideas while accommodating an organic developmental scheme of sorts. This model, called “inverse evolution,” represents a Hindu version of intelligent design theory, regarding the myriad life forms as physical manifestations evolving from the subtle designs of an omniscient creator (Krishna):

The account of the origin of species given in the *Vedas* is similar to Darwinian evolution in that it involves physical descent from a common ancestor and the appearance of new species by sexual reproduction. The Vedic evolutionary concept differs from the Darwinian in that the common ancestor is a superintelligent being, not a single-celled creature. Also, the progression of descent is from more complex forms to simpler ones. (Thompson, Drutakarma dasa, and Bhutatma dasa 1984a, 60)

Common to all ISKCON versions of Vedic creationism—whether Prabhupada’s spiritual developmental scheme, or his notion of the simultaneous creation of all species, or Thompson’s inverse evolutionary model—is the presumption that human beings have been around for a very long time, hundreds of millions, billions, even trillions of years. This affirmation of ancient hominids—the signature doctrine of Vedic creationism—is required for the spiritual welfare of the universe. In order to accommodate the needs of spiritually evolving beings throughout the endless cycles of time presupposed by Hindu schools in general, there must always have been the physical vehicles—such as humanlike bodies—necessary to reach the very highest stages of consciousness. Although the habitation of ancient humans has not necessarily always been on this planet—there are many other physical worlds and higher-dimensional realms as well, according to Vedic creationism—the Vedic texts affirm clearly enough (at least in any semiliteral reading) that terrestrial human beings have existed for over the last few billion years. Thus, misplaced fossils, especially human, are as significant for Vedic ancient-hominid creationism as for young-Earth creationism, as evidenced in Cremo and Thompson’s more than 900-page *Forbidden Archeology: The Hidden History of the Human Race*

(1998). But misplaced fossils are not the only sort of evidence to which the new Hindu creationists appeal.

One of the clearest and most comprehensive explications of the theoretical basis for ancient-hominid science is found in Thompson's book *Mechanistic and Nonmechanistic Science* (1981). Chapter 8, "The Doctrine of Evolution," consists of three basic charges against current evolutionary theory as being nonscientific and one argument for a more plausible explanation of organic diversity. All four parts of the argument (the three charges and the one alternative hypothesis) will be quite familiar to readers of Christian creationist literature.

The first charge is that modern evolutionary theory is unscientific because it is "unfalsifiable." In developing this charge, Thompson starts with Steven J. Gould and Niles Eldredge's controversial theory of punctuated equilibrium. Unlike Darwin's original theory of gradualism, punctuated equilibrium posits that new species arise rapidly, in geologic microseconds—and probably in small, isolated populations—and then enjoy long periods of stability. Accordingly, Thompson continues, one can hardly expect to find a record of the transformations that occurred in the microseconds in only a small locale. At the same time, because these "microseconds" of geologic time are actually some 10,000 to 50,000 years, we cannot expect to see such transformations occurring even over the course of many human lifetimes, either. Thus, punctuated equilibrium makes the evolution of species "officially invisible even in principle" (1981, 186).

Thompson then supplements his non-Gouldian conclusion about punctuated equilibrium with similar conjectures about erosional gaps in the fossil record. Where important evidence for a transformation is lacking, evolutionists often attempt, in ad hoc fashion, to account for the missing evidence by the notion of erosional obliteration. Thus, the theories of both punctuated equilibrium and erosional gaps allow evolutionists to argue for all sorts of transitional stages without having to provide evidence. Thompson concludes, "If this procedure is allowed, then the theory of evolution becomes unfalsifiable. . . . Such vacuous proposals can explain anything, but for this very reason they have no place in a scientific account of the world" (1981, 190).¹⁰

The second charge—also deriving from consideration of the fossil record—concerns a complementary, unscientific practice: "setting aside and ignoring evidence that does not fit into a particular evolutionary scheme" (1981, 190). This, of course, is the familiar problem of anomalous fossil findings. Thompson highlights the particular example of the discovery of angiosperm pollen in Precambrian rock in South America, citing a 1966 article in *Nature* magazine by R. M. Stainforth. The example is reminiscent of Clifford Burdick's discovery, never independently confirmed, of angiosperm dicotyledons in the Precambrian rocks of the

