

Rethinking In Indian Anthropology

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ABSTRACT In the wake of specialization many disciplines are facing a problem of segmentation. If this is allowed to influence anthropology it can result into such disciplines which will become virtually unrecognizable to each other. Consequently anthropology needs to work out a formula where most recent advances in biological and sociological fields can be incorporated to devise newer strategies of research. If we look at the issues emanating in the national scene in the last 50 years we would see that none of them fall outside the area of involvement of Anthropologists. Whether it is Jharkhand problem, the Mandal Commission or the tribal de-Christianization. Anthropologists in our country could provide very little research results to help us understand the contemporary issues. In physical anthropology as well there is a crying need to understand occupational Osteology and Physiology. Increasing stress brought about by rapid transformation in life style is another sector for which we have no base-line data to provide. None of these issues can be dealt purely by analysing samples in the laboratory. Each of these areas of research require a thorough understanding of both the traditional mores of a population as also the magnitude and direction of change brought to bear by them. Consequently, one needs to wed the socio-cultural studies with biological information. No other subject can handle these diverse areas as successfully as the anthropologists can. Yet the impact of specialization has created such a vast gap between our sub-disciplines that we were unable to address to the actual issues. It is felt that in the next century we should try to gear our researches to such an array of issues which can consider a population as not only the product of genetic combinations but also the product of a society and history. This might also be extended to serological studies where newer parasites and viruses are using Man as a Vector. Since human cultural adaptation to a specific food, water source or even sexual behaviour regulates the point of entry of these parasites or viruses and since these are rapidly mutating organisms, anthropological studies can make substantial contribution also in the areas of public health if we try to change our direction of research.

An older period turning into a new one is a process we cannot control. But this can serve as a useful marker of time to estimate the direction as also magnitude of change through time. I shall like to compare the path of such change with the usual normal distribution curve. For metric analysis we divide this into three segments; the

first 17½ per cent is taken as Low, the hunch of the curve constituting 65 per cent as Medium and the last 17½ per cent as High. In order to appreciate the process of change in Anthropology, I would like to designate these three segments of the curve as Formative, Descriptive and Analytical stages. In epistemological terms the formative period can be compared with what Kuhn (1970) would term *Pre-Paradigmatic* and in the same light the descriptive period can be termed as *Paradigmatic* and the analytical as *Post-Paradigmatic*. It is further argued that the post-Paradigmatic phase in turn can lead to new Paradigms and the process goes on.

Anthropology took a discrete shape in the middle of the eighteenth century and continued in a formative stage all throughout this century. The Nineteenth century developed typical characters of a descriptive stage and this culminated into the rise of Darwin himself and subsequently the Darwinian approach. Nineteenth century ended with the beginning of a search for possible explanations of discovered facts in many parts of the west. This brought about newer issues, discovery of newer enzymes and proteins. Twentieth century has gone deeper into these quests and as we are standing at the end of this century we feel as if Man has been reduced to an enormous mosaic of interacting sets of thousands of biochemical chains. It will not be entirely wrong to speculate that the turn of the century will witness attempts at human cloning and transplanting of human organs obtained through such cloning.

The development curve for Indian anthropology, however, would appear to be highly skewed because we seem to be still continuing with the descriptive stage.

Indian Anthropology inherited the environment of scientific thinking at its inception. Soon the colonisers' preoccupation of studying the little known exotic populations in Africa, Pacific and Tasmania was taken up in India as well. Indian anthropology as a result of this got totally

involved with describing attributes - may it be anthropometric, craniometric, physiological or cultural. There was hardly any question of one's going back to these attributes and understanding their process of expression. To the biologists heritability refers to the passage of traits along family lines as a result of genetic transmission. It says little about environmental modifications to which these traits are subject. Once the traits were given a name they start getting an identity of an insular entity as if each one of these have a set of genes controlling them independently. Genes do not make specific bits and pieces of a body. They code for a range of forms under an array of environmental conditions. Thus, a dolicocephal or Sheldon's body type can hardly act as population discriminant.

