

## Preface: Anthropology Today

Anthropology has been described as “the most scientific of the humanities and the most humanistic of the sciences”. Anthropology over the years is recognised as the discipline that studies all dimensions of humanity (evolutionary, biophysical, sociopolitical, economic, psychological, etc.). The focus of anthropological research is on human population(s) living in an ecological niche. In the 21<sup>st</sup> century Anthropology is under continuous pressure to redefine itself to explore sweeping biological and social transformations that are taking place in the society today.

Anthropology has traditionally followed a four fold division recognising as distinct areas of specialisation.

1. Palaeo-anthropology/Pre-historic Archaeology
2. Social/Cultural Anthropology
3. Biological Anthropology
4. Linguistic Anthropology

However, over the years emphasis has shifted. Linguistic Anthropology has gradually merged with the independent discipline of linguistics and there are few departments today that continue to teach linguistic anthropology as was done at the time of the inception of the discipline. The science of man in society while conforming to the broad four fold division has over the years developed numerous sub-disciplines that cater to the challenges of comprehending impact of technology and rampant industrialisation, global warming and biological interventions on mankind. Various new frontiers have opened in the last century that demands anthropological skills for intervention. The preface to the volume is only an attempt to provide a glimpse to the readers of various methodological and functional modalities of the discipline on a broad platform.

### Palaeoanthropology/ Pre-historic Archeology

One of the core areas of the discipline that continues to draw a great degree of scholarship is the sub-discipline of Palaeoanthropology/Pre-historic archaeology. Great strides have been made in this area. Discovery of fossil remains and accompanying archaeological evidences depicting diversity of civilisations continues to evoke human curiosity.

The archaeology and palaeo-anthropology of human evolution during the last four million years has been researched and described by competent

scholars. Archaeology is an important field of anthropology which is broad study of human cultures and biology. Pre-historic archaeology is the study of the past before historical began. Archaeology studies past human behaviour through examination of material remains of previous human societies. These include fossil remains (preserved bones) of humans, food remains, the ruins of buildings and human artifacts- items such as tools, pottery and jewellery. In trying to understand how and why ways of life have changed through different parts of the world, archaeologists collect materials from the excavation sites. Archaeologists interpret their data using techniques and findings borrowed from other disciplines in addition to the inferences from anthropological studies of recent and contemporary cultures. Archaeological research spans the entire development of phenomena that are unique to humans. There is potential to contribute a palaeo-dimension to a wide range of environmental sciences. The key areas are palaeodiet, health and human osteology; forensic archaeology; coastal and wetland geoarchaeology; and micromorphology of archaeological sediments. Submarine prehistoric archaeology, a branch of archaeology, undertakes research to construct underwater cultural heritage.

### Social Anthropology/Cultural Anthropology

An area of enquiry that has made remarkable progress in the last century and continues to thrive in the first decade of the twenty first century is the sub discipline of social/cultural anthropology. Irrespective of the challenge posed by the sister discipline sociology, research and theoretical skills of social/cultural anthropology rooted in the closely guarded practice of fieldwork and generating empirical ethnographic data - the contributions made by social/cultural anthropologists are in great demand.

Socio-cultural anthropology is the study of social institutions and human behaviour in a cross-cultural perspective. It attempts to unravel the underlying designs of human existence with a view to arrive at generalisations having validity not only at the level of the concerned culture but also at the global level. United States universities more often use the term cultural anthropology; British universities have tended to call the corresponding field social anthropology, and for much

of the 20<sup>th</sup> century emphasised the analysis of social organisation more than cultural symbolism. After the World War II, number of British and American scholars started borrowing ideas and approaches from each other and started reckoning the subject as sociocultural anthropology. In some European countries, socio-cultural anthropology is known as ethnology. Subfields and related fields include psychological anthropology, folklore, anthropology of religion, ethnic studies, cultural studies, anthropology of media and cyberspace, and study of the diffusion of social practices and cultural forms.