Grand Canyon (Burdick 1974, 69). Burdick, incidentally, also took note of the South American anomaly in support of his young-Earth ideas. In any case, Thompson concludes that if the report in *Nature* “can be taken at face value, it completely upsets the accepted scientific picture of the origin and evolution of life” (1981, 191). Accordingly, Thompson argues in familiar fashion, when the evidence conflicts with established theory it seems to be “ignored, or even suppressed” (p. 192).¹¹

Implicit in Thompson’s second charge is the third, also previously encountered: that evolutionists are led by blind faith, specifically faith in the supposed mechanisms of evolution. All attempts to explain specific evolutionary developments, such as that of the eye, Thompson finds “disappointingly vague and incomplete” (p. 192). He cites as a typical instance Ernst Mayr’s description of eye evolution starting from photosensitive protoplasm. Thompson passes the following judgment: “[Mayr’s] account of evolution of the eye is typical of theoretical evolutionary explanations, for it relies on an abiding faith in the power of natural selection and mutation to effect transformations in organic form that evolutionists themselves cannot even imagine, much less observe” (p. 193).

Such abiding faith, Thompson contends, not only compels evolutionists to ignore anomalous data but also leads them to sidestep one of the fundamental problems in evolutionary theory: “the problem posed by the complex networks of structure and function that are characteristic of living organisms” (1981, 193). Like Christian creationists, Thompson argues for the irreducible complexity of various interlocking mechanisms in organic structures that seem to defy attempts to explain in terms of gradual, step-by-step developments, each of which must somehow be beneficial to the organism involved. Although he does not use the bombardier beetle dear to his Christian counterparts, Thompson uses similar examples, such as the truly remarkable defensive mechanisms of a particular flatworm (*microstonum*) (pp. 194–95). Thompson asserts, without specific citations, that “a number of prominent evolutionists are openly admitting that in many significant cases the required intermediate stages simply may not exist” (p. 193).

If the “enigma of biological form,” as Thompson calls it, is one of the fundamental problems for evolutionists, one of the fundamental problems for antievolutionists is the occurrence of homologies of structure found in a wide diversity of organic forms. Closely related is the problem of apparently vestigial organs seen in the course of embryonic development. According to evolutionary theory, of course, all these phenomena are explained in terms of descent from a common ancestor. The vestigial organs, in particular, are taken as evidence against any sort of divine creation, for they often give the appearance of clumsy and inefficient tinkering, something an all-powerful and wise, or merely sensible, God would surely have

avoided. Thompson is well aware that an alternative explanation to descent from a common ancestor is needed if his Vedic creationism is to have any claim to plausibility.

Thompson's alternative explanation for anatomical homologies uses the venerable creationist notion of a divine blueprint modified as necessary by a providential and efficient engineer. Thompson elaborates:

Let us suppose that an intelligent creator wished to devise blueprints for a variety of animal forms. What would be the most economical way for him to go about this? Would it be best for him to design each animal from scratch? Or would it be more efficient for him to devise one basic plan that could be modified in various ways to produce various specific forms?

We can see that the second strategy would be the most economical, and it is certainly the strategy that a human engineer would choose, if possible. Now, it turns out that the idea of regulative genes provides a means of executing this strategy. (1981, 200–201)

We shall return to the idea of regulatory genes in a moment but will note here that this passage could have been written by such Christian creationists as Gary Parker. Parker uses the example of building various bridges either from totally different materials and parts or from a common stockpile of various-sized parts adapted to build a variety of bridges. The efficient human engineer, of course, “recognizes the principles of creative economy and variations on a theme” (1980, 26–27).

As for vestigial organs, Thompson turns his attention to such phenomena as three-toed horses and the incipient embryonic teeth of baleen whales that are reabsorbed in later stages of development.¹² Are these evidence of equine ancestors with three toes and cetaceous ancestors with functioning adult teeth? Have newly evolved regulatory genes brought about such evolutionary changes? Or might regulatory genes be the means used by an intelligent creator to create diverse forms, using them to modify a basic mammalian plan consisting originally of five toes and a full set of teeth? Regarding the equine foot, Thompson concludes, “If the genetic system were properly designed, he [the intelligent creator-engineer] could suppress the growth of the unwanted toes simply by throwing a single genetic switch, and thus save himself the effort of completely redesigning the genes for the foot” (1981, 201). The occasional three toes of a horse and the incipient baleen teeth are thus simply the “byproducts of the design strategy of an intelligent engineer” (p. 202). Yet Thompson recognizes that there remains an element of the peculiar in such vestigial traces. As he indicates later, regarding his blueprint argument, “The key to this interpretation is the realization that God does not necessarily intend the material world as an exhibition of His finest workmanship” (p. 204).