In matters of single allelic or even polygenic characters as well environmental intervention is capable of creating a range of expression. If we scan the record of human ancestry we would see that within the span of last 50,000 years of our species there has been hardly any new gene added in our make up which could herald the formation of a sub species, least of all a new species. Yet the changes observed in human societies from the days of the Veddas of Ceylone or Tasmanians has been, to say the least, just enormous. This proves beyond doubt that differentiation occurs in human kind more by way of cultural change than by biological change. The former can proceed so quickly because it operates in the 'Lamarckian' mode *i.e.*, by the extrasomatic inheritance of acquired characters. Whatever one generation learns, it can pass to the next by writing, instruction, ritual and a host of similar other methods that humans have developed to assure continuity of culture. Once the role of culture in human differentiation is accepted one needs to delve into the issues of culture as a phenomenon. Although one can probably accept that the culture making ability in man is conditioned by specific genetic configuration, yet understanding culture with genetic rule or law usually lands us in problem. It needs to be clearly understood that while in biological sciences transformations are possible on the basis of earlier ones which constitute their pre-conditions, in social sciences acquired knowledge at every step of transformation can provide both

newer as also multiple choices. In short human cultural change cannot be put within any predictable frame. Here is a barrier that biologists generally refuse to accept and consequently many over simplistic relations of cultural behaviour and biology are brought out as scientifically administered truth.

I personally feel that Indian Anthropologists should start working on developing a new branch of study called Behavioural Genetics. The duplication of research by taking up bio-chemical genetics will require our leaving the boundary of Anthropology but Behavioural Genetics will not. Further, the cultural divergence as also culturally controlled millions of Mendelian populations spread over the length and breadth of the country should provide an excellent control for understanding the process by which adaptational success heralds the natural selection process in one population more rapidly than in another. My contention is that population genetics, as has been done so far by us had scarcely addressed the issues of ethnographic problems or even changes in human behaviour. Fast changes are being observed in the polarization of opportunities and hence power and status. These forces are bringing together members of diverse Mendelian groups in active interactional field and it does not take time to change the mating behaviour which has hitherto maintained the control provided by caste, region, language and religion. Once these controls become temporal one can soon observe G6PD surfacing in Bihar and Lactase dehydrogenase deficiency surfacing in Punjab and Himachal Pradesh. Consequently gearing population genetics from ethnic investigation to issues of micro-evolution could provide a very promising field for future anthropological studies.

The area for which India is put in international map is the area of investigations in Siwalik fossils. It will be only befitting that this area is further emphasised in the coming millennium. However, not to make this recommendation area-specific I shall feel that Anthropology elsewhere in India also might as well emphasise studies on human bones. Impact of specific behavioural adaptation of bones needs to be isolated from what among these can be taken safely as taxa for identifying species and sub-species. The

volume of human skull, for instance, expands from about 400 C.C. at birth to approximately 1350 C.C. by the age of 6 years. During this entire period of expansion the various segments of the vault maintains precise spatial relationships with the many nerves and vessels that supply the brain. One would naturally wonder how much of this quadrupling process is genetically coded and how much of this has environmental intervention. The numerous functions and processes that influence bone growth is not only complex but is also substantially controlled by occupational requirements. Genes regulate many aspects of bone growth and morphology but it would be impossible to pre-program any osseous feature for any specific age, sex, nutrition and occupation. Life's unpredictability and the countless areas of interactions between anatomical structures require that bones be able to respond to nongenetic signals from neighbouring tissues, from mechanical forces, and from numerous local growth factors and systemic hormones. The multifactorial basis of osseous morphology consequently can obscure many crucial informations for researches in fossil history. For those desiring evolutionary relationship of a fossil find we need to rely on features which have strong genetic basis. As opposed to this for those working on behavioural variations the plastic components of bones might come very handy. These conflicting epistemological demands often contribute to the vastly different conclusions that are drawn from analyses of the same fossils.

