

Puranic Time and the Archeological Record

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Abstract:

The time concept of modern archeology, and modern anthropology in general, resembles the general cosmological-historical time concept of Europe's Judaeo-Christian culture. Differing from the cyclical cosmological-historical time concepts of the early Greeks in Europe, and the Indians and others in Asia, the Judaeo-Christian cosmological-historical time concept is linear and progressive. Modern archeology also shares with Judaeo-Christian theology the idea that humans appear after the other major species. The author subjectively positions himself within the Vaishnava Hindu worldview, and from this perspective offers a radical critique of modern generalizations about human origins and antiquity. Hindu historical literatures, particularly the Puranas and Ithihasas, place human existence in the context of repeating time cycles called yugas and kalpas, lasting hundreds of millions of years. During this entire time, according to the Puranic accounts, humans coexisted with creatures in some ways resembling the earlier toolmaking hominids of modern evolutionary accounts. If one were to take the Puranic record as objectively true, and also take into account the generally admitted imperfection and complexity of the archeological and anthropological record, one could make the following prediction. The strata of the earth, extending back hundreds of millions of years, should yield a bewildering mixture of hominid bones, some anatomically modern human and some not, as well as a similarly bewildering variety of artifacts, some displaying a high level of artistry and others not. Given the linear progressivist preconceptions of generations of

archeologists and anthropologists, one could also predict that this mixture of bones and artifacts would be edited to conform to their deeply rooted linear-progressive time concepts. A careful study of the archeological record, and the history of archeology itself, broadly confirms these two predictions. Linear-progressive time concepts thus pose a substantial barrier to truly objective evaluation of the archeological record and to rational theory-building in the area of human origins and antiquity.

The practically employed time concept of the modern historical scientist, including the archeologist, strikingly resembles the traditional Judaeo-Christian time concept. And it strikingly differs from that of the ancient Greeks and Indians.

This observation is, of course, an extreme generalization. In any culture, the common people may make use of various time concepts, linear and cyclical. And among the great thinkers of any given period, there may be many competing views of both cyclical and linear time. This was certainly true of the ancient Greeks. It can nevertheless be safely said that the cosmological concepts several of the most prominent Greek thinkers involved a cyclic or episodic time similar to that found in the Puranic literatures of India. For example, we find in Hesiod's Works and Days (129-23406-201) a series of ages (gold, silver, bronze, heroic, and iron) similar to the Indian yugas. In both systems, the quality of human life gets progressively worse with each passing age. In On Nature (Fragment 17) Empedocles speaks of cosmic time cycles. In Plato's dialogues there are descriptions of revolving time (Timaeus 38 a) and recurring catastrophes that destroy or nearly destroy human civilization (Politicus 268 d ff). Aristotle said in many places in his works that the arts and sciences had been discovered many times in the past (Metaphysics 1074 b 10, Politics 1329 b 25) In the teachings of Pythagoras, Plato, and Empedocles regarding transmigration of souls, this cyclical pattern is extended to individual psychophysical existence.

When Judaeo-Christian civilization arose in Europe, another kind of time became prominent. This time has been characterized as linear and vectorial. Broadly speaking, this time concept involves a unique act of cosmic creation, a unique appearance of the human kind, and a unique history of salvation, culminating in a unique denouement in the form of a last judgement. The drama occurs only once. Individually, human life mirrored this process; with some exceptions, orthodox Christian theologians did not accept transmigration of the soul.

Modern historical sciences share the basic Judaeo-Christian assumptions about time. The universe we inhabit is a unique occurrence. Humans have arisen once on this planet. The history of our ancestors is regarded as a unique though unpredestined evolutionary pathway. The future pathway of our species is also unique. Although this pathway is officially unpredictable, the myths of science project a possible overcoming of death by biomedical science and mastery over the entire universe by evolving, space-traveling humans. One group, the Santa Fe

Institute, sponsor of several conferences on "artificial life," predicts the transferal of human intelligence into machines and computers displaying the complex symptoms of living things (Langton 1991, p.xv) "Artificial life" thus becomes the ultimate transfiguring salvation of our species.