In the beginning, social anthropologists were interested in the description of the culturally relevant behaviour, the characteristic social institutions and the customary practices of the population different from that of the researcher. Thus it emerged as the study of the other cultures. Since then, social anthropology has progressed to reach the contemporary state. It has witnessed several paradigmatic shifts and associated changes in methodology. Due to its emphasis on simple, preliterate and small scale societies, it has mainly remained holistic and comparative. Cross-cultural comparison has been used as the methodological means to arrive at universal laws governing human societies. This way of practicing social anthropology was mainly advocated by Radcliffe-Brown in the 1920s who strongly argued that social anthropology is nothing but the natural science of human society. This carried the implications of taking social anthropology as a positivistic discipline. Initial compulsions of wanting to establish itself as science, led anthropologists to emphasise observable behaviour during their fieldwork. There was also pressure to augment data and validate with statistical measures. Quantitative methods were gradually incorporated by social/cultural anthropologists in support of qualitative data. However, the early 1960s saw a shift from the study of behaviour to the study of ideas. The cultural anthropologists of America were pioneers in this field. They believed that every culture had its own logic and the discovery of this logico-mathematical model of the cultural grammar was the main task of cultural anthropology. This way of conducting social anthropological enquiry came to be known as the New Ethnography, the newness being the shift from the study of observable behaviour to unobservable social meanings. Julian Steward and Leslie White, focused on how societies

evolve and fit their ecological niche-an approach popularised by Marvin Harris. Economic anthropology, gained recognition and was immensely influenced by Karl Polanyi work. This was followed by Marshall Sahlins and George Dalton studies which pointed out how traditional economic ignored cultural and social factors. Social anthropological paradigm fragmented as scholars such as Rodney Needham and Edmund Leach incorporated Levi-Strauss's structuralism into their work. Structuralism predisposed a number of advances including cognitive anthropology and componential analysis. David Schneider, Clifford Geertz, and Marshall Sahlins postulated and developed a popular concept of culture as a web of meaning or signification which proved its utility within and beyond discipline. With the rise of post-modernism, the 1980s saw another change in the foci of anthropological enquiry in which the observers interpretation and not the observed factual description occupied the central place. Interpretive anthropology provided a fertile ground for deconstruction of the already established anthropological theories and paradigms.

The contemporary social anthropology thus survives on a delicate balance between the persistence of already established anthropological theory on one hand and the deconstructionist trend of the post-modern era on the other. Of the several branches of social anthropology, development anthropology, economic anthropology, political anthropology, cultural ecology, psychological anthropology, medical anthropology, anthropology of religion and tribal studies are few important ones. Development anthropology is one of the branches where the applied potential of social anthropology is fully manifested. As a distinct body of theory and methods, it elucidates the complex developmental issues which were hitherto handled by economists. Issues such as displacement, rehabilitation, adaptation to a new environment, acceptance of modern innovation are addressed by development anthropology. Application of social anthropological knowledge in the field of public health, family planning and management of local resources, has made considerable progress. With the independence of the third world countries and creation of the welfare state, applied anthropology serves as an instrument to solve peoples problems rather than serving the interests of the colonial government as was done by its old counterpart. Sol Tax in 1951 talked about a new

kind of anthropology, the action anthropology, which gave the anthropologist adequate power to make decisions in the field unlike the applied anthropologist who always relied on government resources and waited for the government approval. Currently anthropologists are paying attention to globalisation, medicine and biotechnology, indigenous rights, anthropology of industrialised societies, and global warming.

Anthropological findings have provided newer and deeper insights into the dynamics of community life at a micro level. The diversity and richness of Indian culture has placed the anthropologists at an advantageous position to comprehend and explain the cultural rationale behind the individual and group behaviour. Different voluntary associations, NGOs, and international development organisations of United Nations are relying on the rich ethnographic data bank generated by the social anthropologists while devising strategies for integral development.

### **Biological or Physical Anthropology**

Biological or physical anthropology seek to understand physical human being through the study of human evolution and adaptability, population genetics, and primatology. Subfields or related fields include anthropometrics, forensic anthropology, osteology, and nutritional anthropology. Anthropologists contribution in the area of human genetics, forensic anthropology and growth studies is well acknowledged. The sub-discipline of biological anthropology is devoted to evolving a comprehensive and scientific understanding of both the phenotype and the genotype.

