

The Crisis of Palaeoanthropology in India in the Twenty-first Century

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INTRODUCTION

The Greek biographer Plutarch (45-120 A.D.) reported in an essay of his *Morales* that the Egyptians of his day always placed a human skeleton in a prominent place at their banquets as a reminder that life brings troubles as well as pleasures. Thus was coined the popular phrase “the skeleton at the feast” Although these gloomy guests were countenanced by ancient Egyptian diners, some present-day archaeologists exhibit a less welcoming reaction when encountering human bones, teeth and the occasional hank of hair resting on their laboratory tables alongside associated artifacts of greater appeal. This sentiment was eloquently expressed by the late Dr. Sasanka S. Sarkar (1908-1969) (1972), a biological anthropologist at the University of Calcutta:

“I have felt that archaeologists of this country are not yet so interested in skeletal remains as they are with potsherds. I tried to ascertain in certain cases as to what happened with the excavated skeletal remains, their whereabouts, or the completion of their reports, but I failed to obtain a scientific answer from any quarter. And if those facts were available, some lacunae in our knowledge would have been filled up The reconstruction of the skeletal remains should not be considered at par with pottery-washing and mending.”

In short, the osteological company is not always welcome at the archaeological banquet, and South Asia has not escaped the consequences of this attitude held over the past two centuries of study by Orientalists, antiquarians and archaeologists. Some excavators have left the burials unexhumed; others packed them off to a museum or other institution where they linger unexamined for decades; and not infrequently the excavated skeletons were lost, purposefully destroyed, or reburied without scientific study (Kennedy, 2000: 37-44). Despite these tragedies, many valuable collections of prehistoric human remains have been preserved, examined by trained biological anthropologists, and results of their investigation published. Prospects for a closer affiliation of archaeologists with their biological anthropology colleagues specializing in the sub-discipline of palaeoanthropology are encouraging, and this trend

is best demonstrated by a brief summary of the history of developments that have taken place in South Asia during the last century.

EARLIER ISSUES OF PRIMARY IMPORTANCE TO PALAEOANTHROPOLOGISTS IN SOUTH ASIA

When I entered the field of South Asian palaeoanthropology in 1960, the following five issues were of primary importance to my Indian and Western colleagues:

1. What were the phylogenetic lines of descent of the Miocene-Pliocene apes, whose fossils had been recovered from the Siwalik hills of northern India and western Pakistan, to ancient and modern humans ?
2. Could the manufactures of prehistoric stone tools found in the Indian subcontinent be biologically identified with certain living populations that had been classified into racial entities by Western and India anthropologists ?
3. Who were the creators of the Harappan (Indus) Civilization, and what happened to their culture and population after 1700 B.C. ?
4. What is the skeletal and archaeological evidence of the first Indo-European speaking people in South Asia, more specifically the Aryans of Vedic tradition ?
5. Has South Asia been a biological and cultural cul-de-sac receiving foreign populations with their distinctive cultural traditions from lands beyond the Himalaya ? Or were some, perhaps all, cultural changes within the subcontinent achieved independently and not acquired by cultural diffusion ?

The questions posed today by palaeoanthropologists active in South Asia bear little resemblance to those listed above. What has caused this transition? Some issues disappeared or were rephrased because of new skeletal discoveries. More fundamental factors relate to the dethronement of *Ramapithecus* as the Siwalik Miocene-Pliocene ape once accorded the status of a “proto-hominid” when fresh fossil discoveries in the 1970s revealed its closer phylogenetic affinities to a sivapithecine lineage represented today

by *Pongo*, the orangutan (Pilbeam et al., 1990). And this interpretation found support in the evidence of molecular biology that living apes and humans separated from a common ancestor ca. 6 million years ago (Sarich and Cronin, 1976). And if the dates for the chopper tools found in the northwestern sector of Pakistan are confirmed, then the earliest settlement of the subcontinent by hominids took place as early as 2.2 million years ago (Dennell, 1998).

The discovery in 1982 of an archaic *Homo sapiens* fossil in the Narmada valley is associated with late middle Pleistocene faunal remains and tools of the Acheulian tradition (Sonakia, 1984; Kennedy et al., 1991; Misra et al., 1990), while anatomically modern *Homo sapiens* skeletons dating to 34,000 years ago in microlithic cave sites in Sri Lanka provide a record of human evolution in South Asia that for the late Pleistocene is contemporary with the Cro-Magnon people of Europe (Deraniyagala 1992; Kennedy and Zahorsky, 1997).