One is tempted to propose that the modern human evolutionary account is a Judaeo-Christian heterodoxy, which covertly retains fundamental structures of Judaeo-Christian cosmology, salvation history, and eschatology while overtly dispensing with the scriptural account of divine intervention in the origin of species, including our own. This is similar to the case of Buddhism as Hindu heterodoxy. Dispensing with the Hindu scriptures and God concepts, Buddhism nevertheless retained basic Hindu cosmological assumptions such as cyclical time, transmigration, and karma.

Another thing the modern human evolutionary account has in common with the earlier Christian account is that humans appear after the other life forms. In Genesis, God creates the plants, animals, and birds before human beings. For strict literalists, the time interval is short--humans are created on the last of six of our present solar days. Others have taken the Genesis days as ages. For example, around the time of Darwin European scientists with strong Christian leanings proposed that God had gradually brought into existence various species throughout the ages of geological time until the perfected earth was ready to receive human beings (Grayson 1983). In modern evolutionary accounts, anatomically modern humans retain their position as the most recent major species to occur on this planet, having evolved from preceding hominids within the past 100,000 or so years. And despite the attempts of prominent evolutionary theorists and spokespersons to counteract the tendency, even among evolution scientists, to express this appearance in teleological fashion (Gould 1977, p. 14), the idea that humans are the crowning glory of the evolutionary process still has a strong hold on the public and scientific minds. Although anatomically modern humans are given an age of about 100,000 years, modern archeologists and anthropologists, in common with Judaeo-Christian accounts, give civilization an age of a few thousand years, and, again in common with Judaeo-Christian accounts, place its earliest occurrence in the Middle East.

I do not here categorically assert a direct causal link between earlier Judeo-Christian ideas and those of the modern historical sciences. Demonstrating that, as Edward B. Davis (1994) points out in his review of recent works on this subject, needs much more careful documentation than has yet been provided. But the many common features of the time concepts of the two knowledge systems suggest these causal links do exist, and that it would be fruitful to trace connections in sufficient detail to satisfactorily demonstrate this.

I do, however, propose that the tacitly accepted and hence critically unexamined time concepts of the modern human sciences, whether or not causally linked with Judaeo-Christian concepts, pose a significant unrecognized influence on interpretation of the archeological and anthropological record. To demonstrate how this might be true, I shall introduce my own experience in evaluating this

record from the alien standpoint of the cyclical time concepts and accounts of human origins found in the Puranas and Itihasas of India.

My subjective path of learning has led me to take the Vaishnava tradition of India as my primary guide to life and the study of the visible universe and what may lie beyond. For the past century or so, it has been considered quite unreasonable to bring concepts from religious texts directly into the realm of the scientific study of nature. Indeed, many introductory anthropology and archeology texts make a clear distinction between "scientific" and "religious" ways of knowing, relegating the latter to the status of unsupported belief, with little or no utility in the objective study of nature (see, for example, Stein and Rowe 1993, chapter 2). Some texts even go so far as to boast that this view has been upheld by the United States Supreme Court (Stein and Rowe 1993, p. 37), as if the state were the best and final arbiter of intellectual controversy. But I propose that total hostility to religious views of nature in science is unreasonable, especially for the modern historical sciences. Despite their pretensions to areligious objectivity, practitioners unconsciously retain or incorporate into their workings many Judaeo-Christian cosmological concepts, especially concerning time, and implicitly employ them in their day to day work of observation and theory building. In this sense, modern evolutionists share some intellectual territory with their Fundamentalist Christian antagonists.

But there are other ways to comprehend historical processes in nature. How this is so can be graphically sensed if one performs the mental experiment of looking at the world from a radically different time perspective--the Puranic time concept of India. I am not alone in suggesting this. Gene Sager, a professor of philosophy and religious studies at Palomar College in California, wrote in an unpublished review of my book Forbidden Archeology (Cremo and Thompson 1993): "As a scholar in the field of comparative religion, I have sometimes challenged scientists by offering a cyclical or spiral model for studying human history, based on the Vedic concept of the kalpa. Few Western scientists are open to the possibility of sorting out the data in terms of such a model. I am not proposing that the Vedic model is true....However, the question remains, does the relatively short, linear model prove to be adequate? I believe Forbidden Archeology offers a well researched challenge. If we are to meet this challenge, we need to practice open-mindedness and proceed in a cross-cultural, interdisciplinary fashion" (personal communication, 1993). The World Archeological Congress provides a suitable forum for such cross-cultural, interdisciplinary dialogue.