Biological anthropology can be defined as the scientific study of inter-and intra-population variations. Many of the anthropological studies aim to investigate nature-nurture relationship, though both elements of this interaction can be holistically studied separately. Thus there is a genetic study of a morphological, anatomical or serological trait, and there is also an anthropology of food and nutrition in the orbit of biological anthropology. Disciplines like ecology and demography lie at the interface of biological and cultural studies in which the techniques of biological anthropology are used to determine the biological status of a population. For accomplishing the studies of nature, nurture and their relationship, the concept of population,

consisting of the people sharing the same gene pool, is imperative. Biological anthropology today investigates the micro-evolutionary adaptation processes, dialectically related to natural and cultural environments, which determine the survival value of a population. In addition to delineating the biological profile of a Mendelian population, the applied dimensions of biological anthropology identify the pathogenic characters of a population, suggesting viable and concrete programmes for their alleviation.

The dynamism of biological anthropology is clearly evident in the studies pertaining to growth and development. Earlier the primary emphasis was laid on the growth patterns of children but in recent years the compass of these growth studies has been extended to include not only the growth patterns in the foetus (what has come to be called foetal anthropology), but also of elderly people as part of gerontology studies. The studies of the senescence and ageing process have acquired an important place in anthropology.

Genetic counselling has opened new vistas to identify chromosomal errors at the foetal level. Now it is possible to offer advice to expectant mothers about their genetic fitness. Ultra-Sonography has proved to be a superior technique compared to X-ray in determining foetal abnormality, and it has acquired a significant place in anthropological works.

Anthropologists are committed to the problems of the marginalised sections of society. Culture of poverty and its impact on biological and social well being of society is an important area of research explored by anthropologists for decades. These concerns have become much more poignant. Recent studies have shown that more than 2/3<sup>rd</sup> of children below the age of five in India are malnourished. Malnutrition has adverse impact on the growth of the children, It not only deters their physical growth but also impacts their mental health. Anthropologists for years have conducted various health-status surveys on the Scheduled Castes and Tribes so that better health programmes may be planned for them.

People inhabiting different eco-niches have their own specific problems, and for their understanding a holistic knowledge of their biological and social adaptation is required. The study of mother-child welfare is equally important in contemporary physical and social anthropology in the true tradition of its holistic

approach. All this shows that the vitality of anthropology lies in the fact that it is able to absorb new techniques in its framework for a better and total understanding of human beings. By its very nature, it is a science with highly permeable frontiers where new techniques and methods, evolving in other disciplines, have found a respectable place. In all these attempts, the singular goal of biological and social anthropology, that is the total understanding of the biological and social contours of a population, has remained intact. Such a perspective in anthropology has resulted from the change of foci in the discipline itself.

### *Emerging Frontiers in Physical Anthropology*

It was in 1951 that S.L. Washburn laid down a distinction between the pre-1951 and post-1951 physical anthropology. His oft-quoted term, "The old physical anthropology", is a term about which there was not much agreement. Washburn's insights were carried forward with the improvisation of new techniques, like chromosome analysis, molecular genetics, etc., and still newer and newer dimensions of physical anthropology were explored. In a nutshell, physical anthropology has moved from a descriptive study of biological parameters to an understanding of their causes. In recent studies, mathematical models formulated for population biology have become popular for understanding the causes of variation and co-existence of genetic traits. Thus the orientation of physical anthropology has changed from description to causes to models.

The old counterpart of physical anthropology was purely descriptive; it described the expanse of a character, its frequency distribution, and its various types. In other words, the "old" type was least analytical, heavily descriptive; least experimental and heavily morphological, least hypothesis-testing and heavily hypothesis-generating and it was satisfied with treating a trait and its distribution as an "end" in itself, rather than relating it with the relevant issues of adaptation and evolution. It studied structure without relating it with function, and all its attempts were directed towards attempting racial classification. In the pre-Darwinian era, it was static, and because of the absence of a dynamic perspective, it was not able to launch a multifaceted study for understanding various problems.