That such a recognition considerably weakens the design argument and renders it unfalsifiable in certain regards is not at all disturbing to Thompson, for he admits, or rather celebrates, that the design argument is far

from conclusive. While it can demonstrate, in Thompson's mind, that a nonevolutionary explanation of homologies and vestiges is quite plausible, it does not indicate how creation actually occurred. The design argument, and natural theology as a whole, are just speculations that can provide no certainty, as they ultimately rely on the normal—and inevitably untrustworthy—sensory and cognitive human capacities. Indeed, the popularity of natural theology in Darwin's day, according to Thompson, points to a major inadequacy in the Jewish and Christian traditions of the time: their general inability to provide a sure, practical, experiential means of directly knowing God and God's nature and purposes. The emphasis on natural theology and the argument from design were thus an attempt to make up for the failure to bring people into direct contact with God. It seemed that natural theology might secure definite proof of God's existence that traditional religious thought and practice were failing to provide.

The actual inability of natural theology to prove God's existence and to provide definite information about God's nature and purposes led many scientists and theologians to see natural theology as a dead end. This disillusionment with natural theology inspired what Thompson calls the argument from negative theology. The essence of this argument is that it presupposes a certain kind of deity, one who is so sensible as not to create peculiar and funny arrangements of parts in organisms and one who is too beneficent and all-powerful to create a world of great suffering for animals and humans. But because the natural world does not appear to have been created by that sort of a God, then there must not be a God. Accordingly, negative theology is the presupposition for the "doctrine of evolution," which dismissed supernaturalistic explanations for naturalistic ones. For Thompson, the theory of evolution appears to be "little more than a poorly reasoned intellectual reaction against a spiritual tradition that was perceived as inadequate" (1981, 205).

Negative theology, then, in Thompson's view, is the underlying basis of evolutionary theory. But negative theology is itself based on an inadequate conception of God—not only inadequate but unscientific. As Thompson says regarding the two negative notions of God as lacking in sensibility and benevolence, "We can immediately dismiss both versions of the negative theological argument as scientifically unsound, for they are based on completely speculative ideas about the purposes of God and the methods He uses to achieve them" (1981, 203).

How does one avoid such unscientific speculation and overcome the uncertainties of both natural theology and negative theology? Following close in his master's footsteps at this point, Thompson has a ready answer: "the negative theological argument of the evolutionists does not apply to the world system of the *Bhagavad-gita* . . ." (1981, 205). The *Bhagavad Gita* provides an understanding of the purpose of the material world and of how suffering can be a part of that world despite Krishna's benevolence.

In an argument reminiscent of much traditional Christian theodicy, Thompson sees the key to understanding the *Gita's* message through the concept of free will. The soul (*jivatman*) chooses to turn away from devotional service to the loving Krishna, and Krishna provides the material world as a place where the soul can pursue its desire for independence.

Then, bringing in the traditional Hindu emphasis on ignorance, Thompson argues that the soul, forgetful of its true nature and relationship to God, must endure the process of transmigration through various species and thereby suffer in separation from God. Here, incidentally, is one more reason for the peculiarities sometimes found in organic forms: because such forms “represent limitations on the true nature of the *jivatma*, it is not surprising that they should be crafted in a rough and ready manner” (1981, 205). In any case, the world is a place of suffering not because of Krishna’s malevolence or poor design but because of human free will.

Like any other theodicy, the *Gita's*—at least as interpreted by Thompson—leaves a number of questions unresolved. Thompson’s teacher, Prabhupada himself, partially recognized the problem. Prabhupada asserted that souls, “because they have disobeyed God—because they did not abide by the order of Krsna—they have been put into this material world” (1985, 67). But if the soul were truly able to disobey through the exercise of free will, would it not have known the consequences of its choice? (If it did not know, was the choice really free?) As Prabhupada says, “Voluntarily we have accepted this material body, but actually we are spirit souls who should not have accepted it. When and how we accepted it cannot be traced. No one can trace the history of when the conditioned soul first accepted the material body” (1985, 67).