This cyclical time of the Puranas operates only within the material cosmos. Beyond the material cosmos lies the spiritual sky, or brahmajyoti. Innumerable spiritual planets float in this spiritual sky, where material time, in the form of yuga cycles, does not act.

Each yuga cycle is composed of 4 yugas. The first, the Satya-yuga lasts 4800 years of the demigods. The second, the Treta-yuga, lasts 3600 years of the demigods. The third, the Dvapara-yuga, lasts 2400 years of the demigods. And the fourth, Kali-yuga, lasts 1200 years of the demigods (Bhagavata Purana 3.11.19).

Since the demigod year is equivalent to 360 earths years (Bhaktivedanta Swami 1973, p. 102), the lengths of the yugas in earth years are, according to standard Vaishnava commentaries, 432,000 years for the Kali-yuga, 864,000 years for the Dvapara-yuga, 1,296,000 years for the Treta-yuga, and 1,728,000 years for the Satya-yuga. This gives a total of 4,320,000 years for the entire yuga cycle. One thousand of such cycles, lasting 4,320,000,000 years, comprises one day of Brahma, the demigod who governs this universe. A day of Brahma is also called a kalpa. Each of Brahma's nights lasts a similar period of time. Life is only manifest on earth during the day of Brahma. With the onset of Brahma's night, the entire universe is devastated and plunged into darkness. When another day of Brahma begins, life again becomes manifest.

Each day of Brahma is divided into 14 manvatara periods, each one lasting 71 yuga cycles. Preceding the first and following each manvatara period is a juncture (sandhya) the length of a Satya-yuga (1,728,000) years. Typically, each manvatara period ends with a partial devastation. According to Puranic accounts, we are now in the twenty-eight yuga cycle of the seventh manvatara period of the present day of Brahma. This would give the inhabited earth an age of about 2 billion years. Interestingly enough, the oldest undisputed organisms recognized by paleontologists--algae fossils like those from the Gunflint formation in Canada--are just about that old (Stewart 1983, p. 30). Altogether, 453 yuga cycles have elapsed since this day of Brahma began. Each yuga cycle involves a progression from a golden age of peace and spiritual progress to a final age of violence and spiritual degradation. At the end of each Kali-yuga, the earth is practically depopulated.

During the yuga cycles, human species coexist with other humanlike species. For example, in the Bhagavata Purana (9.10.20) we find the divine avatara Ramacandra conquering Ravana's kingdom Lanka with the aid of intelligent forest dwelling monkey men who fought Ravana's well-equipped soldiers with trees and stones. This occurred in the Treta-yuga, about 1 million years ago.

Given the cycle of yugas, the periodic devastations at the end of each manvatara, and the coexistence of civilized human beings with creatures in some ways resembling the human ancestors of modern evolutionary accounts, what predictions might the Puranic account give regarding the archeological record? Before answering this question, we must also consider the general imperfection of the fossil record (Raup and Stanley 1971). Hominid fossils in particular are extremely rare. Furthermore, only a small fraction of the sedimentary layers deposited during the course of the earth's history have survived erosion and other destructive geological processes (Van Andel 1981).

Taking the above into account, I propose the Puranic view of time and history predicts a sparse but bewildering mixture of hominid fossils, some anatomically modern and some not, going back tens and even hundreds of millions of years and occurring at locations all over the world. It also predicts a more numerous but similarly bewildering mixture of stone tools and other artifacts, some showing a high level of technical ability and others not. And, given the cognitive biases of the majority of workers in the fields of archeology and anthropology over the past

150 years, we might also predict that this bewildering mixture of fossils and artifacts would be edited to conform with a linear, progressive view of human origins. A careful investigation of published reports by myself and Richard Thompson (1993) offers confirmation of these two predictions. What follows is only a sample of the total body of evidence catalogued in our lengthy book. The citations given are for the single reports that best identify particular finds. Detailed analysis and additional reports cited elsewhere (Cremo and Thompson 1993) offer strong confirmation of the authenticity and antiquity of these discoveries.

