1945-2024

ANTHROPOLOGICAL SURVEY OF INDIA

Directors and Projects

GOVERNMENT OF INDIA
MINISTRY OF CULTURE

Regional Centers of Anthropological Survey of India and their Year of Establishment

ANTHROPOLOGICAL SURVEY OF INDIA

Directors and Projects

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Acknowledgements

This booklet would not have been possible, but it was at the suggestion of Ms Mugdha Sinha, I.A.S, then Joint Secretary, Ministry of Culture, Government of India. We are grateful for her guidance and support in every possible way in AnSI's research endeavours.

Many scientific staff of AnSI directly or indirectly contributed to preparing this booklet. I am thankful to each of them for their efforts to provide information in a short time after consulting many secondary sources. I must not miss to mention some names specifically. Dr. Sashikumar, Joint Director of AnSI, was responsible for coordinating with a team of staff assigned to prepare the summaries of the projects undertaken by AnSI. He also took pains to verify the correctness of details the team members provided and helped in language editing. I am grateful to him for all the support extended by him. Dr. Santanu Mitra and Dr. Abhishikta Ghosh Roy have helped in this regard in the final stages of preparing this booklet. I sincerely appreciate their contribution to this task.

Dr. Amit Ghosh and Dr. Umesh Kumar have particularly assisted in the designing and printing tasks relating to this booklet. I am thankful to them for their continued support of me in both administrative and academic matters.

Due to our enthusiasm for bringing out this booklet in a short time, we may have made some errors or omitted some projects. We will rectify any such shortcomings when we revise this booklet and if they are brought to our notice by any others associated with AnSI. We welcome suggestions for improving the content of this booklet.

BV Sharma

PROLOGUE

This booklet provides a chronological overview of the research projects carried out by the Anthropological Survey of India (AnSI) since the division of the Anthropology division of the Zoological Survey of India in 1945. It was felt that such an exercise would help inform the public as well as academia about the research interests of the Survey at different periods. This kind of stocktaking was attempted earlier when Dr. Kumar Suresh Singh was the Director General, and a book titled '*The History of the Anthropological Survey of India*' was published. However, after this exercise in 1991, i.e. for almost about 35 years, this information was not updated.

The earlier book on the history of the Survey contained not just some details of projects undertaken at that time but also some memoirs of some scholars who were associated with AnSI. The scope of the current booklet is slightly different and limited, primarily in identifying the significant projects of AnSI during the time of different directors. However, in this introduction, some effort is made to outline the contexts of some of these major projects and spell out how their relevance can be felt today.

AnSI emerged as the sole government organization globally dedicated to anthropological research. With a mandate to explore the intricacies of human society and its evolution, AnSI has made significant contributions to anthropological discourses at the National level since its inception, shifting its focus owing both to the changes in the concerns of the discipline of anthropology and the Government's expectations of its contributions, particularly in the field of Applied and Development Anthropology.

AnSI's research spans the breadth of anthropological inquiry, encompassing both physical and cultural anthropology. The Physical Anthropology section of AnSI delves into distinct biological markers and genetic diseases among the Indian communities, employing cutting-edge research approaches of molecular anthropology. However, Paleoanthropological studies dealing with human evolution and migration were also considered equally important. On the other hand, the cultural anthropology section explores the diversity of cultures and societies in India, comprehensively examining all the social institutions and shedding light on the tangible and intangible cultures of Indian ethnic groups. Through extensive fieldwork and meticulous documentation, AnSI

researchers have documented India's diverse communities' unique cultures and traditions, preserving invaluable cultural heritage. AnSI's research over the years has also been concerned with both change and continuity of culture.

AnSI's 79 years of legacy is marked by several notable achievements. Its collaboration with the Census of India, the Archaeological Survey of India, and various other national institutions helped the holistic understanding of the people of India through time and space. Establishing regional centers across India has facilitated research and outreach activities, bringing anthropology closer to the people. Additionally, AnSI's collaborations with international institutions have fostered global exchange and advanced the frontiers of anthropological knowledge.

AnSI had twenty-four Directors, with the twenty-fifth currently heading the organization. Some were full-time Directors, and some others were Directors in Charge. Fourteen full-time Directors contributed dedicated leadership to AnSI for four to nine years. The Directors in Charge were appointed for varying terms, ranging from three months to six years. Notably, out of the 25 who had served as Directors, there are only two women, and both of them served the institution as Director in Charge, and each steered the institution for about a year only. Interestingly, of the first 13 Directors, only two served as In-charge Directors, and the average service period was only about three months.

On the other hand, from June 2002 to 2024, out of the 12 who functioned as Directors, as many as 10 served as Directors In-charge, and there was no regular Director from 2002 to Prof. Vinay Kumar Srivastava's appointment as Director in the year 2017. Subsequently, after the tenure of Prof. Srivastava, two other officers of the Ministry of Culture had to take charge of the institution as Directors, in addition to their assignments in their parent departments, for about two years. While some of those who served as In-Charge Directors during this period were then heading institutions like the Indian Museum, Indira Gandhi Rashtriya Manav Sangrahalay, National Council of Science Museums, and Eastern Zone Cultural Centre, four were from AnSI itself. Thus, many of these in-charge directors were from an anthropology background, and at least one from AnSI served for a considerable period of six years as a Director in Charge. The total period of Directors-in-charge with non-anthropology backgrounds is about five years.

The pool of Directors has been diverse, encompassing academicians and professors from both Indian and international universities. Additionally, two Indian Administrative Service (IAS) officers headed the organization for different periods. Only Dr. K.S. Singh served AnSI in two different spells - first as Director and second as Director General. Thus, of the 11 who served as Full-time Directors other than Dr K. S. Singh, six belonged to the State of West Bengal, and one each from Bihar, Uttar Pradesh, Himachal Pradesh, Delhi and Telangana.

The Directors and their duration of heading the Anthropological Survey of India

Sl.no.	Name of the Directors	Service Period
1.	B S GUHA	01/08/1946 -14/08/1954
2.	N K DUTTA MAJUMDAR	18/08/1954 - 02/05/1958
3.	N K BOSE	29/01/1959 - 29/01/1964
4.	D K SEN	29/01/1964 - 29/03/1972
5.	S C SINHA	10/04/1972 - 27/08/1975
6.	H. K S SINGH	29/04/1976 - 31/12/1977
7.	D P MUKHERJEE	01/01/1978 - 13/04/1978
8.	H.K. RAKSHIT	14/04/1978 - 30/04/1982
9.	A K DANDA	11/09/1984 - 11/09/1990
10.	K S SINGH (Director General)	21/09/1984 - 31/03/1993
11.	R S MANN	16/10/1991 - 31/01/1992
12.	TN PANDIT	01/02/1992 - 12/04/1993
13.	R K BHATTACHARYA	13/04/1993 - 31/05/2002
14.	D. TYAGI	01/06/2002 - 31/12/2002
15.	J K SARKAR	01/01/2003 - 31/05/2003
16.	VR RAO	04/06/2003 - 30/12/2009
17.	K K BASA	31/12/2009 - 20/12/2010
18.	K K MISRA	20/12/2010 - 31/07/2013
19.	G S RAUTELA	31/07/2013 - 29/02/2016
20.	MUNDAYAT SASIKUMAR	29/02/2016 – 01/07/2016
21.	JAYANTA SENGUPTA	01/07/2016 - 31/07/2017
22.	VINAY KUMAR SRIVASTAVA	01/08/2017 - 23/12/2020
23.	GOURI BASU	14/01/2021 - 26/06/2022
24.	SANJUKTA MUDGAL	14/07/2022 - 17/08/2023
25.	B V SHARMA	18/08/2023 - Continuing

Many stalwarts provided leadership to the Anthropological Survey of India during its 79 years of glorious journey. However, the names of Dr. Biraja Sankar Guha, the founder director of the Survey, and Verrier Elwin (the first deputy director) need special mention. This is because, at that stage, the socio-political circumstances were unique, and the expectations of the relevance of Anthropological research to those unique socio-political circumstances were different. After Independence, India faced the challenge of fostering

harmony among its people, who were divided by conflicting interests rooted in ethnic, cultural, and religious affiliations. Additionally, devising effective strategies for aboriginal and disadvantaged social groups to adapt to evolving conditions within and outside their regions of residence while safeguarding their ways of life became a crucial endeavour. Dr. Guha and Dr. Elwin took cognizance of these socioeconomic and political circumstances and initiated necessary research.

Dr. Biraja Sankar Guha, a physical anthropologist known for his pioneering work on the classification of Indian populations, prioritized research relating to identifying individuals based on physical characteristics during his tenure as Director. The collaboration with the Bureau of Police Research and Development was a significant step for such research. However, the contribution to paleoanthropological studies during his Directorship is also very substantial. Dr Guha achieved the required collaboration with the Archaeological Survey of India (ASI) and arranged the transfer of several human skeletal remains from various prehistoric, proto-historic and historical sites which were excavated between the years 1921 and 1946 from all over India (British India) to AnSI for its preservation. These efforts laid the foundation for the physical anthropology of ancient populations and contributed to understanding human history in India.

Owing to strong support for integrated Anthropology research at that time, Dr Guha shaped the AnSI by giving due importance to all the subfields of anthropology. He led a multidisciplinary team on the social tensions among the refugees of then East Pakistan for appropriate advice to the Government. More importantly, on the advice of the Ministry of Home Affairs, studies were initiated among the communities of Andaman and Nicobar Islands, and in fact, the Andaman and Nicobar Regional Centre was established in 1951 at Port Blair for this purpose. The AnSI was given the task of establishing contacts with the indigenous communities in these islands. AnSI pursued research in the socio-cultural and biological aspects of the people of Andaman and Nicobar Islands in a holistic perspective, with an emphasis on matters of contemporary relevance and national significance. The long-term ethnographic studies of Indian tribal communities, launched during this period, continue to be a cornerstone of the AnSI's research. In 1953, the Northeast Regional Centre was established in Shillong to learn about the people and tribes of Northeast India. Overall, Dr. Guha used a holistic approach in his research projects, focusing mainly on tribal areas that were geographically isolated. One significant feature of field research during Dr. Guha’s period was involvement of multidisciplinary teams in the ethnographic studies. Thus, social anthropologists, physical anthropologists, linguists, psychologists, and biochemists participated in the fieldwork at the same time.

Dr N K Dutta Majumdar, who was a former Indian Administrative Service officer and took charge of AnSI after Dr Guha, followed the path of Dr Guha. Ethnographies of tribes of N.E India and the dynamics of a matrilineal system of the Khasis and Garos of Meghalaya

attracted his attention. An important contribution during his time in the field of archaeological anthropology was the expedition and collection of human skeletal remains from Rupkund and Crania from Adichanallur. Dr N. Dutta Majumder, had personally involved in the Rupkund expedition. The projects during his tenure were often confined to small geographical areas, and projects were of short duration.