The past 40 years has seen the fall of the traditional race concept in systematic biology whereby typologies were removed from studies of subspecies diversity for all organisms, including humans (Wilson and Brown, 1953; Kennedy, 1976). Of course racial categories continue in social thought where phenotypic diversity is confused with a faith that races are classifiable natural entities.

The origins of the Bronze Age Harappans are now better understood through discoveries of pre-Harappan cultures dating as early as 7000 B.C. in Baluchistan (Jarrige and Lechevallier, 1979), and convincing theories of Harappan decline, unrelated to mythical massacres by Aryan invaders (Wheeler, 1968; Kennedy, 1995), as reported in the current anthropological literature (Possehl, 1999). Continuing excavations at Harappa since 1986 by a joint Pakistani-American team included four biological anthropologists who have provided detailed descriptions of newly recovered skeletons from cemetery R 37 as well as a reassessment of all skeletons recovered from this and other sites of the Harappan realm (Hemphill et al., 1991).

Other advances include the recognition that the megalith-builders of the South Asian Iron Age were members of heterogeneous populations, not biologically homogenous or mysterious foreigners missionizing from a Druidical headquarters on the Salisbury plain (Sarkar, 1972; Kennedy, 1975). The identification and mapping of pathological responses to environmental stressors from the late Pleistocene to the dawn of the Historic Period in South Asia (Lovell, 1997; Lukacs and Walimbe, 1998) parallels other recent studies of how prehistoric

populations adapted to changing ecological and cultural stresses.

PRESENT-DAY ISSUES

Today the issues of major importance of palaeoanthropologists active in South Asia are strikingly different from those of only four decades ago. The questions are :

1. What is the evidence of earliest hominid settlement in South Asia ?
2. Can South Asian prehistoric human remains reveal biological affinities of living populations within the subcontinent and/or beyond its borders?
3. How have socioeconomic and technological changes in prehistory affected
 - A. human body form and size
 - B. muscular-skeletal robusticity
 - C. sexual dimorphism
 - D. ontogenetic growth and development
 - E. changes in dental anatomy
 - F. pathology and trauma ?
4. Which biological properties appear to be adaptive in the shift from hunting-foraging to food-producing (farming and herding)?
5. Where does South Asian palaeoanthropology fit into the broader worldwide arena of prehistory, particularly with regard to
 - A. Indo-European languages and the concept of Vedic Aryans
 - B. migrations of foreign peoples and patterns of gene flow
 - C. diffusion of cultural elements and institutions within South Asia and beyond its land-mass ?

In short, it would seem that palaeoanthropology of South Asia has shifted from a preoccupation with a classificatory model of race identification to an evolutionary palaeodemographic paradigm. But has it? I find that many of my respected South Asian colleagues agree in principle to the fall of the traditional race concept, but the venerable practice of polytypic sorting of ancient and living peoples survives in some published materials. Why is this the case ? I propose that several factors are operative:

- A. Older generations of Western and South Asian anthropologists found it expedient, even reasonable, to interweave the Hindu caste system with race classification. We see this in the 1901 *Census of India* compiled by Herbert Risley (1851-1911) (1908) and perpetuated, with some modifications, by B.S. Guha (1894-1961) (1935).
- B. The origin of the caste system is traced to the Vedic accounts wherein high caste individuals are directly associated with the Aryan Indo-Eu-

ropean speaking conquerors to whom classical Hindu religious and social institutions are attributed beginning around the hypothetical period of 1500 B.C. Since the majority of highly educated persons in India today are members of the elevated Brahmin caste, the story of population diversity expressed in caste and racial identities has personal relevance.

- C. Survival of the race concept is perceived in efforts to determine the origins of the ancient Harappans, the megalith-builders, or tribal populations. These do not include inquiries into evolutionary processes, environmental stressors, or palaeodemographic configurations. It is not a question of South Asian scholars rejecting evolutionary theory, genetics, and new scientific approaches to the study of earlier populations so much as it is the issue that their Western colleagues no longer seem to address the questions that are still regarded as important in the complex patterns of modern South Asian cultures. Even investigators of genetic profiles in rural and urban communities appear to Western readers to end up as exercises in racial classification, although many studies provide invaluable genetic data (Bhasin et al., 1994).

PROSPECTS FOR THE TWENTY-FIRST CENTURY

Results of this persistence of earlier anthropological models and veneration of certain texts by both Western and South Asian authors have consequences that characterize the status of palaeoanthropology in this part of the world as we enter the new millennium.