While the question of why one would choose to disobey God is left unresolved in both Prabhupada and Thompson, as perhaps it inevitably must be, we see in their theodicy the driving force behind Krishna consciousness, as behind the religious quest in general: to make sense of this physical universe in which we live and suffer. How do we find meaning and purpose in such a universe? For Thompson, evolution not only fails to provide an adequate material explanation for the origin of life; more important, it fails to develop any sort of spiritual knowledge that explains the purpose of life. For the religiously inclined, mechanistic science seems to deny any purpose, leading to an inner dissatisfaction, if not despair. As Thompson says, “The mechanistic world vision tends to create in sensitive individuals . . . a sense of existential despair. It denies the very existence of an absolute dimension of higher purpose that seems essential for the satisfaction of the inner self” (1981, 2). And he goes on to deny that the attempt to create our own purpose can be satisfying.

Here is not the place to debate whether a humanistic/empiricist worldview can satisfy the human quest for understanding and purpose, or whether there are other viable religious options (like theistic evolution) that accept

the naturalistic methodology of science. We may note at least that Thompson expresses some empathy for those whom he views as trapped in the mechanistic worldview of modern science, no longer condemning them as rascals and fools. Even his concern for the lack of moral foundations within a mechanistic worldview is more muted than that of earlier disciples, who were prone to argue “that when someone believes that life comes from matter rather than from spirit, his concern for morality diminishes considerably” (Hamsaduta Svami 1977, 129). For Thompson, more charitably, a diminished moral concern is simply a likely possibility (1981, 3).

VARIETIES OF CREATIONISM AND EMERGING VARIANTS OF CREATIONIST SCIENCE

As has been repeatedly pointed out in recent years, despite the current popular impression, there is a huge spectrum of Christian creationist views, from strict, young-Earth creationists (themselves of varied sorts) who take the biblical account in Genesis with its six days of creation and a worldwide flood in a highly literal fashion to old-Earth and progressive creationists who, at the extreme, seem to blend almost imperceptibly into theistic evolutionists (Numbers 1992, x–xiv; Barker 1987, 215; Scott 1999). And now emerging on the American scene, as we have seen, is another sort of antievolutionism, the ancient-hominid creationism based not on the biblical tradition but on Hindu Vedic literature.

Given their different foundational texts, it is hardly surprising that Hindu and Christian creationists employ quite divergent models of the material universe and render the details of cosmic and terrestrial history in radically different ways. The greatest Christian antithesis to Hindu Vedic creationism clearly is the young-Earth model of George McCready Price and his scientific creationist successors. Hindu creationism, in contrast to flood geology with its limited time span, assumes a temporal vista stretching into billions or trillions of years that provides plenty of time for gradual geological developments (although the Hindu tradition has its own share of catastrophic flood narratives). Moreover, the Hindu perspective presupposes a cyclic rather than linear view of time. Thus, rather than adopting the catastrophist approach of flood geology to explain Earth history and the fossil record, Hindu creationists tend to invoke the notion of lost worlds, including lost civilizations, evidence for which has largely, perhaps entirely in many cases, disappeared in the vast world-crunching cycles of cosmic time. Enlightened or higher consciousness (e.g., Krishna Consciousness) is the means for transcending this ultimately meaningless wheel of time. This cyclical perspective, of course, contrasts with Christian creationism in general—whether of the young-Earth or old-Earth variety—which espouses a strong, linear sense of salvation history, from creation to judgment.

In any case, despite differences in their models of the physical universe and of terrestrial history, Christian young-Earth creationists and Hindu ancient-hominid creationists share a common disdain for establishment science. Both groups reject the comprehensive methodological naturalism of modern science, yet both seek to use scientific data (usually as recorded in mainstream scientific literature) in constructing what they see as an empirically based confirmation of their religiously inspired elucidations of the natural world. Although these interpretations are rooted in a revelatory tradition, the merits of the case are argued mainly on scientific, not theological, grounds, although occasionally, depending on the context, reference may be made to the foundational religious ideology.