During his tenure as Director of the AnSI, Dr. Nirmal Kumar Bose seems to have given a new direction to the research in AnSI, emphasizing the indigenization of Indian anthropology. He embarked on a series of ambitious and extensive projects in the fields of cultural, physical as well as Linguistic Anthropology. All the Projects initiated show an all-India coverage, including many ethnic communities of the entire Indian subcontinent, though focusing more on the economically weaker sections and rural societies. The 'All-India Survey' was introduced, showing a shift from 'largely tribal' to 'all, including tribal communities'. Collection of data relating to cultural facts was more systematic (like creating 8000 cards containing the basic data relating to cultural facts in a memoir, "*Peasant Life in India: A Study in Indian Unity in Diversity"* in 1961). Additionally, Dr. Bose shed light on the linguistic study that was done in Calcutta, focusing on the socio-cultural and linguistic aspects of slums and pavement dwellers. In the field of Physical Anthropology too, 'The All-India Anthropometric Survey, initiated in 1961 and which continued for more than eight years, covering 195 social groups and the 'Survey of Dermatoglyphics' to explore population variations and sexual dimorphism across the Indian subcontinent reflects the changed research strategy. The projects seem to have emphasized unifying the diversified nation and provided an overview of the whole Indian population. The research approach shifted from composite inter-disciplinary research to specialized and intensive research and comparative studies of tribal settlements, peasant villages and urban communities.

Dr. D K Sen, as Director of AnSI, initiated five significant projects during his tenure from 1964 to 1972. He prioritized research in social and cultural anthropology fields. The projects primarily focused on Scheduled Tribes and Scheduled Caste communities within specific regions of India like Bihar, Madhya Pradesh, Mysore, Kerala, Assam, Andaman and Nicobar Island. A comparative study of marine fisher folk communities across the coastal states of West Bengal, Orissa, Kerala, and Gujarat, which belong to the Scheduled Caste communities, is another significant research priority. Apart from these major research projects, a study of the intricate relationship between music and culture among South Indian tribes and comprehensive linguistic analysis of Indo-Aryan tribal dialects in West Bengal, Bihar, and Orissa that studied the imprints of linguistic borrowing *vis a vis* with the cultural borrowing from the neighbouring communities of the southern and eastern part of India show the tilt towards cultural anthropology during this time. In so far as physical anthropology research is concerned, it was restricted to West Bengal and the subject of nutritional assessment.

Dr. Surajit C. Sinha initiated long-term research spanning the entire Indian subcontinent. Comprehensive all-India bio-anthropological studies were the concern. He initiated the All-India Bio-anthropological Survey (AIBAS) in 1972. This was a comprehensive nationwide survey across the 29 states and union territories that employed systematic sampling techniques for collection of data from 351 locations on physical attributes, demographics, health, and genetic factors across both rural and urban India. The study took eight years (1972-1980) for data collection, and AnSI published the data finally in 1988. Similarly, the lesser-known groups residing in the Himalayan border regions of Arunachal Pradesh were given importance.

According to Dr K.S. Singh who served as Director during 1976-1977, except for a few studies, most of the micro-level studies conceived and produced by the AnSI in the earlier period yielded only a fragmentary picture of tribal society (Singh, 1991: 6). Thus, he conceived many national projects for a macro level understanding and initiated significant research projects mainly focusing on tribal studies. A study on shifting cultivation practices in 1976 was undertaken to understand human-environment interactions. The relevance of that project can be judged from the fact of occurrence of natural disasters like the cyclone that hit coastal Andhra Pradesh killing 1000s of people in 1977. Similarly, the discourses on tribal unrest in the country at that time possibly resulted in prioritizing studies on tribal movements across the northeast, east, and western regions of India. Dr Singh was deeply influenced by the model presented by Prof. N. K. Bose in his Peasant Life in India: Unity in Diversity, which, according to him was probably the best-known work of the ASI in the world of scholarship. Owing to such conviction, an extensive survey in 23 states on cultural traits and linguistic areas was also prioritized in 1977 primarily to test the theory of India as a linguistic area.

H.K. Rakshit, as Director of AnSI, responded to government priorities regarding research. AnSI, for instance, took up the responsibility of assessing the nature and degree of education spread among the tribals in India. Research projects on weaving communities of Karnataka, Kerala, and Andhra Pradesh for their development were also of similar response. AnSI's study on the Sacred Bath ceremony and myth-ritual complex at Gangasagar addressed the dispute over ownership of monetary offerings at the pilgrimage site at Gangasagar between the local people and the Government. A study was conducted on human adaptation to extreme climates in the Himalayas and the Jaisalmer desert, finding the correlations between altitude, rainfall, and the economic and cultural life of the people. These studies reflect the priority for applied and development anthropology.

Dr. Ajit K Danda, as Director of AnSI, initiated three major projects. The projects of the Cultural Anthropology section reflect the discourses relating to comprehending the social change in India, particularly in the framework of the tribe-caste continuum. However, one significant shift during this time is getting the focus back to paleoanthropological

research. Exploration and excavation in the Central Narmada basin and other important prehistoric sites were an important contribution at that time that resulted in the remarkable discovery of the left clavicle and 9th rib bone from the same stratigraphic level that yielded calvarium at Hathnora, designated to be Homo erectus and archaic Homo sapiens. The discovery by Dr. A.R Sankhyan was attributed as Narmada man.

Dr. K. S. Singh was appointed as the Director-General of the AnSI in 1984 and also Director of the Indira Gandhi Rashtriya Manav Sangrahalaya. The six major research projects initiated under his leadership at that time are aligned with the priorities of the 6th and 7th Five-year plans. The project on 'Tribal Transformation in India', which was proposed during the 7th Five Year Plan (1985-1990) and executed during the 8th Five Year Plan (1992-1997), was to understand the diverse process of cultural change of 36 ethnic communities. The concerns for tribal identities and especially the loss of tribal languages resulted in the projects relating to 'Language Maintenance and Language Shift among the select Tribal groups of India', which aimed to assess the attitude of the tribal speakers towards their mother tongue, the pattern of retention and shift from their mother tongue.

The People of India (POI) project undertaken by the AnSI (launched on 2nd October 1985, and the data collection was completed in 1992) is easily the most mega project in terms of coverage of communities and geographical breadth. The study covered 4635 communities spread across 4513 villages, 941 towns, 438 districts and 89 cultural regions of the country. This study is an enormous effort to showcase the diversity of India in more concrete terms. Apart from coverage and comprehensive reports, the study has probably resulted in institutional reforms for research procedures, documentation, record keeping, and publication of reports. The project taught the significance of standardization procedures for data collection, analysis, and report writing in the case of any mega project of this kind. This work serves as reference material for many purposes, like the castes and tribes of South India by Thurston, and provides the template for any brief ethnographic notes on any community to provide a context for a study.

T N Pandit also continued the People of India Project, which was initiated earlier by K S Singh in 1985. After a prolonged neglect of physical anthropology research, a project covering 122 communities was initiated to evaluate the nutritional status of India's diverse population groups across different regions, capturing the intricate interplay between cultural practices, environmental factors, and socioeconomic conditions.

R K Bhattacharya, too, continued with the unfinished work relating to the 'People of India' project. However, the significant contribution of his tenure is the project, 'Crafts and Craftmanship: Studies in Traditional Knowledge in India', which aimed at bringing out linkages of craft activities with the structure of living societies, organization of production, marketing and the utilization of natural resources. The other projects during his tenure which are of the nature of minor projects are 'Management of Environment and Natural Resources: Study of Traditional Wisdom in Tribal Societies', and the 'Boardgames in India'.

During the ninth five-year plan, a new project was launched under the title 'Development and Regionalism: Anthropological, Ecological and Psychological Perspective'. This was initiated to understand the impact of planned development and its impact on the rise of regionalism. A new project, Cultural Dimension of Tourism in India, was initiated in 2002 under the Tenth Five Year Plan. The project was conceived to find out the possibilities for the growth and development of tourism in India through a study with an eco-cultural perspective.

The Indian anthropology and the research understanding in cultural anthropology in AnSI was highly influenced by 'the Hindu mode of Tribal Absorption" of Prof. N. K. Bose. The concepts of universalisation and parochialisation, great and little tradition, Sanskritization, Westernization, Modernization, Rajputisation, Tribe-Peasant-Caste Continuum etc., largely guided the research. A new approach was taken up during the Tenth Five Year Plan to understand the pluralistic aspect of Indian Civilization in its national project "Study of Syncretism" in India.

The project 'Study of Syncretism in India: Multidisciplinary Approach' was initiated by AnSI under the 10^{th} five-year plan in 2002, with a theoretical understanding as well as an organized guideline. The study aimed to understand cultural, religious, and linguistic adaptations and reinterpretation towards the emergence of new cultural, religious and linguistic identities. The process of syncretism among different communities, such as cultural syncretism among the weavers of West Bengal, religious syncretism in Santal society, peaceful co-existence of Animism, Christianity, and Islam in the Nicobar Archipelago, the religious syncretism among the Hos of Kolhan, Jharkhand, and Sahebdani Sect of Nadia district of West Bengal was studied.

Dr. V R Rao is a physical anthropology specialist and is credited with the introduction of molecular genetics and setting up DNA laboratories with basic facilities in all regional centres. While there have been notable contributions to research during this time, the research seems to be a little monotonous.

The project 'DNA Polymorphism of the Contemporary Indian Populations' was initiated with the objectives of studying Genetic diversity – mtDNA; Y Chromosome markers; understanding the phylogenetic architecture of the Indian populations; to identify new candidate genes through genome-wide studies; to know the candidate gene association with various diseases; and to generate a database of Indian tribes. The study helped many younger scholars who joined AnSI under the fellowship scheme to secure Ph.D.s. Publications relating to studies in different communities too, appeared periodically. An edited volume published more recently serves as the comprehensive report of the project.

Another project in the field of Physical Anthropology titled 'Physical Growth and Development of the Children of North East India' was launched during Dr. Rao's time. This project was also continued for a long time, studying one community after another with

the same protocols. While one consolidated report for the Angami Naga children has been finalized in 2015, such report for the children of the Garo community (0-18 years) studied subsequently is under preparation as on date.

Under the 10th Five Year Plan program, a national research project entitled "Community Genetics and Health: Bio-cultural Adaptation" was also initiated during Dr. Rao's tenure. This was also continued for almost 12 years. Though this was projected as a research project, it included a specific objective of creating mass awareness as well as mass screening for hemoglobin disorders in the Indian population. The study was carried out in some high-risk zones for thalassemia (eastern India), sickle-cell anemia (central India) G6PD and Hb-E (north-eastern India and A&N Islands). The project, from 2012 to 2022, particularly focused on mass awareness and utilizing the funds under the tribal sub-plan. The consolidated report of this project for the work done from 2002 to 2013 has been compiled recently, and the work undertaken during 2013-2022 is now being prepared.