This discipline is practiced in the subcontinent by both South Asian and foreign scholars, but the research institutions of the latter group control greater financial resources that allow for extensive and continuing work within specific localities, e.g. the French teams at Mehrgarh, the American team at Harappa, and the Italians in the Swat valley. During the Raj the British were active in many parts of India and Sri Lanka, and there is today the British Archaeological Mission in Pakistan. While foreign programs are welcome and tolerated, full leadership is not always in the hands of the citizens of South Asian, except by officers of the governmental archaeological surveys and faculty at some universities. The stigma of colonization lingers, although collaboration is the rule. Indeed, in my many years of work in these countries I have encountered only friendship, cooperation, col-

laboration and courtesy. However, I can appreciate the sentiment that scholars of South Asian nations should be the key interpreters of their prehistoric forebears (Mathur, 2000).

Without solid financial support for palaeoanthropological research within these nations, the anthropology graduate student does not find the scientific study of the ancient dead to be a fruitful field for investigation or career commitment. At the present time there are no well established palaeoanthropologists in Nepal, Bangladesh, Sri Lanka, Afghanistan, and Burma. India should be proud of her acceptable number of palaeoanthropologists in the past, but retirements and deaths in many administrative and teaching positions may remain unfilled. Consequently, those graduates with training in biological anthropology in India, of which there are many, are encouraged to enter research areas with apparent "applied" aspects. Governments are inclined to support research providing data on medical and genetic issues, health care and demography. Archeology students have greater opportunities for career choices, particularly in projects involving restoration of historic monuments and in conservation. The expense of their training in Europe or North America is challenging and graduate-level fellowships are few.

The question remains, what must happen to advance South Asian palaeoanthropology into the twenty-first century? A look at what has transpired in earlier historic periods of palaeoanthropology offers hope. Europe entered this scientific endeavor in the mid-nineteenth century with the discovery of Neanderthal and anatomically archaic *Homo sapiens* fossils. Southeast Asia and China became centre stage with discoveries of *Homo erectus* fossils some four decades later. Then East Africa entered the arena by the middle of the twentieth century and continues, as do Europe and Asia, to produce an amazing hominid fossil record.

South Asia can do no less. This vast landmass between Europe, Africa and eastern Asia was not bypassed by our earlier hominid ancestors, as documented by the archaeological record extending into the Pliocene and by the middle Pleistocene hominid fossil from the Narmada valley. But the subcontinent has been slow in surrendering its contributions to the fuller story of hominid evolution because systematic and long-term exploration has not characterized the protocol of foreign and South Asian palaeoanthropologists. Think of where Africa was some half century ago and look what it has become today!

Biological anthropology, with its several sub-disciplines, is thriving today in European and North American nations as the cultural-biology interface becomes more sharply defined through the knowl-

edge that the linguist, archaeologist, biological anthropology and socio-cultural anthropologist forms to create the core endeavor of the broad community of scholars who study the past (Szathmary, 2000). In "rethinking the archive" of history and anthropology in South Asia, Saloni Mathur (2000: 89) notes that:

"Any concern with contemporary transnational or cultural configurations in South Asia, or with the future of the postcolonial nation state, must be considered in relation to colonial history and the specific formations of modernity it generated".

South Asia is the new frontier for our better understanding of human evolution, and the new millennium holds the promise of realization of this goal.

KEY WORDS Palaeoanthropology. South Asia. Twenty-first Century.

ABSTRACT Questions raised by Indian and foreign palaeoanthropologists in the mid-twentieth century have undergone radical changes as scientific specialists in the disciplines of archaeology, human palaeontology and palaeo-ecology enter the twenty-first century. Among the catalysts of the new palaeo-anthropology in South Asia are the fall of the tradition concept of human races within systematic biology, the increase in the prehistoric human skeletal record, and a focus upon the biological changes taking place in populations of the Indian subcontinent as a consequence of the socioeconomic transition from hunting-foraging to food-production survival strategies beginning in the early Holocene. Problems with respect to training and research opportunities for young Indian scholars with commitments to palaeoanthropology are discussed.