The appeal to empirical evidence in the creationists' attack on evolution is tacit testimony to their acknowledgment of the power and prestige of modern science. Yet it is modern science, allied with other liberalizing tendencies of modernity, that most threatens their traditional sense of moral meaning and purpose. It is these underlying moral concerns that allow creationists of diverse persuasions to close ranks in their attack on scientific naturalism. Accordingly, over the last twenty years we find a number of religious conservatives on a worldwide basis adopting methods and tactics similar to those of the young-Earth scientific creationists.

One such group, the Islamic creationists, provides an interesting and informative comparison with both Christian and Vedic creationism. The Turkish Bilim Arastirma Vakfi (BAV, Science Research Foundation) has explicitly borrowed most of its major "scientific" arguments against evolution from Henry Morris's Institute for Creation Research (ICR). Given a different theological understanding of history from that of traditional Christianity, however, the Islamic group is much less concerned about immense geological eons. Accordingly, as Taner Edis points out, the BAV ignores flood geology, "ICR's signature doctrine," while still being "practically a clone of ICR's 'scientific' vision" (Edis 1999, 30, 32). Edis summarizes the relationship of the ICR and BAV as follows:

They hail from doctrinally and socially different religions, but they represent constituencies confronting modernity in similar ways. They both answer a need to claim science for the side of old-time social morality, and both correctly see that evolution is a major intellectual obstacle. So BAV can borrow from ICR because ICR has already done the work of constructing a populist pseudoscience that is, in fact, relatively free of narrowly Protestant literalist doctrinal idiosyncrasies. ICR has a product which will work for almost any Abrahamic fundamentalism. Conservative Christians and Muslims may strongly disagree about religious matters . . . but they can agree on their overall conception of social morality and upon "creation science." (Edis 1999, 34)

Clearly we can extend Edis's analysis beyond just "any Abrahamic fundamentalism." ICR-style creation science has a clear echo not only in Islamic creationism but in Hindu Vedic creationism as well. It should be noted, however, that the specific terms *scientific creationism* and *creation*

science, because of “negative connotations,” are avoided by the scientifically minded members of ISKCON.¹³

Edis also indicates that the BAV remains open to young-Earth possibilities and thus on occasion “cheerfully attacks all modern dating methods” (1999, 33). While the idea of a young Earth may be an ongoing temptation for certain Abrahamic creationists, it clearly has no appeal for their Hindu counterparts. Nonetheless, all three creationist groups, the Christian, Islamic, and Hindu, are united in their “scientific” opposition to Darwinian evolution, which they see as threatening their traditional ideals of morality that are rooted, at least in part, in a teleological view of nature.

In America over the last three decades or so, Christian creationism in various forms—but often inspired by the creation science of young-Earth creationism—has posed a persistent political-religious challenge to science education in our public schools. Will common political interests further unite non-Christian religious conservatives within this country in their antievolutionist campaign? A recent news notice in *Hinduism Today* is suggestive. The magazine, aimed at millions of English-speaking diasporic Hindus throughout the world and dedicated to advancing the global renaissance of Hinduism, briefly reported on the August 1999 decision of the Kansas State Board of Education not to require the teaching of evolution in its schools. The article, entitled “Evolution—Post Darwin America,” noted the furor caused by the decision, as well as the earlier Supreme Court decision forbidding the teaching of biblical creationism—identified in the report with the theory of a six-day creation of the cosmos—in public schools. The report concluded: “Fortunately, there are enough objections from non-Christians to keep Darwin’s ‘survival of the fittest’ theory from being taught as fact. Fossils don’t seem to prove Darwin quite right or wrong. . . . Hindus also hold that divine intelligence has guided the creation of species, but not necessarily in a week” (*Hinduism Today*, January 2000, 8).

The creation science of young-Earth creationism has had an enormous impact on conservative Christians far removed from the small circle of Seventh Day Adventists in which flood geology arose. Are we about to see a similar broadening of Vedic creationism beyond the small confines of its ISKCON origins to the conservative elements of the growing American Hindu community at large?

NOTES

1. Lyell likened the geological record to a set of census registers taken periodically, with the birth and death of an individual representing the appearance and extinction of a single species. If the census occurred every sixty years, the records would manifest a great discontinuity from one census to the next. Lyell used a second analogy to illuminate the first: the successive volcanic inhumation of cities one on top of the other, each with its own language as manifested in its public monuments. The fewer the superimposed cities one discovered, the less complete the linguistic record would be, giving a misleading impression of abrupt language changes (Lyell [1830–33] 1969, 3:31–34).