The limited research in the field of Paleoanthropology that was conducted during the time of Dr Rao was on the 'Siwalik Expedition'. A team of anthropologists from AnSI explored Ghumarwin Tehsil of Bilaspur district, Himachal Pradesh, from 2003 to 2009 which revealed many fossil fauna and stone tools. Similarly, in the field of cultural anthropology, some effort has been made to study the subject of socioeconomic practices that help conserve and sustain forest resources. On the whole, it is apparent that the research focus considerably shifted to Physical anthropology during this time, more so in terms of fund utilization.

Prof. K.K. Misra guided a new project, 'Bio-Cultural Diversity, Environment and Sustainable Development (Restudy of Indian Villages and Border Area Studies) which also aimed to document bio-cultural diversity with reference to the people of India in different eco-cultural zones and to review development programs from multiple perspectives to identify of critical gaps. Similarly, another project among the PVTGs was conducted to assess their living conditions and understand the impact of the government development initiatives.

After the 12th Five-year Plan, the Government of India set one-year targets since the financial year 2015-16. Thus, the system of aligning the AnSI projects to the priorities set in the five-year plans was discontinued. But the need for aligning the research with the government policy and programmes generally continued.

There has been a considerable slowdown in research activity in AnSI since 2013 at least in the sense of new research initiatives. It was after the taking over of Prof. V. K. Srivastava as a regular director in 2017 that the momentum picked up. A project on 'General Health, Hygiene and Nutritional Anthropometric study among the Denotified, Nomadic and Semi-Nomadic communities', was taken up from the physical anthropology division. Subsequently AnSI has taken up a commissioned research project of NITI Ayog during his time that comprised a specific objective set forth by NITI Ayog under the title

'Anthropological Study of De-Notified, Nomadic and Semi-Nomadic Communities". This has similarities with the People of India project in regard to uniformity with regard to data collection and report writing formats. This project provided the opportunity for all the researchers of AnSI, including those affiliated with physical anthropology and other allied disciplines, to academically engage themselves for about 3-4 years.

Research projects initiated during the tenure of the current Director of AnSI reflect some diversity. In the case of cultural anthropology, the first launched project was 'Rural Livestock Markets in India: Anthropological Exploration of Economic, Social and Cultural Facets'. This subject was different from the others in the previous years in the sense of its special focus on a rural institution rather than an ethnic group or a geographical entity. As of December 2024, the study of four rural livestock markets in different geographical regions of the country is completed, and the final reports of each of these four markets are available. Fieldwork in two more markets (One each in Andhra Pradesh and Odisha) has been completed, and the reports are expected by March 2025. Subsequently, a consolidated report is planned.

The many dimensions of the livestock markets are proposed to be studied from an in-depth anthropological perspective. The research focus firstly being providing an explanation of how livestock markets as an economic institution sustained in rural India for so many years is linked to one of the United Nation's sustainable development goals. Secondly, the research interests extend to knowing how different social and cultural aspects are embedded in this institution and how they vary in different geographical regions. This study also has the potential to inform policy and programmes for improving the livelihoods of rural communities.

A project under the title 'Ethnic groups in Inter-State Borders of Chhattisgarh, India: Identities, Intra and Inter-ethnic relationships and Developmental Concerns' initiated during the tenure of the current Director similarly is a response to the situations of interethnic conflicts in certain parts of the country. The research relates to the state of Chhattisgarh state, which has borders with multiple states and border areas, with each state comprising multiple ethnic communities exhibiting a unique socio-political situation. On the whole, the study has scope for inducing discourses which could be purely of academic interest and also for addressing dilemmas relating to developmental approaches in these areas.

The project relating to the Physical Anthropology section that was initiated is 'Gut Microbial Genomic Study among the Particularly Vulnerable Tribal Groups of India'. In fact, a study similar to this was conceived and debated internally for about two years. The right direction did not evolve due to a lack of expertise and resources in AnSI for research in this area. The current Director provided that direction and arranged the needed collaborations for expert advice in the field of Bioinformatics. The infrastructure required similarly was acquired for the smooth administration of the project. This research, being

of contemporary significance, allows for several academic collaborations and quality publications in leading science journals. Unlike the earlier Physical anthropology research projects, which were dragged for a period of 6 -15 years, this project has a definite time frame of five years. Further, a consolidated report for communities studied in a financial year is periodically finalized.

The study will be of special interest to understand the health issues of the PVTGs and recommend strategies for improving their health status. The gut microbial profiles of the present research are expected to represent an unadulterated gut that has not been influenced by preservative-dependent commercial food products and modern biomedicine. Further, these guts are still shielded from the overuse of medicines and antibiotics; thus, antibiotic-resistant microbes are expected to be a rarity in the studied profiles.

Apart from the two national projects and a region-specific project of a longer duration, two other region-specific projects under the title, 'Assessment of Health, Hygiene and Sanitation of the Khasi in North-East India with special reference to Women and Children' and 'Digital Literacy and its Impact on Cultural Heritage Preservation' were also initiated in the year 2024 by the North Eastern Regional Centre, Shillong.

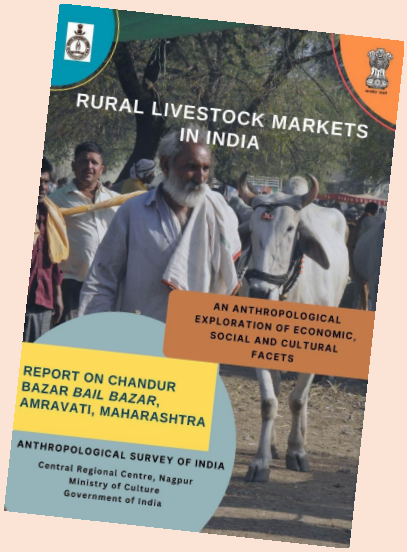
The AnSI has a rich legacy of exploring the depths of India's cultural and biological diversity. Since its inception, AnSI has undertaken approximately 66 significant projects. In terms of numbers, projects relating to cultural anthropology predominate with about 42 projects. Projects that fall in the domain of physical anthropology, prehistoric/archaeological anthropology (paleoanthropology), linguistic anthropology, and allied disciplines are 13, 5, 4, and 2, respectively. However, these numbers do not reveal everything and could be misleading, too. This is evident from the fact that there are few projects in the physical anthropology section, but many of them have a very long duration. For instance, the Hemoglobinopathy project was extended for about 18 years, with almost the same objectives and similar protocols covering different populations. If each of these communities covered was to be counted as one project, the number of Physical anthropology projects constituted the majority.

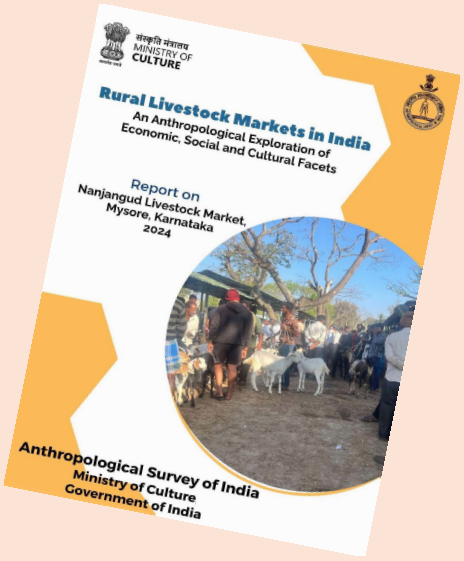
In terms of geographical scope, 36 projects have been conducted on an all-India level, while 27 have been regionally focused. Additionally, 23 projects have specifically targeted tribal populations. Many of these studies have been directly relevant to contemporary social issues and developmental initiatives.

The early years of AnSI were marked by a focus on tribal communities and physical anthropology. Extensive ethnographic studies documented the lives and cultures of various tribes, which were not studied hither to extensively, such as Guha's study on the Onge tribe. The 1960s and 1970s witnessed a broadening of the AnSI's research scope. A shift towards studies on specific cultural practices, pottery-making, and metal crafts across

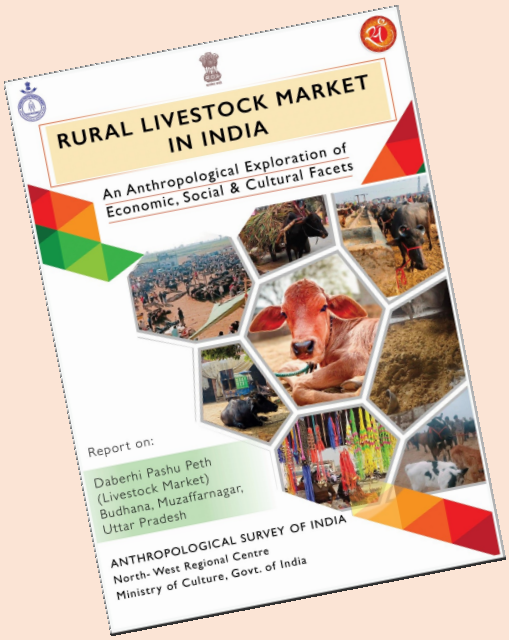
India (as exemplified by Bose's All-India Survey of Selected Material Traits) is also evident. Concurrently, research in social and cultural anthropology delved into areas like music, language, and the impact of development programmes on tribal communities. During the same time, large-scale surveys on physical attributes and health, such as Sinha's All-India Bio-anthropological Survey, became a distinct feature of research relating to biological anthropology.

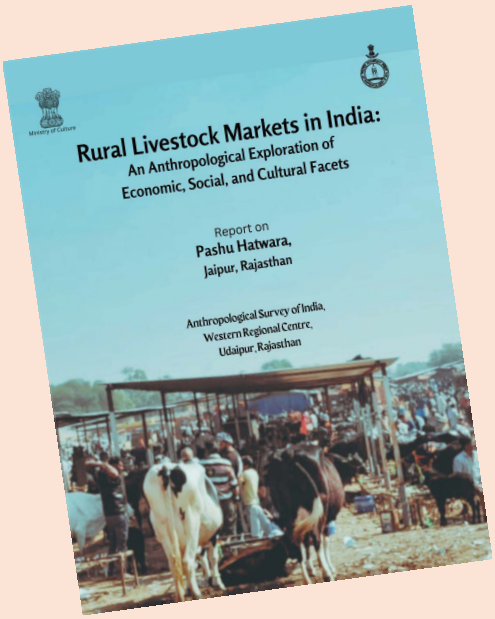
In the 1980s and 1990s, the true mega-project, i.e. the "People of India" project, engaged the researchers of AnSI for a long time in that project. Only by the late 1990s did the focus shift towards contemporary issues, with projects exploring the impact of development projects, planned development, and the cultural dimensions of tourism. Then again Physical anthropology gained dominance with molecular genetics research for quite some time. More recently, a balance in research relating to Physical and Cultural anthropology sections has been attempted.