Incised and carved mammal bones are reported from the Pliocene (Desnoyers 1863, Laussedat 1868, Capellini 1877) and Miocene (Garrigou and Filhol 1868, von Ducker 1873). Additional reports of incised bones from the Pliocene and Miocene may be found an extensive review by the overly skeptical de Mortillet (1883). Scientists have also reported pierced shark teeth from the Pliocene (Charlesworth 1873), artistically carved bone from the Miocene (Calvert 1874) and artistically carved shell from the Pliocene (Stopes 1881). Carved mammal bones reported by Moir (1917) could be as old as the Eocene.

Very crude stone tools occur in the Middle Pliocene (Prestwich 1892) and from perhaps as far back as the Eocene (Moir 1927, Breuil 1910, especially p. 402). One will note that most of these discoveries are from the nineteenth century. But such artifacts are still being found. Crude stone tools have recently be reported from the Pliocene of Pakistan (Bunney 1987), Siberia (Daniloff and Kopf 1986), and India (Sankhyan 1981). Given the current view that toolmaking hominids did not leave their African center of origin until about 1 million years ago, these artifacts are somewhat anomalous, what to speak of a pebble tool from the Miocene of India (Prasad 1982).

More advanced stone tools occur in the Oligocene of Europe (Rutot 1907), the Miocene of Europe (Ribeiro 1873, Bourgeois 1873, Verworn 1905), the Miocene of Asia (Noetling 1894), and the Pliocene of South America (F. Ameghino 1908, C. Ameghino 1915). In North America, advanced stone tools occur in California deposits ranging from Pliocene to Miocene in age (Whitney 1880). An interesting slingstone, at least Pliocene and perhaps Eocene in age, comes from England (Moir 1929, p. 63).

More advanced artifacts have also been reported in scientific and nonscientific publications. These include an iron nail in Devonian Sandstone (Brewster 1844), a gold thread in Carboniferous stone (Times of London, June 22, 1844), a metallic vase in Precambrian stone (Scientific American, June 5, 1852), and a chalk ball from the Eocene (Melleville 1862), a Pliocene clay statue (Wright 1912, pp. 266-69), metallic tubes in Cretaceous chalk (Corliss 1978, pp. 652-53), and a grooved metallic sphere from the Precambrian (Jimison 1982). The following objects have been reported from Carboniferous coal: a gold chain (The Morrisonville Times, of Illinois, U.S.A., June 11, 1891), artistically carved stone (Daily News of Omaha, U.S.A., April 2, 1897), an iron cup (Rusch 1971), and stone block walls (Steiger 1979, p. 27).

Human skeletal remains described as anatomically modern occur in the Middle Pleistocene of Europe (Newton 1895, Bertrand 1868, de Mortillet 1883). These cases are favorably reviewed by Keith (1928). Other anatomically modern human skeletal remains occur in the Early and Middle Pleistocene of Africa (Reck 1914, L. Leakey 1960d, Zuckerman 1954, p. 310; Patterson and Howells 1967, Senut 1981, R. Leakey 1973), the Early Middle Pleistocene of Java (Day and Molleson 1973), the Early Pleistocene of South America (Hrdlicka 1912, pp. 319-44), the Pliocene of South America (Hrdlicka 1912, p. 346; Boman 1921, pp. 341-42)), the Pliocene of England (Osborn 1921, pp. 567-69), the Pliocene of Italy (Ragazzoni 1880, Issel 1868), the Miocene of France and the Eocene of Switzerland (de Mortillet 1883, p. 72), and even the Carboniferous of North America (The Geologist 1862). Several discoveries from California gold mines range from Pliocene to Eocene (Whitney 1880). Some of these bones have been subjected to chemical and radiometric tests that have yielded ages younger than suggested by their stratigraphical position. But when the unreliabilities and weaknesses of the testing procedures are measured against the very compelling stratigraphic observations of the discoverers, it is not at all clear that the original age attributions should be discarded (Cremo and Thompson 1993, 753- 794).

Humanlike footprints have been found in the Carboniferous of North America (Burroughs 1938), the Jurassic of Central Asia (Moscow News 1983, no.4, p. 10), and the Pliocene of Africa (M. Leakey 1979). Shoe prints have been reported from the Cambrian (Meister 1968) and the Triassic (Ballou 1922).