This is primarily because we do not inherit our bones from our ancestors, we inherit only DNA base pairs that play some role in their growth. It would, therefore, seem that bones can serve excellently for reconstruction of past activities and habitual behaviors. Demes and Creel (1988) showed that the location of muscle in the cranium and mandible can be used to calculate the actual bite force. Spencer and Demes (1993) compared bite forces produced in the anterior and posterior dentition of Neanderthals with extant American Indian races, and demonstrated that the Neanderthals possessed higher occlusal forces than many later sapiens. Likewise angular kinetics and its effect on the various long bones also can yield a variety of rich informa-

tion about the process of bone modelling. So little data is available on these factors of occupational Osteology that one can scarcely work out the life ways of our ancestral populations. It provides a very rich field of investigation for our future anthropologist.

Another sphere which has scarcely been touched by anthropologists so far and hence requiring special attention is nutritional anthropology. This has become specially important because of the fast changes in the life style of Indians - specially those living in urban areas or near about such centers. The total energy expenditure and food energy intake is getting hopelessly disbalanced. While television viewing habit is decreasing the quantum of activity, introduction of chocolate and candies as also fast food items and junk food on the other hand is increasing the energy intake inordinately. The effect of this disbalance can create significantly impaired future for the nation when the children are being targeted for this kind of changed life style. The children of our urban metropolis, anyway, are under a great stress of carbon monoxide poisoning and psychological pressure of a chaotic system and to load them with such disadvantages is playing with the future of the nation. Consequently a research directed towards these issues would seem to be a priority area.

This inquiry is also linked with issues of stress physiology. We know that first adrenaline and then Epi-nephrin and Nor-epinephrin hormones are secreted whenever one faces stress situations such as an interview, examination or the like. One can easily visualize the almost constant requirement of these otherwise emergency chemicals in the face of vehicular driving stresses over and above the stresses created by David Dhawan and others of his kind through the small screen. This calls for an over activation of cardiovascular functioning, and this can be detrimental to the under adult population.

Finally I shall like to stress that researches in clinical serology have a great scope in India. This is mainly because of public health reasons rather than pure genetics. Being in a tropical latitude parasites and bacteria are constantly seeking human vector. These simple forms of organisms mutate at a very high rate and human blood has to constantly create newer immunities or

fighting factors. But this success can occur only after a large portion of a population falls victim to them. To top these all is the large number of viruses, the list of which is constantly increasing, which forms an imminent threat. Since both parasites as also many of these viruses are linked with such human socio-cultural behaviors as habitation, water source, dietary habits and sexual habits one cannot deny that studies in this direction can benefit a great deal from an Anthropologist's involvement.

When we view the turning of the century and sit together to work out a direction to be chosen in research for the future, we find that we can no longer remain satisfied with fundamental research. We urgently need getting into fields of applied research within a fast changing society. Lest I am misunderstood I must hasten to add that I am not recommending the giving up of fundamental research. Since I am a firm believer of the fact that man is not for science but science is for man I strongly believe that the time has come when anthropology should address issues bothering the common man. My attempt to link biological investigation with human behaviour is specially to vindicate our position as Anthropologists. Our results obtained with this kind of changed perspective are certainly going to be more meaningful than what can be inferred purely through clinical tools.

Social anthropological research in our country has been much more in quantum and also in diversity. It is quite understandable when one sees the enormity of ethnic diversity present in India. In terms of elucidating social institutions and their functioning we have covered a great distance but the changes brought about by varieties of forces are very poorly covered. Our agricultural societies working under traditional systems are well understood by now. Yet we seem to have no interest in the phenomena of rural suicides or caste violence. These emerging issues have a crying need for anthropological attention. We all know that in the corridors of power or even in other science departments the term anthropologists always invokes the image of a people who are living with isolated tribals and studying their songs, dance and rituals. One would naturally think that in matters concerning tribes in our country the state will requisition