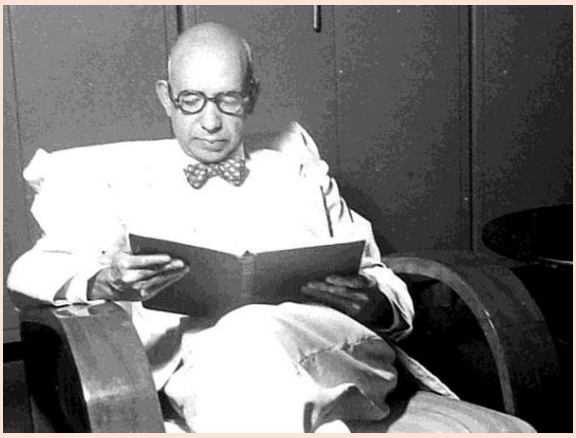


DIRECTORS AND PROJECTS





B S GUHA
(01-08-1946 -14-08-1954)



Dr. Biraja Sankar Guha had his M.A Degree in Anthropology from Harward University. In 1924, he was awarded a Ph.D. degree in Anthropology from Harvard University. Before he was appointed the first Director of the Anthropological Survey of India, Dr. Guha served in the anthropological section of the Indian Museum

Major Research Projects Initiated

1. **Communal Tension in Rural West Bengal**

Under the auspices of UNESCO, the Survey was called upon to study the communal tension in rural West Bengal. In 1950-52, the Survey undertook studies in two communities in rural Bengal to understand social tension among East Bengal refugees of 1952. A team led by B.K. Chatterjee collected the required data. Dr. Guha and two other officers had also received training in Psychology in Europe as part of this study. The first Memoir (Edited by B.S. Guha) published in 1959 by the Anthropological Survey of India titled 'Studies in Social Tension among the Refugees from Eastern Pakistan' was the outcome of this project

Research Findings:

In regard to Jirat, it was concluded that inter-caste prejudices are in a state of resolution. It was assumed that caste prejudices began to breakdown when the Hindus were forced to unite together and made a common front to fight the Muslims. It seemed that the Muslim dominance in Pakistan due to the changed political condition had increased the intensity of their already existing stereotypes. It was inferred that race prejudice flares up when a person's status or the status of anything he adores is endangered by the members of other races or groups and it also persists long after the causes of excitation cease to exist.

With reference to Azadgarh site, it was concluded that the categories eliciting maximum number of hostile responses were in the order of attitude towards the Government, Muslims, local people, intra-family, other castes, and the future, whereas in the case of Jirat refugees, the sequence was, the attitude towards Muslims, local people, Government and future and family. The reason for the hostility seemed to lie in the frustration over their basic needs, whereas the cause of discrepancy between the two groups appeared to be inherent in their adjustment-efforts of bringing into harmony their internal demands and stresses of external events which were very different in the two instances.

Persistence of a sense of optimism, however, among all sections of the refugee population, in spite of disappointment and hardships, was a hopeful sign for their future in West Bengal. Once their displaced energies get canalized into well-directed productive sources, there was every reason to hope, that

instead of a burden and a clog, the refugees would turn out to be useful participants in the march of progress of this country.

2. Onge of Little Andaman

Lidio Cipriani, an Italian Anthropologist conducted an extensive fieldwork among the Onge tribe of Little Andaman in 1950s. A book titled, 'Ándaman Islanders' was published in 1966 posthumously, based on his notes. He studied aspects relating to their physique, ecology, economy, health and hygiene He surveyed the settlements and collected nine Onge skeletal remains to study their prehistory. He also collected considerable material on the kitchen-middens and material culture of the Onge. The work presents the details on the history of contact of the Onge with the outsiders and detailed description of the lives of the people and the topography of the island. The value of the work also lies in the analysis of data relating to spirits and belief system in detail of the Onge.

3. Restoration and study of human skeletal remains from pre-historic, proto-historic and historical sites, in collaboration with the Archaeological Survey of India (AnSI)

Objectives:

1. Understanding the role of skeletal anthropology in archaeology and knowing bygone population; and
2. To contribute to osteoarcheology, various types of disposals of the dead, human skeletal analysis, bio-cultural aspects, and palaeopathology.

One of the important objectives of the AnSI was to restore, preserve and act as guardians of the skeletal remains excavated by the Archaeology Departments of the Universities and the Archeological Survey of India and use them for scientific reporting. AnSI, in collaboration with Archaeological Survey of India, collected several human skeletal remains from different pre-historic, proto-historic and historical sites. The skeletons were excavated in several operations between the years 1921 and 1946. Subsequently, in 1946 all the collections are handed over to AnSI for preservation in its osteology laboratory. Since 1946 the work of cleaning, preservation and restoration of ancient human skeletal remains has been carried out steadily in the Osteological Laboratory of AnSI.

The major osteological studies by the Anthropological Survey are:

1. Harappa: Archaeological Survey of India excavated skeletal remains from the site namely Montgomery district, Sind, Punjab, Pakistan during 1928-1946. These are part of Harappan culture that belonged to the Bronze Age. From radiocarbon dating the time span of Harappan culture was determined as 2300 to 1750 BC.

2. Mohenjo-Daro: Like Harappan skeletons, the Archaeological Survey of India also discovered Mohenjo-Daro skeletons. The site name and locality are Sind, Larkana district, Pakistan. Excavation/discovery took place during 1922-1927 and 1928-1929. Mohenjo-Daro culture belonged to the Bronze Age. The dating of the specimens (relative, radiometric) was between 3250 and 2750 BC.

3. Kalibangan: Kalibangan skeletal remains were excavated in Ganganagar district, Rajasthan by the Archaeological Survey of India in 1961. The culture of these people was Chalcolithic. The C^{14} dates for

Kalibangan were 2370±115 BC and 1825±110 BC.

4. Lothal: Skeletal remains of Lothal were discovered in Ahmedabad, Gujarat by the Archaeological Survey of India during 1958-1960. The cultural affiliation of these people was the Bronze Age. Radiometric dating based on the C^{14} method ascribed that these belonged to 2650±145 BC.

5. Rupar: Rupar skeletal remains belonging to Bronze Age were excavated from Rupar, Punjab by the Archaeological Survey of India during 1954-1955. The dating of the Rupar specimens (relative, radiometric) was from 2100 to 1400 BC.

6. Burzahom: Burzahom sites are situated on a terrace of karewa clay above the marshy flood-plain of the river Jhelum, 10 km north-east of Srinagar in Kashmir. Burzahom's skeletal remains were excavated by the Archaeological Survey of India during 1961-1968. The culture of these people was Neolithic. The dating of the specimens from C^{14} method was 2300-1500 BC.

7. Kurmitha: Kurmitha skeletal remains were discovered in Kurmitha, Birbhum, West Bengal. Dr. D. K. Chakrabarti, in collaboration with the Directorate of Archaeology, West Bengal in 1992, discovered these. The culture of these people was Chalcolithic. The dating of the specimens (relative, radiometric) was around 1000 years BC.

8. Kunnattur: The skeletal remains of Kunnattur were discovered from Chingleput, Tamil Nadu by Archaeological Survey of India during 1965-1966. The culture of these people was Megalithic (Iron Age). Dating of these people was not possible.

9. Satanikota: The skeletal remains of Satanikota were discovered in Kurnool district, Andhra Pradesh. Satanikota is located on the right bank of the river Tungabhadra in Nandikotkur taluk. The Archaeological Survey of India discovered these skeletal remains during 1977-1980. The culture of these people was Chalcolithic. The dating of the specimens (relative, radiometric) was around the 4^{th} to 3^{rd} century BC.

10. Nagarjunakonda: The site name and locality of Nagarjunakonda's skeletal remains was Palnad Taluk, Guntur District, Andhra Pradesh. The site is on the right bank of the river Krishna. The culture of these people was Neolithic and Megalithic. The Archaeological Survey of India discovered these skeletal remains during 1956-1960. The dating of the specimens (relative, radiometric) was 2500-1500 BC (Neolithic) and 750-650 BC (Megalithic).

11. Kumhar Tekri: This site is situated on the outskirts of the city of Ujjain, Madhya Pradesh. The Archaeology Department of the former State of Gwalior discovered the burials in 1939. The cultural affiliation of these people was early historic. Dating of the specimens (relative, radiometric) was 2^{nd} to 3^{rd} century BC.

12. Brahmagiri: The site name and locality of Brahmagiri was Molakalmur Taluk of the Chitaldrug district, Mysore state (Karnataka). The culture of the people belonged to this period was megalithic and chalcolithic stone axe culture. Archaeological Survey of India along with the State Archaeology Department, Mysore discovered these skeletal remains in 1947. Dating of the specimens (relative, radiometric) was early 1^{st} millennium BC to the beginning of the 2^{nd} century BC (Stone Axe Culture) and 200 middle 1^{st} century AD (Megalithic Culture).

13. Maski: Maski skeletal remains were discovered by the South-Western Circle of the Department of Archaeology, in collaboration with the Hyderabad Archaeology Department from January to March 1954. This site is located in Linsugur of district Raichur, Karnataka. The cultural affiliation of the people was Chalcolithic (period I)/Megalithic (period II)/Early Historic (period III). Dating of the specimens (relative, radiometric) was 1st millennium-400 BC (Chalcolithic), 200 BC-1st century AD (Megalithic) and 1st - 3rd century AD (Historic).

14. Sanur: Sanur's skeletal remains were discovered in Chingelput, Tamil Nadu. These were discovered by the Archaeological Survey of India during 1951-1952. The culture of these people was Megalithic. Regarding the dating of the specimens, it can be mentioned that no absolute dating is available. However, the series is earlier than the Brahmagiri series. The relative dating assigned is 300-200 BC.

15. Kausambi: This site is situated at Allahabad, Uttar Pradesh. Dr.G.R. Sharma, University of Allahabad discovered the skeletal remains during 1957-1959. The cultural affiliation of these people was early historic. The dating of the specimens (relative, radiometric) was 185±45 BC and 50-4509 AD.

16. Pandu Rajar Dhibi: Pandu Rajar Dhibi site is situated on the valley of the river Ajoy in Burdwan, West Bengal. Directorate of State Archaeology, West Bengal discovered the skeletons during 1962-1965. The cultural affiliation of the people was Chalcolithic. As per C^{14} approximate date the dating is 1012±120 BC.

17. Haraipur: The Haraipur skeletal remains were discovered in Birbhum, West Bengal by the Archaeological Survey of India in 1965. The cultural affiliation of the people was Chalcolithic. Dating of the specimens is not available.

18. Araikamedu: The Archaeological Survey of India discovered skeletal remains of Araikamedu from Pondicherry. The cultural affiliation of the people was Early Historic. Dating of the specimens is not available.

19. Adichanallur: The Adichanallur skeletal remains were discovered from Tiruneveli, Tamil Nadu by the Archaeological Survey of India during 1876/1908. The cultural affiliation of these people was Megalithic (Iron Age). The dating of the specimens (relative, radiometric) was Iron Age that ranges between 400-4000 years.