With the emergence of the New Physical Anthropology, the perspective of biological anthropology started changing. Washburn defined it as the study of the mechanisms of human evolution. According to him, it connoted the experimental study of adaptive functions of human biological endowments and the application of population genetics to an understanding of human evolution. This distinction between the New and the Old physical anthropology was a change in outlook and perspective, and in the repertoire of techniques and methods used for carrying out a scientific study. Here the shift of focus was from classification of human types to the understanding of the biological contour of a population. Initially, anthropology was the study of oddments and exotic people, and in such a study various kinds of stereotypic images were fixed, but the changing perspectives clearly stated that anthropology studied every kind of population, without looking for the eccentricities of human groups. The descriptive approach gave way to the analytical and the pertinent question was: Why did a population come to have a particular kind of distribution? For this it was essential to know the population structure, and its interaction with the environment-nutritional, biotic and cultural.

In the descriptive type of physical anthropology, G.W. Lasker has identified five major areas of interest according to which relevant techniques for investigation were devised.

1. The form of bones and teeth
2. Determination of age and sex and ethnic group from bones and teeth
3. Human growth and development
4. Composition of the body and its variation
5. Body build and its application to human engineering.

Although in Lasker's formulation, dermatoglyphics did not figure, it occupied an important place in physical anthropology preceding 1951. Therefore, for completing the list of the old interests, the inclusion of dermatoglyphics is imperative. Since 1951, the various dermatoglyphic traits occupied an important place in biological anthropology. Determined by genetic factors, a few weeks after the conception, they are not affected by environmental factors. It is this property that explains the importance of dermatoglyphics in population studies. Though up to now it is not possible to calculate gene frequencies for the various dermatoglyphic traits,

they are nevertheless good tools in order to record genetic variation within the human populations.

But it should not be forgotten that these interests listed by Lasker are instrumental in generating a wealth of data, still valuable for accomplishing newer interests. These fields have not been discarded by biological (physical) anthropologists when the New Physical Anthropology, the result of the consanguinity between evolutionary and adaptational theory on the one hand and genetics on the other, had gained ground. With the "New Physical Anthropology", the interests which have come to stay are :

1. Serological studies
2. Biochemical genetics especially of various polymorphic systems.
3. Studies of evolutionary factors such as mutation, natural selection and gene flow.
4. Primatological studies, of their biology and behaviour.
5. Demographic studies, especially of factors that affect inbreeding and genetic drift and the biological consequences of formal kinship and alliance systems.
6. Anthropometric and anthroposcopic studies, with reference to nutritional factors and ensuing demographic characters.
7. Ecological studies dealing with biological and cultural adaptations.

Physical anthropology has achieved new strides after Washburn's 1951 statement. For grasping the laws and processes of human evolution, molecular evidences have been assembled leading to the advent of microscopic work in the area. Human cytogenetics has made an outstanding contribution towards the knowledge of adaptation and evolution. Evolution at the genic (elemental) level is that which is being sought through DNA analysis using recombinant techniques. Thus, we have come a long way from

morphological studies to those of genetics, and to those where the gene-environment relationship is the subject matter. The question, what happens to genes with degradation in biotic environment, acquires a primary place. With these newer and still newer interests, different kinds of techniques have been enunciated to understand nature-nurture relationship in a better fashion. Moreover, there has been a concomitant advancement in statistical methods and we are now in a position to make use of many parameters.

A number of subfields of anthropology cut across these four divisions. In the field of medical anthropology, a considered branch of socio-cultural anthropology; however studies are being taken on the interaction of culture and biology or analysing biological variation in populations. Scholars use archaeological techniques to understand health and sickness in prehistorical populations. Biocultural studies are being taken on large scale synthesizing cultural and biological perspectives.

To pay befitting tribute to the subject of Anthropology, it will be perfectly in order to state that the discipline has the unique distinction of being a melting pot of all the basic and applied sciences - earth, -physical, -life, -medicine as well as - social and humanities. In the past contributions made by the fraternity has helped mankind pass many milestones. Its contributions to exploring complexities of human civilisation are well acknowledged. This volume explores new frontiers that discipline with its advanced theoretical insights and methodological tools is examining. Review articles and other papers take a critical view of the past accomplishments and future possibilities. The volume is presented to you with the hope that it will become a ready reckoner for future researchers looking for new themes and research paradigms.

Delhi  
May 31, 2007

**Veena Bhasin &  
M. K. Bhasin**