In the course of negotiating a fashionable consensus that anatomically modern humans evolved from less advanced hominids in the Late Pleistocene, scientists gradually rendered unfashionable the considerable body of compelling contradictory evidence summarized above. It thus became unworthy of discussion in knowing circles. Richard Thompson and I have concluded (1993) that the muting of this evidence was accomplished by application of a double standard, whereby favored evidence was exempted from the severely skeptical scrutiny to which unfavored evidence was subjected.

One example from the many that could be cited to demonstrate the operation of linear progressive preconceptions in the editing of the archeological record is the case of the auriferous gravel finds in California. During the days of the California Gold Rush, starting in the 1850s, miners discovered many anatomically modern human bones and advanced stone implements in mineshafts sunk deeply into deposits of gold-bearing gravels capped by thick lava flows (Whitney 1880). The gravels beneath the lava were from 9 to 55 million years old, according to modern geological reports (Slemmons 1966). These discoveries were reported to the world of science by J. D. Whitney, state geologist of California, in a monograph published by the Peabody Museum of Natural History at Harvard University. From the evidence he compiled, Whitney came to a nonprogressivist view of human origins--the fossil evidence he reported indicated that the humans of the distant past were like those of the present.

To this W. H. Holmes (1899, p. 424) of the Smithsonian Institution replied: "Perhaps if Professor Whitney had fully appreciated the story of human evolution

as it is understood today, he would have hesitated to announce the conclusions formulated, notwithstanding the imposing array of testimony with which he was confronted." This attitude is still prominent today. In their college textbook, Stein and Rowe assert that "scientific statements are never considered absolute" (1993, p. 41). But they also make this very absolute statement: "Some people have assumed that humans have always been the way they are today. Anthropologists are convinced that human beings...have changed over time in response to changing conditions. So one aim of the anthropologist is to find evidence for evolution and to generate theories about it." Apparently, an anthropologist, by definition, can have no other view or purpose. Keep in mind, however, that this absolute commitment to a linear progressive model of human origins, ostensibly areligious, may have deep roots in Judaeo-Christian cosmology.

One of the things Holmes found especially hard to accept was the similarity of the purportedly very ancient stone implements to those of the modern Indians. He wondered (1899, pp. 451-52) how anyone could take seriously the idea that "the implements of a Tertiary race should have been left in the bed of a Tertiary torrent to be brought out as good as new, after the lapse of vast periods of time, into the camp of a modern community using identical forms?" The similarity could be explained in several ways, but one possible explanation is the repeated appearance in the same geographical region of humans with particular cultural attributes in the course of cyclical time. The suggestion that such a thing could happen is bound to strike those who see humans as the recent result of a long and unique series of evolutionary changes in the hominid line as absurd--so absurd as to prevent them from considering any evidence as potentially supporting a cyclical interpretation of human history.

It is noteworthy, however, that a fairly openminded modern archeologist, when confronted with the evidence catalogued in my book, himself brought up, in a somewhat doubting manner, the possibility of a cyclical interpretation of human history to explain its occurrence. George F. Carter, noted for his controversial views on early man in North America, wrote to me on January 26, 1994: "If your table on p. 391 were correct, then the minimum age for the artifacts at Table Mountain would be 9 million [years old]. Would you think then of a different creation--[one that] disappeared--and then a new start? Would it simply replicate the archeology of California 9 million years later? Or the inverse. Would the Californians 9 million years later replicate the materials under Table Mountain?"

That is exactly what I would propose--that in the course of cyclic time, humans with a culture resembling that of modern North American Indians did in fact appear in California millions of years ago, perhaps several times. "I find great difficulty with that line of reasoning," confessed Carter. But that difficulty, which encumbers the minds of most archeologists and anthropologists, may be the result of a rarely recognized and even more rarely questioned commitment to a culturally acquired linear progressive time sense.

It would, therefore, be worthwhile to inspect the archeological record through other time lenses, such as the Puranic lens. Many will take my proposal as a perfect example of what can happen when someone brings their subjective

religious ideas into the objective study of nature. Jonathan Marks (1994) reacted in typical fashion in his review of Forbidden Archeology: "Generally, attempts to reconcile the natural world to religious views end up compromising the natural world."

But until modern anthropology conducts a conscious examination of the effects of its own covert, and arguably religiously derived, assumptions about time and progress, it should put aside its pretensions to universal objectivity and not be so quick to accuse others of bending facts to fit religious dogma. Om Tat Sat.

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