20. Nalanda: Nalanda's skeletal remains were discovered in Nalanda, Bihar by the Archaeological Survey of India during 1965-1966. The people belonged to the Early Historic Cultural Period. Dating of the specimens is not available.

21. Taxila: The Archaeological Survey of India discovered these skeletal remains from Taxila, Pakistan during 1930-1931. The cultural affiliation of the people was Early Historic. The dating of the specimens (relative, radiometric) was between 500 BC and 500 AD.

22. Amrithamangalam: Skeletal remains of Amrithamangalam were discovered from Chingelput, Tamil Nadu by Archaeological Survey of India during April-July, 1955. The cultural affiliation of the people was Historic. Dating of the specimens is not available.

23. Khuntitoli: Khuntitoli's skeletal remains were discovered by the Archaeological Survey of India from Ranchi,

Bihar in 1965. The people belong to the Megalithic cultural period. Dating of the specimens is not available.

24. Sarai Nahar Rai: Skeletal remains of Sarai Nahar Rai were discovered in Pratapgarh district, Uttar Pradesh. The Archaeology Department of Uttar Pradesh discovered these remains in 1968. The cultural affiliation of the people was Mesolithic. Radiometric dating is estimated to be 8110 BC.

4. Serogenetic Survey of 100 Ethnic Groups of India

The Anthropological Survey of India conducted the above study in collaboration with the Bureau of Police Research and Development, Government of India, on a portrait-building system for development kits that could help in identifying persons based on morphological traits. The main aim of the study is to investigate genetic characteristics like Blood grouping, Sickle-Cell trait, PTC taste sensitivity, Colour blindness and Mid-Phalangeal hair.

The study has been carried out among scattered populations in different parts of India including Sikkim. The study shows that in India, sickling is more prevalent in tribal groups and Scheduled caste populations. Anthropological Survey of India has scanned about 130 distinct population groups in the above-said project.

5. Ethnographic study of Different tribal communities of India

One of the important projects initiated during this period and continued for several years by the Survey is the "Ethnographic study of Different Tribal communities of India". The project over the years covered several communities across India like the Cholanaickan, Paliyan, Yerukula, Yenadi, Kota, Mullukurumba, Soliga, Pengo Poraja, Lodha, Kuvi Kandha, Khasis, Garos etc., etc. The major interest areas of study are to know about the place and people, family, kinship, economy, religious and social life. These studies show how the different communities adapt to the changed environment and in different ecological settings.

It is inferred that changes are occurring in their traditional way of living by adopting new ways of socio-economic lifestyle. When there was no contact with outsiders, they more or less lived a peaceful life without much intervention from outsiders and outside agencies like Government. They flourished as there was no penetration of market forces. All of them have their own sustainable way of living. Most important is that all are equal and there is no hierarchy present in them. But now in settled life with the interference of other caste people living along with them, there is a hierarchy in between them.

With the influence of the new market and cash economy a labor class is seen in all the communities. Earlier they consumed what they gathered from the forest, and now they are selling most of their products via co-operative societies for cash economy and are also facing exploitation. Government schemes for tribes are beneficial in the case of many.

Indus valley civilization

NK DUTTA MAJUMDAR
(18-08-1954 - 02-05-1958)

Dr. N.K Dutta Majumdar *has a Doctorate in Anthropology from the North Western University, U.S.A. He belonged to the Orissa cadre of the Indian Administrative Service.*

Major Research Projects Initiated

1. Study of Khasis and Garos of Meghalaya

The aim of this Project is to explicate the matrilineal systems of Garo and Khasi and to address theoretical concerns. It studied the marriage systems and changes in the institutions of kinship, family, and marriage over time. The impact of changes in different social institutions on the ownership of land and especially impact of the structural dynamics of the family relationships on emotional dimensions were studied. The study was carried out by Japanese Anthropologist Chie Nakane. The following objectives have been derived for the comparative approach to understanding the dynamics of the matrilineal system.

- Understand the dimensions of social and cultural aspects of the Garo and Khasi;
- Analyze the socio-economic, cultural, and political dimensions for their impact on structural changes in family, kinship, and marriage among the Garo and Khasi; and
- Explore the forms of marriage, and kinship patterns, with a focus on study of their role in sustaining the matrilineal system among the Garo and Khasi.

Findings:

The work has been presented in three parts which give insightful field data by integrating a comparative approach to understand the Garo and Kashi social organization, kinship structure, and social change in villages.

The study explained the composition of the descent groups and how it played a major role in understanding the property rights and succession rules. The analysis of the power and controlling systems that lead to operational mechanisms of the kinship relationships among the Garo and Khasi has also been undertaken.

It is also noted how the concept of property and the authoritarian systems influence the structural changes in kinship. These dynamics in kinship systems were closely investigated through a comparative approach that provided theoretical insights to understand the matrilineal and patrilineal systems.

Film on Onge tribe

To capture some aspects of the traditional way of life of the Onges, a black and white silent movie on the Onge was produced. It was screened at the Indo-Soviet Druzhba-Dosti Exhibition at Moscow in 1988.

2. Rup Kund expedition

A collection of human body remains from Rup Kund was brought to An.S.I., on September 14, 1956. This collection consisted of an assemblage of skeletal parts

of fairly large number of the victims. No complete skeleton of any individual could be obtained. These bones of Rup Kund expedition were studied with the following objectives:

1. To diagnose the sex and maturity (or immaturity) of the skeletal parts;
2. To measure the skull and long bones and to estimate the average stature from the length of the long bones;
3. To detect blood groups of the substances by the inhibition test; and
4. To perform radio-carbon dating from the wooden articles and body remains.

Further, the study was extended to the genomic level to know the affinities of the ancient samples with the existing population of the world.

Findings:

The cultural affiliation of the people at Rupkund was early historic. Radiometric dating based on C^{14} is estimated to be 470±120 years (C.U., Calcutta), and 560±60 years (Royal Institute, London)

Further, the ancient DNA from the skeletons of Roopkund Lake, reveals Mediterranean migrants in India. The researchers have combined radiocarbon data, ancient DNA results, and stable isotope measures to determine that three distinct populations died at the lake at two different times. The stable isotope measures reveal dietary profiles. The study was done with ancient DNA from 38 skeletons from Roopkund Lake, located at over 5,000 meters above sea level in the Himalayan Mountains and found that they cluster into three distinct groups. One group of 23 individuals has ancestry that falls within the range of variation of present-day South Asians, a further 14 have ancestry typical of the eastern Mediterranean, and one individual has Southeast Asian-related ancestry. The said study was conducted at Birbal Sahni Institute of Palaeosciences, Lucknow in collaboration with the Anthropological Survey of India.

3. Report on Adichanallur Crania

In the year 1956, B.K. Chatterjee and P. Gupta prepared a report on the complete series of two skulls discovered at Adittanalur (Adichanallur) in Tinnevelly district, Madras, by Mr. A. Rea of the Archaeology Department, Government of India during 1899-1904.

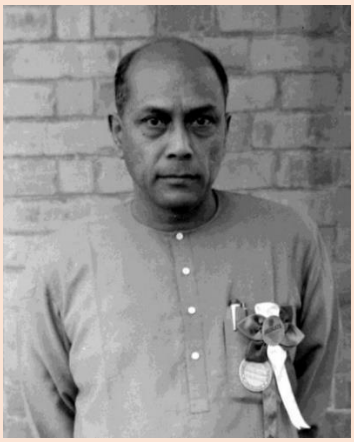
Objectives:

1. To find out mean values of linear measurements and indices; and
2. To find out mean values of angular measurements and indices.

Findings:

1. The Adittanalur skulls are ovoides in shape having low and vertical foreheads.
2. The vault of the skulls is moderately high with well-developed frontals.
3. Glabella is prominent.
4. Muscular ridges on the occipital region are marked in the majority of the skull.
5. Mastoid process is moderately developed.
6. Adittanalur skulls show more Veddid-Australoid affinity.

N K BOSE
(29/01/1959 - 29/01/1964)



Nirmal Kumar Bose *(1901-1972) was an Anthropologist, Gandhian, and educationist. He earned an MSc degree in Anthropology from the University of Calcutta. In 1972, he was elected as the President of TheAsiatic Society. Between 1934 and 1947, Bose started working closely with Gandhi and served as his secretary in the mid-1940s*

Major Research Projects Initiated

1. All-India Survey of Selected Material Traits in 439 Villages covering 311 Districts of India

The survey was undertaken on 11 selected basic traits namely, settlement pattern, house type, food, fats or oils used, costumes of men and women, foot gear, bullock cart, plough, husking implements and oil press.

The aim was to make the basic data (in cards) available to any researcher for consultation and for relating the cultural facts to the natural environment, language and ethnic affiliation. Further, the survey of the material objects was also believed to help learn classification of the items in terms of structure and function. The survey is also to train young anthropologists in accurate observation of cultural facts.

This study helped in creating 8000 cards containing the basic data covered during the survey. The results were later published as a memoir, "*Peasant Life in India: A Study in Indian Unity and Diversity*" in 1961.

Findings

1. There is a certain measure of local differentiation; and there is also a considerable amount of interpretation in almost every case.
2. The boundaries of the culture areas or sub-areas do not tally with Grierson's boundaries of either linguistic families like Indo-Aryan and Dravidian or of branches with either of the families. Material items of culture seem to have independent extensions of their own; and roughly these tend to be in accord with one another.
3. On their basis, India can be divided into two distinguishable, but overlapping, regions meeting at broad zone which runs from Maharashtra to Bihar in some cases and to Orissa or West Bengal in others. This broad belt has also been the area where several material traits have interpenetrated again and again bringing about changes in form or function.
4. Village plans in India have a certain rough distinction between north and south. The north is the area of shapeless characters, often broken up into dispersed units, while southern villages are, on the whole distinguished by the presence of open streets as an integral part of the lay out.
5. It also noticed in many cases that styles present in India have affiliation with styles in neighbouring countries. It appears that relationships can be established on their basis as much with south-east Asia as with

countries lying to the west and north-west of India.

6. The plough or the husking mortar and pestle, the unsewn cloth worn and regarded as ritually pure by women, the forms of village, of oil presses and methods of cooking food in oil etc., show a kind of kinship between the peasant, folk, the weaver, the potter etc.

2. Social Survey of the City of Calcutta

The study aimed to analyze and understand the socio-cultural and linguistic aspects of slums, and pavement dwellers of Calcutta, the visual arts films and cultures.