2. “The Record of the Rocks” (Thompson, Drutakarma dasa, and Bhutatma dasa 1984c) and other Hindu creationist antievolutionary articles referred to in this paper appeared in *Origins* magazine, whose senior editor and researcher was Sadaputa dasa (Richard Thompson). Authorship of the articles is credited to Drutakarma dasa (Michael Cremo), Bhutatma dasa (Austin Gorden), and Sadaputa dasa himself. Thompson informed me in a personal note (4 August 2000) that he had supplied the technical content and arguments for the *Origins* articles, which were then written up by Cremo and Gorden under Thompson’s supervision.

3. Local Indians knew of the dinosaur prints as giant turkey tracks. Dinosaur bones from the Glen Rose area were reported in scientific literature as early as 1887. See Cole, Godfrey, and Schafersman 1985, 37.

4. According to John Morris (1980, 10), giant manlike tracks were discovered by a local resident of the area, Ernest “Bull” Adams, as far back as 1908.

5. Burdick’s views as expressed in his brief 1950 article have had a far-reaching impact among biblical creationists, for his conclusions (along with pictures of the mysterious slab prints) were highlighted in the influential *The Genesis Flood* (Whitcomb and Morris 1961, 166–68, 173–75) as well as in later creationist literature and films (cf. Hastings 1988, 145). In the introductory essay to a special issue of *Creation/Evolution* devoted to the Paluxy footprints, Cole, Godfrey, Hastings, and Schafersman refer to the publication of Burdick’s article as having “opened a can of worms not yet contained” (1985, 1).

6. In his original 1939 *Natural History* article, Roland T. Bird reported his discovery of the two “man-track” slabs at a trading post in Gallup, New Mexico. Bird made it quite clear that he considered the prints fake. (The footprints are human-made, by the hands of twentieth-century residents of Glen Rose.) Bird’s own subsequent investigation of *in situ* “man-tracks” in the Paluxy riverbed revealed only one print “about 15 inches long with a curiously elongated heel,” probably made by an “unknown dinosaur or reptile,” and in any case quite indistinct (Bird 1939, 257). John Morris, son of Henry Morris and a creationist, acknowledges that the Gallup prints are doubtful and that indeed there have been carved imitations from the Paluxy area, but he insists, “These counterfeit tracks do not, of course, disprove the genuine tracks” (1980, 109).

7. Both creationists and evolutionists can agree on the general principle. The creationist A. E. Wilder-Smith notes (1968, 293–94): “One well-documented factual observation of this sort [showing that dinosaurs and humans were contemporaries] would rob the theory of the huge time spans regarded as a *conditio sine qua non* for evolution to have occurred. . . . One London biologist . . . remarked that a single such find would provide sound reason for renouncing all evolutionary theory. He was a convinced evolutionist.” The question, then, is whether there is any such “well-documented factual observation.” John Morris, in *Tracking Those Incredible Dinosaurs . . . and the People Who Knew Them* (1980), after citing Wilder-Smith’s words quoted above to set up the problem (pp. 3–4), devotes the rest of the book to attempting to provide such evidence.

8. Even the *Bhagavad Gita*, a generally theistic text that plays a major role in Prabhupada’s worldview, as we shall see, was introduced into the West largely in Advaitin terms. Cf. Ellwood 1973, 241.

9. The date of Thompson’s formal entry into ISKCON was supplied by Thompson himself, in a personal communication (17 August 2001).

10. But see Ruse 1982, 132–42, on the supposed unfalsifiability of Darwinism.

11. Carol Gill (science reference librarian at Trinity at the time) and I conducted a careful search of the scientific literature following publication of Stainforth’s article in *Nature* (1966) and found several references to this geologic puzzle over the ensuing thirty-five years. It is rather misleading to say the problem was ignored, let alone suppressed.

12. The same basic argument also appears in Thompson, Drutakarma dasa, and Bhutatma dasa 1984b, 44–45.

13. In a personal communication (26 July 2001), Thompson responded to my query about whether he would accept being referred to as a scientific creationist: “I am interested in creationism from a scientific standpoint. Unfortunately ‘scientific creationist’ has acquired highly negative connotations, and you will be interested to know that quite a few prominent devotees involved with science and religion in the Hare Krishna movement are totally opposed to being associated with this term in any way.”

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