REFERENCES

- Bhasin, M.K., Walter, H. and Danker-Hopfe, H.: *People of India: An Investigation of Biological Variability in Ecological, Ethno-economic and Linguistic Groups*. Kamla-Raj Enterprises, Delhi (1994).
- Dennell, R.W.: Grasslands, tool-making and the hominid colonization of southern Asia: A reconsideration, pp 280-303. In: M.D. Petraglia and R. Korisettar (Eds.): *Early Human Behavior in Global Context: The Rise and Diversity of the Lower Palaeolithic Record*. Rutledge, London and New York (1998).
- Deraniyagala, S.U.: *The Prehistory of Sri Lanka: An Ecological Perspective*. 2 vols. Department of Archaeology, Archaeological Survey, Colombo (1992).
- Guha, B.S.: The racial affinities of the peoples of India. In: *Census of India 1931*. Government of India Press, Simla (1935).
- Hemphill, B.E., Lukacs, J.R. and Kennedy, K.A.R.: Biological adaptations and affinities of Bronze Age Harappans. pp 137-182. In: R.H. Meadow (Ed.): *Harappan Excavations 1986-1990: A Multidisciplinary Approach to Third Millennium Urbanism*. Prehistory Press, Madison (1991).
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- Jarrige, J.F. and Lechevallier, M.: Excavations at Mehrgarh, Baluchistan: Their significance in the prehistorical context of the Indo-Pakistani borderlands, pp 463-535. In: M. Taddei (Ed.): *South Asian Archaeology 1977*. Istituto Universitario Orientale, Naples (1979).
- Kennedy, K.A.R.: *The Physical Anthropology of the Megalith-Builders of South India and Sri Lanka*. Australian National University Press, Canberra (1975).
- Kennedy, K.A.R.: *Human Variation in Space and Time*. William C. Brown, Dubuque (1976).
- Kennedy, K.A.R.: *God-Apes and Fossil Men: Paleoanthropology of South Asia*. University of Michigan Press, Ann Arbor (2000).
- Kennedy, K.A.R.: Have Aryans been identified in the prehistoric skeletal record from South Asia? Biological anthropology and the concepts of ancient races. In: G. Erdosy (Ed.): *The Indo-Aryans of Ancient South Asia: Language, Material Culture and Ethnicity*. Walter de Gruyter, Berlin (1995).
- Kennedy, K.A.R., Sonakia, A., Chiment, J. and Verma, K.K.: Is the Narmada hominid an Indian *Homo erectus*? *American Journal of Physical Anthropology*, **86**: 475-496 (1991).
- Kennedy, K.A.R. and Zahorsky, J.L.: Trends in prehistoric archaeology and biological anthropology: New evidence from Pleistocene deposits at Fa Hien Cave, Sri Lanka., pp 839-853. In: B. Allchin (Ed.): *South Asian Archaeology 1995*. Oxford-IBH, New Delhi (1997).
- Lovell, N.C.: Anaemia in the ancient Indus valley. *International Journal of Osteoarchaeology*, **7**: 115-123 (1997).
- Mathur, S.: History and anthropology in South Asia: Rethinking the archive. *Annual Review of Anthropology*, **29**: 89-106 (2000).
- Misra, V.N., Rajaguru, S.N., Badam, G.L., Ranjoo, R.K. and Korisettar, R.: Further research in the prehistory and quaternary geology of the Narmada valley. In: N.C. Ghosh and S. Chakrabarti (Eds.): *Adaptation and Other Essays*. pp. 53-59. Research Publications, Visva-Bharati, Santiniketan (1990).
- Pilbeam, D.R., Rose, M.D., Barry, J.C. and Ibrahim Shah, S.M.: New Sivapithecus humerus from Pakistan and the relationship of *Sivapithecus* and *Pongo*. *Nature*, **348**: 237-239 (1990).
- Possehl, G.L.: *The Indus Age: The Beginning*. Oxford-IBH, New Delhi (1999).
- Risley, H.: *The People of India*. Thacker, Spink and Company, Calcutta (1908).
- Sarich, V.M. and Cronin, J.E.: Molecular systematics of the primates. pp 141-170. In: M. Goodman and R.E. Tashian (Eds.): *Molecular Anthropology*. Plenum, New York (1976).
- Sarkar, S.S.: *Ancient Races of the Deccan*. Manoharlal, New Delhi (1972).
- Sonakia, A.: The skull-cap of early man and associated mammalian fauna from Narmada valley alluvium, Hoshangabad area, Madhya Pradesh, India. *Records of the Geological Survey of India*, **113**: 159-172 (1992).
- Szathmary, E.J.E.: A comment on the series: A view of the science: Physical anthropology at the millennium. *American Journal of Physical Anthropology*, **114**: 1-3 (2000).
- Wheeler, R.E.M.: *The Indus Civilization. The Cambridge History of India. Supplementary volume*. 3rd Ed.: Cambridge University Press, Cambridge (1968).
- Wilson, E.O. and Brown, W.L.: The subspecies concept and its taxonomic applications. *Systematic Zoology*, **2**: 97-111 (1953).