The major findings of the study were published in the form of a book entitled "*Cultural Profile of Calcutta*" (1972). The significant findings are concerned with: communities and their occupations, voluntary institutions common to Bengali and non-Bengali people, and the mapping of land use. The information on communities, occupations, and voluntary institutions is concise and resembles an inventory. The findings suggest that Kolkata is home to various communities with different languages and occupations, alongside a few voluntary institutions where different communities can meet to fulfil their civic or cultural needs. It is notable that Bengalis exhibit a strong sense of local patriotism and prefer the company of like-minded individuals. There is also a significant observation that the Hindi community is divided into poor and rich segments, highlighting socio-cultural integration challenges. The study includes maps showing population distribution and changing residential and commercial patterns from 1911 to 1961. Additionally, it delves into caste panchayats among Hindi-speaking *bustee* dwellers and explores the westernization patterns among different communities such as Gujarati, Rajasthani, and Punjabi. The findings emphasize how linguistic differences among communities influence other aspects of life, including economic and cultural influences. Furthermore, the study notes an influx of migrant labourers from other states due to Calcutta's industrialization. Finally, it points out that the superstructure of cultural pluralism persists in Calcutta's civic community, indirectly contributing to maintaining communal differences.

3. Peasant Life in India: A Study in Indian Unity in Diversity

Objectives:

The study was undertaken to examine the peasant settlement patterns, and it included the study of different aspects of culture such as food, fats or oil used, costumes of men and women, foot gear, bullock carts, plough, husking implements and oil press, with an aim to understand the diversity in the united peasant lives of India.

Findings:

The project's findings cover various topics, including village forms, cottage types, staple diets, oil and oil presses, ploughs and husking implements, dressing patterns of both men and women, footwear, and bullock carts in rural India. The village forms in India are categorized into shapeless clusters, linear clusters, square or rectangular clusters, and isolated homesteads, each with distinct characteristics and distribution across various regions. Three primary types of rural cottages are identified based on their ground plan and roof structure: rectangular with horizontal roofs, rectangular with inclined roofs, and

circular with conical roofs. Geographical and cultural factors influence variations in construction materials and design. The staple diet in India varies across regions due to diverse agricultural practices and cultural preferences. Rice dominates in the eastern and southern states, while wheat is common in the North and west. Millet and maize are also significant. Cooking methods include boiling, grinding for bread, and fermenting. The diet includes pulses, vegetables, protein sources, fats, and oils, with regional variations. Meal preparation often involves rituals and offerings to deities, reflecting cultural and religious norms. The study also highlights regional diversity in material culture, suggesting a deeper unity in India's variety with historical roots in cultural mingling from both the West and the East.

The section on oil and oil presses discusses traditional methods of expelling oil in India and contrasts them with practices in China. It highlights the use of rotary oil mills and the shift towards motor-driven machinery. Various types of ploughs and husking implements used across India are detailed, with their designs influenced by regional factors such as soil and draught animal strength. The study also classifies women's dress into several types, highlighting regional variations in garments and headgear styles. The study explores the traditional footwear used in rural India, and noted the absence of footwear in certain areas. Finally, the research categorizes bullock cart wheels into different sizes based on their diameter and describes their prevalence across various regions in India.

4. All-India Anthropometric Survey

The national project "All India Anthropometric Survey" was initiated in 1961 to address the need for comprehensive anthropometric studies across India. Beginning with four states in South India from 1961 to 1963, the survey expanded to include the northern states under the project "All India Anthropometric Survey: North Zone" in December 1962. Over the years (1963-1969), the survey extended to cover various other regions of India, aiming to achieve the following objectives.

Objectives:

1. To classify Indian populations based on external morphological characters;
2. To assess the biological relationship between various castes;
3. To investigate the biological relationship between the tribal and non-tribal populations of India;
4. To give a general picture of the physique of the people in various regions; and
5. To generate adequate data to draw up isophenic maps of India.

The project was commenced with the Southern states of Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu, with a focus on anthropometric dimensions of male adults aged 20-55 years. Simultaneously, the survey covered the Northern states under the supervision of experienced personnel. Extensive data collection was conducted, ensuring the representation of diverse social groups across India. The following communities have been covered under this project:

Sl.No	State	Communities covered
1	Assam	Ahom, Brahmin, Jugi, Kachri, Kaibarta, Kalta, Koch, Lalung,

		Mech, Miri, Muslim, Roybanshi
2	Bihar	Ahir, Bauri, bhujia, Brahmin, chamar, Dusadh, Goola, Ho, Kayastha, Kumbar, Kurmi, Mehtar, Munda, Muslim, Oraon, Paswan, Rajput, Santal, tanti, Teli, Tharu,Yadab
3	Orissa	Agaria, Bhuiya, Brahmin, Chasagaura, Ghasi, Gond, Karan, Keota, Khandayat, Khond, Kumbhar, Munda, Muslim, Nulia, pana, porja, Santal, Savara, Tanti, Teli
4	Maharashtra	ANdh, banjara, bandari, Bhil, Brahman, Chambhar, Gond, Katkari, Koli, Korku, Kumbhar, Kunbi, Mahadeokoli, Mahar, mong, Mangela, Maratha, Muslim, Rajgond, Savar, Teli, Tirole Kunbi, Varli
5	Gujarat	Ahir, bhil, brahmin, Charan, Dubla, Jain, Kanbi, Koli, Kumbhar, Patidar, Rabari,

		Rajput, Vankar
6	Jammu Kashmir	Kashmir Brahmin, Rajput, Mahara, Muslim, Chamar
7	Himachal Pradesh	Bodh (Bhot), Brahmin, chamar, gaddi, Girth, Gujjar, Kanet, Koli, Rajput, Thakur, Rathi.
8	Punjab	Brahmin, chamar, jat, Sikh, khetri, Rajput, Saini
9	Hariyana	Brahmin, Rajput, Jat, Sikh, Harijan
10	Uttar Pradesh	Ahir, Arakh, Baghwan, bhantu, bhar, brahmin, Chamar, Gujjar, Jat, Kachhi, Kahar, kayastha, Kewat, Kolta, Koeri, Kori, kumhar, Kurmi, Zodha, Lohar, Muras, Muslim, Pasi, Rajput, Sahariya, Sainee, Sainthwar, Shilpakar, Shilpakar-Sorji, Shilpakar-Mistri, thakur, Teli, Vishya
11	Madhya Pradesh	Ahir, balai, barela, Bhil, Brahmin, Chamar, Gond, Gujjar, Jath, Kachchi, Kaller, Kanwar, Khati, Kol, Koli, Kori, Korku, Korwa, Kumhar, Kulmi, Kurmi, Kurumbanshi,

		Lodha, Lodhi, Lohar, Lora, Mahar, Majhi, Mehar, Muslim, Oraon, Panka, Rajput, Rawbat, Saharia, Santnami, Sonar, teli
12	Tamil Nadu	Aganudaiyan, Badaga, Brahman, Chakkilian, Chetty, Idaiyan, Irula, Kaikolam, Kallan, Karunigar, Kuruba, Kusuvan, Maravan, Muslim, Labbai, Muslim (Urdu speaking), Pallan, Paraiyan, Paravan, Shannan, Palli, Valaiyan, Vaniyan, Vellala
13	Karnataka	Banajiga, Beda, Billava, Brahman, Bunt, devanga, gangakula, ganinga, Holeya (kannada Spaeaking), Holeya (Tulu Speaking), Idiga, Kodaga, Koracha, Korama, Kunchatiga, Kuruba, Betta Kuruba, Jenu Kuruba, Kadu Kuruba, lambani, Langayat, Madiga, meda, Muslim, Neyigi, Sholiga (Kannada and Telugu Spaking)
		Vokkaliga, Yadava, Yerava
14	Andhra Pradesh	Balija, bestha, Boya, Brahaman, Chenchu, Devenga, Golla, Idiga, Kamma, Kapu, Kolam, Komati, Konda Dora, Konda Reddy, Koya, Lambadi, Madiga, Mala, Medari, Mudiraj, Muslim (Dudekula, Shaik, Syed), nagara, Padma Sali, Raju, Reddy, Savara, Telaga, Teli, Togata, Velama, Yanadi, Yerukula
15	Andaman	Mopillah, Bhantu, Karen, Namasudra, Local born,
16	Chota Nagpur tribals	The Oraon, The Kharia and The Munda, Chakkiliyan, Valmiki, Pariyan, Vadabaliga
17	Lakshadweep	Koya, Malmi, Melaceri, Manikfan, Thakur, Thakrufan, Raver

In this project, a total of 47,139 adult males, representing more than 195 social groups were measured for 14 metric and 14 somatoscopic traits across the 12 states, including the Lakshadweep Islands. The findings have been documented and published across various volumes.

5. Comprehensive Survey in Dermatoglyphics

In the year 1967, a project entitled "Comprehensive Survey of Dermatoglyphics" was initiated. The project sought to unveil insights into population variations and sexual dimorphism with the following objectives.

Objectives:

1. To describe the dermatoglyphic features of the community;
2. To determine the variations in the dermatoglyphic patterns;
3. To relate the qualitative and quantitative dermatoglyphic traits based on sexual dimorphism;
4. To compare the obtained data with other Indian communities and tribes.

The study was conducted among few endogamous communities which were sporadic. Finger and palm print data of a few tribes were collected, such as Ulladan of Travancore, Riang of Tripura and Onge of Little Andaman. Later, extensive dermatoglyphics studies were carried out among the caste and tribal populations of India. A more comprehensive survey in dermatoglyphics was undertaken during phase 1960 when population groups of six different regions of India were covered: (i) Mundari- speaking tribe of middle eastern India, (ii) the tribe of Northeastern India, (iii) the tribe of Nilgiri hills, (iv) certain caste group of Mysore (v) caste and tribe of West Bengal ad Dravidian-speaking tribe of middle central India. In the said study the Anthropological Survey of India has collected finger and palm prints of over 17,000 individuals. Varying frequencies of dermatoglyphic patterns in different castes and tribes were considered and sex differences were made with both qualitative and quantitative dermatoglyphic traits. Besides, the comparison was made with the data available for other Indian castes to discern the nature of dermatoglyphic variation. A comparison with the tribal populations of surrounding states was also made.

This initiative focused on examining the intricate patterns adorning human fingertips, requiring a meticulous examination of the unique ridges, loops, and whorls, thereby contributing insights into the understanding of human identity and diversity within the Indian subcontinent.

6. All-India Survey of Pottery Technology in India

Objectives:

In 1959, the Anthropological Survey of India initiated a survey to study three dozen items of material culture and locate the culture zones of India methodologically, and to prepare a detailed note on the art of pottery manufacturing all over the country. The study considered distribution of pottery traits which comprise the tools and techniques of manufacture. It was thought that such an approach will help immensely in locating the major technological traditions in pottery-making. Further, it was considered that if these traditions are plotted out on the map of India, they will indicate the distribution pattern of pottery technology or of the pottery-making zones. Since pottery-making is a hereditary monopolistic occupation, such technological zones were also thought to suggest the grouping of potters based on technology and occupation. The study also aimed to examine the potter craft to its organization of production and to see how this will eventually characterize the system

which binds the potters economically to the rest of the Indian population.