our expertise. Sadly no such things happens because of our inability to get involved in researches which could help us to understand the issues. We saw how the Mandal Commission was formulated by merely decorating the expert panels with names of some anthropologists. You would perhaps know that originally both Jats in Haryana and Punjab and Kurmis in Bihar were grouped in Backward Class in spite of our tooth and nail fight with the state officials. We have seen how the Jharkhand issues first and now the tribal de-christianization has been totally hijacked by the politicians. Anthropologists, who in lighter vein are taken as tribal experts are *persona non grata* in state matters. One would naturally like to ask why this has happened - when our first Prime Minister was so keen to understand the Tribals and even got Verrier Elwin in the first Parliament as the President's nominee. I feel, this is because our Anthropologists have created their own ivory towers where they are busy in such issues as classifying kinship relations in a segmentary lineage working out its differences with other lineage systems. We have experts who have worked in History of religion. Yet we have no body to point out that Tantiric Hinduism as also Hinduism at Common man's level for long time in ancient India had ameliorated ancient Buddhistic beliefs and incorporated them as different folk traditions. Folk beliefs in India continue parallelly with classic Brahminical period unlike in the West. Yet looking for Archaeological remains to pin down a structure as either Hindu or Muslim in a certain site in Faizabad would surprise many of us. Probably Noam Chomsky had meant this kind of attempts when he gave the term "*State constructed truth*".

I strongly believe that Indian anthropology in the turn of the millennium has to address issues which are of national interest and this alone can make us relevant within Nation Building Planning.

A time has come that we should step down to contemporary realities within a fast changing scenario. The spurt of rural suicides is a slap on the sociologists who had always maintained that suicide is an urban phenomenon. Our experts on peasantry should direct researches to understand how the break up of traditional pattern of subsistence can create its own backlash. This is more important because very lately multinationals are

shrewdly planning to push consumer goods in the rural base by skillfully using rural dialect in their advertisements. Coupled with this the withdrawal of subsidies in fertilizers and electricity to operate irrigation pump can be a death blow to a system which is not ready yet to jump into the western system. Translocation of populations because of various developmental projects is yet another aspect which needs our urgent attention. Changes brought about in any segment within a compact society are bound to create backlashes at unpredictable segments, and it is the anthropologists alone who can prevent such changes which prove counter productive at the end.

Finally I shall briefly mention about the dead baby we are carrying on our arms for the last 100 years without knowing exactly what we should do about it. From the days of our colonial past Indian anthropology has been incorporating three distinct branches of studies. Of these the only branch which has never been called upon to address itself to anthropological issues is Prehistoric Archaeology. It is now almost a century and Prehistory has survived in the body of anthropology without any change in form or function. Looking at its redundancy many departments have even undergone the operation of appendectomy. I am not here to go into the issues and causes for this state of affair. However, I do think prehistorians can play significant role in anthropology in the near future, if only they stop limiting their activities to mere antiquity analysis. Questions that require to be undertaken through archaeological researches are the mechanism through which band societies in various eco-zones may have undergone

changes. Settlement as either proper peasants like for instance in Durum wheat zone of Panjab, Agro-pastoral groups like in the barley and millet zone of north-west frontier land or dispersed and loosely interoven village as in the root crop and wild seed collecting groups in the middle Ganga region can give rich informations about the magnitude and direction of changes in the socio-cultural features in various regions of India. It can speak volumes about the possible mind-sets of the people in various regions of India. This can provide a guiding principle of elucidating reactions of technological innovations experienced by diverse populations. Our understanding of the millions of megaliths spread all over India are still very incomplete. We still donot know where prehistory ends and history takes them over as hero stones, memorial stones, or even Sati stones. Tribes making metals is a significant feature of India. Asurs, and Agarias are still not adequately incorporated within the interpretations of metal age in India. Tribes acting as the clearing agent of forest produce for agricultural villages is indicative from many Chalcolithic sites of India. Yet palaeo-ethnic movement is not properly understood.

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