Findings:

The study observed that there are, broadly two kinds of potter's wheel in use in India. One of these has a pivot fixed below the nave, and it rotates like a top in a socket set below. The other type has a socket in place of the pivot, and it turns upon a conical pivot which is set below. The pivoted wheel is southern, eastern and north-eastern, while the socketed one is northern and western in distribution. Wheels are, moreover, either solid or spoked, and it is interesting that this feature also bears a regional significance. It is of even greater interest that, in the west, in portion of Kathiawad, Maharashtra and Mysore, the wheel is of the northern solid type, but it bears a pivot as in the south. Such regional distinctions and overlaps are in consonance with the distribution of other elements involved in the manufacture of pottery. Thus, the anvil and the base on which earthenware are finally beaten into shape, the oven in which they are fired, and even the postures assumed by potters while the work, show a distinct regionalism in distribution, which was also a major finding from this project.

As one goes carefully through the report, and particularly the distribution maps, one feels how the various elements constituting the trait of pottery manufacture have become clustered in distinguishable constellations in one part of India or another. When the maps are compared with those of ploughs, oil-presses and the like, it is apparent that some of these clings together and even carry us over to areas of similar technology either in the south- east of Asia or in the Middle East. It is highly significant that these distributions are markedly different from the distribution of families of languages in India, of which the dates of introduction or differentiation are roughly known. The implication is that the basic arts of life like agriculture, preparation of food or pottery were introduced at a time, and in a manner, different from that associated with the diffusion of languages in different portions of India.

As outcome of this project a book titled "Pottery Techniques in Peasant India" is published. This covers the craft of pottery as an occupation traditionally followed by a particular caste known by different names in different regions of India. This potter's caste is divided into several endogamous groups or sub-castes which are based mainly on territorial or occupational considerations. In general, the potters of south-east India are basically territorial, north-west Indian potters are largely occupational, and in central India, both territorial and occupational divisions prevail. In conformity with this distribution of the potter's caste, we find the major techniques employed in pottery manufacture. There appears to be a close affinity between south and east India, north and west India in the types of wheels, the technique of making pots and methods of firing. In central India, again come to the same combination of south-east and north-west India.

7. Survey of Metal Crafts in India

This investigation aimed to ascertain the state of indigenous metal craft in India. The project was executed during 1962-1964. This was a one-man investigation done by Meera Mukherjee, an artist, a sculptor, trained in India and Germany with the grant of a Senior Fellowship in Anthropological Survey of India. The work is divided into three sections. The first deals with metal craftsmen, their

castes, and their position in the hierarchy. The second gives an account of how the investigator located and approached different artisans. The third gives a description of the techniques used by them. A few charts and Maps show the geographical distribution of the artisans, the metal used, the types of artifacts, and the techniques. All states of India except Assam, Gujarat and Maharashtra, are included in the Survey. Two years later, in the course of another investigation initiated by the Indian Handicrafts Board, some more data were collected concerning folk artisans and added to the project report. Special attention was paid to the study of metal, crafts and brass bell metal and bronze other metal crafts was only briefly noticed, and Iron was excluded.

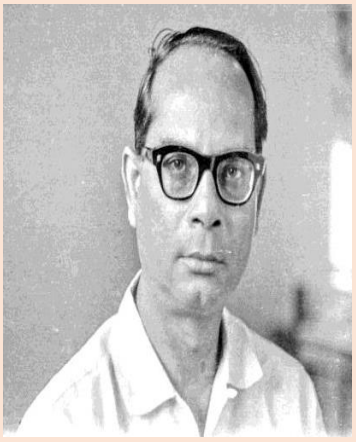
Objectives:

1. To ascertain the state of indigenous metal crafts in India, the position of metal artisans and to prepare a contemporary record of the techniques employed by the artisans.

Findings:

Researcher talks about the advancement of mechanical civilization and a new economy, which ruins the indigenous metal-craft techniques. Due to this advancement, some of them abandoned their caste-craft. Many left their native villages. But the hard core of artisans remained. They see their work not only as a means of living but also as their way of life, which testifies to the past affluence and position of honour enjoyed by the artisans. Also, to save their craft, they have drawn men from other castes to help with simpler operations. This research work is published in the form of a book titled 'Metal Craftsmen of India' by Meera Mukherjee (1978; Reprint, 2009).

D K SEN
(29/01/1964 - 29/03/1972)



Dr. D.K. Sen *worked as the Director-in-Charge of the AnthropologicalSurvey of India for some time and then as Director from 1964 to 1972.*

Major Research Projects Initiated

1. Ethnographic studies among the tribes of Bihar, Madhya Pradesh, Mysore, Kerala, Assam and Andaman and Nicobar Islands

During 1964-66, ethnographic studies were taken up among little-known Scheduled Tribes of Bihar, Madhya Pradesh, Andhra Pradesh, Karnataka, Kerala, Assam and Andaman and Nicobar Islands.

2. Study on infant growth and nutrition

The study was conducted in 1965 with the aim of getting an integrated picture of economic and nutritional background, diet and growth of infants of rural West Bengal. Data related to the general economic background and dietary habits of the families of the sample population was gathered

Anthropometric measurements were taken from parents to assess their nutritional status.

Data related to Infant mortality were also gathered. Qualitative information on feeding practice of all infants under 36 months of age were taken while supplementary foods of all under 12 months of age and of some of the infants between 12 and 18 months of age were quantified. Height and weight of the infants from about the first week up to 36th month of birth were also taken. The study concluded that poor diet, grossly deficient in calories and protein (and very likely in some minerals and vitamins as well) is mainly responsible for the poor growth at the weaning stages. Very low birth weight has also been considered to be partly responsible for the low body weights of infants in the pre weaning and weaning stages.

3. All-India Survey of marine fisher folk

The project is a comparative study of marine fisher folk and was conducted among the following communities;

1. The Fisher folk of Jambudwip, Phuleswar of West Bengal.
2. The Nulias of Orissa.
3. The Mopila Fisherman of Kerala.
4. The Fisher folk of Gujarat (Central India station)
5. The Fisher folk of Andhra Pradesh.

Objectives:

1. To study fishing as a way of life. This includes a detailed study of the economic organization, social organization, political organization and religious life; and
2. To study the fishing communities singularly and make a comparison of them.

Findings:

The study found that the fishermen's interaction with the neighboring castes in recent days resulted in occupational and social mobility. In all the communities, the survey found people taking up agriculture, mostly observed in the younger generation. The fishing community is an occupational group and degrades themselves to the level of Scheduled Caste as the government is providing them safeguards. Being an integral part of the Hindu Peasantry, the religious system of the marine fisher folk-believes and practices, is not very different from that of the other castes of the local peasant society. The findings of the study are published in few independent volumes.

4. Ethnomusicology of selected tribes of South India

The tribes studied were Toda, Kota, Urali, etc. of South India.

Objectives

1. To provide meaningful insights into the surveyed tribes through the study of their music in their social and cultural context; and

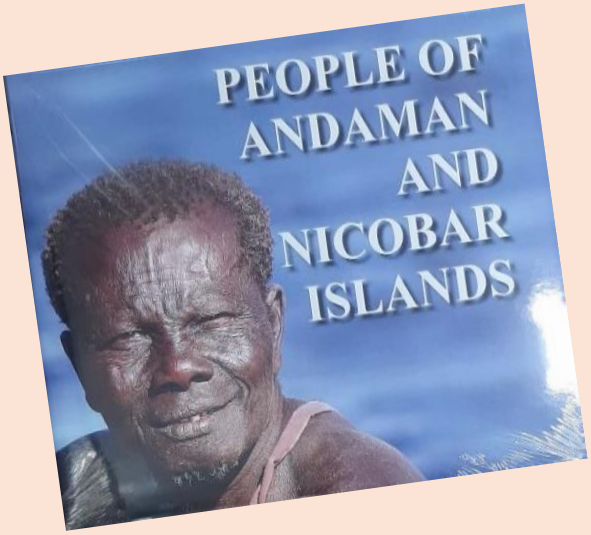
2. To gain insights into the living conditions of the studied tribes and the way, if any, music influence these conditions.

5. Survey of the Indo-Aryan tribal dialects of West Bengal, Bihar and Orissa

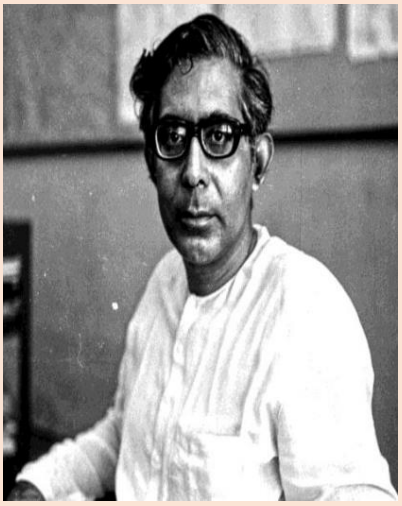
The project, 'Study of Indo-Aryan tribal dialects' aimed to present a comprehensive study of the Indo-Aryan Tribal Dialects spoken by the tribes residing in and around the states of West Bengal, Bihar and Orissa. Main objective of the study was to have an in-depth study of the selected tribal languages and study the imprints of linguistic borrowing vis a vis with the cultural borrowings from the neighbouring communities. The researchers focused on the

linguistic traits retained by the tribal communities particularly the non-Aryan traits and the pattern of borrowings from the regional and standard variety spoken in the area of study.

The outcome of the study presented that Malpahariya and Bhuyan have many distinct traits in their sound systems and grammars where they differ with Bengali and Oriya, respectively, which portray that the culture of the tribal people had not yet fully disintegrated. The difference between the tribal dialect and the standard language was studied in the parlance of culture. The major cultural drifts or contacts in the lives of the studied tribal groups reflected in the data were found to correspond to the different strata and ages of the linguistic and cultural innovations. The high approximation of the two studied communities with Hindu culture has been paralleled by a very high agreement of their speeches with the standard variety.



S C SINHA
(10/04/1972 - 27/08/1975)



Dr. Surajit C. Sinha *completed his Ph.D. in Anthropology from Northwestern University in Illinois, United States on a Fulbright Scholarship. He was the fifth Director of the Anthropological Survey of India during which he was considered to be an advisor of the then Indian Prime Minister, Indira Gandhi. He was the Professor of Anthropology at the Indian Institute of Management, Calcutta. He became the Upacharya of Visva Bharati, Santiniketan.*

Major Research Projects Initiated

1. All-India Project on the socio-economic changes among the weaker sections of the Indian population
(Report not available)

2. Culture and society of the people of the Himalayan region

The main aim of the project was to study the least known groups living in the border area and analyse their degree of social change due to contact with other groups. This study also aimed to find out the nature of

adaptation of these people in different ecological settings. For this project the 'Border Area' of the North Eastern Region' has been defined as 'the stretch of land lying between the Himalayan International Boundary on the North East and line running almost parallel to this boundary just where the Himalayan foot hills meet the plain'. Accordingly, three villages located in three different ecological settings of Arunachal Pradesh were selected to conduct a comparative analysis with the following objectives.

Objectives:

1. To give the ethnographic account of the people living in three villages conceiving each village as a part of larger whole; and
2. To Examine the nature of contact each village had in past, and is having at present with other villages.

Findings:

The villages selected for the study were inhabited by three different tribes, viz. Khamti, the Kaman Mishmi, and the Padam located in Lohit district of Arunachal Pradesh. The study revealed that the people have made the best use of the locally available resources like bamboo and cane for building their house structure and in producing other items of material culture.

In Lohit valley, the habitat of the Kaman Mishmi is very narrow, it has sandy and rocky bed which does not encourage the people to cultivate anything near the river bed. Hence, considering the availability of water and suitable land for the purpose of cultivation, the slopes or the hill tops, are preferred for construction of houses. Due to nonavailability of the suitable wet land, the inhabitants continue with the shifting cultivation. In the foothills, the Khamti prefer to establish their villages near the bank of the rivers. In the entire Chowkham and nearby area, the Khamti villages are located on the bank of the Beyeng, Teyeng, and Namchoom (Tengapani) river as they practice wet land cultivation. The Padam of Dibang valley have come down from the hills to establish their villages near the bank of the rivers to get the irrigation facilities for the wet agriculture cultivation which they are trying to adopt while settling in the foothills.

In the narrow Lohit valley, the Kaman Mishmi construct their house near to agricultural fields to take proper care of the crops, hence, there are very small sized scattered villages (3-4 households having 15-20 families on an average). The agricultural land is distributed on different hilltops and slopes and communication facilities are not available. The villages in the foothills are compact having 60-100 households on an average due to availability of sufficient cultivable land within the walking distance and the communication is comparatively better. The villagers do not feel to establish their houses in a scattered way as the Kaman Mishmi of high hills do.

In Kaman Mishmi, the village owns the land surrounding it, where its ancestors had originally cleared the jungles. However, a family maintains a lose control over the patch of the land which is first cleared for Jhum and reserves claim to revert to its cultivation after the Jhum cycle. Traditionally, the land among the Padam is owned and controlled by the Kelang (village council). The agricultural land of the village is called as 'Patat' and each household gets agricultural land within the Patat. The Padam of the foothills have adopted wet cultivation. Among them, the land cleared for cultivation by an individual

becomes his private property and the village has no right in its use or disposal. The Kaman Mishmi and the Khamti practice clan exogamy while the Padam observe sub clan exogamy.

3. All-India Bio-anthropological Survey (AIBAS)

Launched in 1972, the project focused on gathering data regarding physique, demography, food habits, diseases, genetic disorders, congenital anomalies, and disabilities. Covering both rural and urban areas across the country, the survey aimed for comprehensive nationwide coverage. By 1980, data had been collected from 351 locations and 35,100 households. A Task Force was established in December 1985 to retrieve and publish this vital information, leading to the compilation of location-wise results for preliminary analysis. These findings, presented in nine tables, hold significance for physical anthropologists, planners, and administrators.

The project employed a systematic sampling design, covering both rural and urban areas nationwide. Each cell, defined by unit degrees of longitude and latitude, was investigated, with locations spaced approximately 100 kilometers apart. Information was collected from 100 households in each location, supplemented by data from urban areas based on population density. Structured schedules guided data collection, ensuring uniformity and comprehensiveness.

Objectives:

To generate data on physique (body weight, body height and chest girth) for adult males, demography, food habits and disease among Indian populations.

Findings:

The Anthropological Survey of India published the preliminary tables in September 1988 on the different aspects like population distribution, marital status, literacy rate, anthropometric measurements, physical morbidities, and food pattern. As per the data recorded, 29 State/Union territory were included in the study. The highest sex-ratio as well as child-woman ratio were observed in Rajasthan (i.e., 0.586 and 1366, respectively; 284 males and 198 females). The highest proportion of unmarried male and female were found in Arunachal Pradesh (39.73% and 31.92%, respectively). The highest proportion of married males and females were found in Andhra Pradesh (28.94% and 30.28%, respectively). The highest percentage of non-literacy among males and females were observed in Arunachal Pradesh and Madhya Pradesh, respectively (54.44% and 53.98%, respectively).

K S SINGH
(29/04/1976 - 31/12/1977)

Kumar Suresh Singh *(1935-2006) was an Indian Administrative Service officer of Bihar cadre. He obtained Master's Degree, and finally a Ph.D. in History Hewas appointed as the Director-General of the Anthropological Survey of India and also Director of the Indira Gandhi Rashtriya Manav Sangrahalaya.*

Major Research Projects Initiated

1. Shifting Cultivation in India

With an aim to understand the total situation of shifting cultivation practice in India, the project entitled as "shifting cultivation in India" was started in 1976 with the following objectives.

1. To understand the ecological and cultural variations for identifying the regional problem of shifting cultivation;
2. To understand the problems posed by shifting cultivation and people's own ways of grappling with them;
3. To understand the different sets of problems of man-environmental relationships as there cannot be any uniform prescriptions for all regions in India; and
4. To assess the problems and approaches to tackle them according to the ecology and cultural environment of the people involved in this method of cultivation.

Findings:

The study found that the practice of shifting cultivation has its merits and demerits. Sometimes called as lazy process of earning, it requires only cutting of jungles, burning of trees which have been cut down, and sowing of seeds by broadcasting. However, this practice of cultivation is not completed merely with the sowing of seeds. In dense forests, wild animals destroy a good proportion of the crops. Farmers have, therefore, to keep guard day and night all through the season. This involves hard labour. The study found that this system of economy is very harmful as it destroys the forest cover and lowers the fertility of the soil. However, the study also found that shifting cultivation is not necessarily a harmful practice and suggested that if due regard is paid to the nature of the soil, slope of the land and sufficient time is allowed for regeneration, the decay can be prevented. The study further suggested that the problem of shifting cultivation should not be considered in isolation and should be solved through the approach of 'Integrated Area Planning'. Land use plans should not disturb their traditional preferences of crop production and consumption. This project found out that some degeneration has taken place in states like Meghalaya, Bihar, Orissa and Andhra Pradesh, where they have already begun practicing permanent cultivation side by side. On the contrary, in a situation of low-density of population, like Arunachal Pradesh or the southern part of Mizoram or even in the Abujhmar Hills of Madhya Pradesh, people maintain the

ecological balance through conventional practices. In these places the danger of soil devastation may not be apparent within a short time, because the availability of land is more than the need.

2. Survey of tribal movements in India

The Survey of Tribal Movements in India was conducted by AnSI in 1976. It identified thirty-six ongoing movements. Fourteen of these were concentrated in North-East India, seven in Eastern India and four in Western India.

Method and Objectives: Quick short-term surveys were conducted by employing the conventional tools of field investigation to generate short, descriptive profiles of ongoing movements and to update in the process existing material, generate new material and undertake the content analysis of newspapers, periodicals, and other published material relating to the movements. Investigators went round the regions and interviewed the leaders and participants in the tribal movements and organized their material around a typology. This comprised the origin of the movement and factors contributing to it, goal and programme of the movement, its life cycle and development - a historical narrative and a chronology of events, role and nature of dominant groups and interaction of group, community and factional interests, character of the movement in terms of its political, social, reformative and cultural programmes, geography of the movement, concept of insiders and outsiders, leadership of the movement, participation in elections and political processes at the local, regional and national level, support of the movement by forces from outside and within, the present status of the movement, causes of its survival or decline, impact of the movement, folklore of the movement, emergence of multi-tribe regional systems and a bibliography of the movement.

Summary of Results:

Tribal unrest assumes an organized character only among the large, homogenous, literate, landowning tribal communities who have a relatively strong economic base, such as Munda, Santal, Gond and Bhil. Very few of the primitive tribes, who have a pre-agricultural technology, participated in the movements. The major tribal communities have also a high degree of literacy and high rate of participation in the democratic process. A second aspect of these movements is that tribal demands are mostly couched in secular idioms. The era of messianic movements and their charismatic leadership has passed.

The AnSI had identified movements seeking political autonomy and formation of a state, agrarian and forest-based movements, socio-religious movements and movements based on script and language. The best organized of the movements of the first type was the Jharkhand movement which was discussed in terms of its historical development, ideology, structural and regional dimensions. While a few agrarian struggles were reported from the northern and southern parts of India, five agrarian and forest-based struggles which were closely linked were reported from central India. However, it was socio-cultural movements that held sway in this area. Five Bhagat type movements were reported, which highlighted some aspects of the Sansktitisation processes. More important was the set of four cultural movements based on script, language and religion seeking to assert and define tribal identity. Down south

and in the islands, the tribes were too backward, isolated and numerically small to organize movements on their own. However, incipient processes of political mobilization were found at work among some of them.

The movements covered in the first volume include Naga movement, Zeliangrong movement, ethnic and script movements of Manipur, Paite identity movement and Mizo political movement. The Khasi and the Garo chose the path of constitutional politics to statehood.

3. All-India survey on tribal economy

This project was undertaken by the AnSI in 1970s. The research gap as identified for this study is that economies of the tribes have been studied in our country as a part of material culture and have been considered either in isolation or described as peripheral to the larger system. The processes of transformation have been delineated as unilinear, from tribe into jati-like peasant. A whole range of research institutes are engaged in tribal studies, but the over-all picture that emerges lacks focus and the information remains diffused. The dynamism, diversities and direction of change have not been adequately projected.

Objectives:

This project was designed to yield an all-India perspective through surveys of regional situations and to focus on various modes of production and analysis of specific issues.

Method:

Researchers of AnSI had conducted a quick survey to generate information and organize available data according to a format and interacted with scholars from many disciplines and persons from various vocations including tribal insiders.

A National Seminar on Tribal Economy was conducted by AnSI in 1977 in connection with this Project. 39 out of the 100 papers presented in the Seminar were selected and a book titled 'Economies of the Tribes and their Transformation' was brought out in 1982.

Findings:

This work showed that the process of transition from one system to the other is far more complex, and that integration with the political and economic system of modern India is now a more pronounced process, than the traditional integration with the caste. As the tribal economic situation is diverse, there are multi-linear processes of integration into regional/national economic systems.

4. All-India survey on tribal customary law

This project was conceived by the AnSI in 1970s, but the actual fieldwork and other activities could be initiated only later. The project aimed at covering all the traditional and normative rules governing the customs of the tribes. A detailed guideline was supplied along with explanatory notes on the technical terms.

The related publications include the article 'Economic Transmutations in a Food Gathering Ecology: A Note on the Kadar of Kerala' written by S.B. Chakraborty (published in 1977 in the Journal of the Anthropological Society), the article titled 'Hazong Peasants: A Study on Some Agrarian Relations' written by B.K. Das (published in 1978 in the Journal of NEC for Social Science

Research), and two articles titled 'Short Notes on Garasia Tribe' and 'Impact of Family Planning Programme on the Garasia People' written by N.N. Kundu (published in 1979 in Vanyajati journal).

This project could not generate the desired data and most of the reports that were prepared looked more like conventional ethnographic monographs.

5. Culture trait and culture area survey

The project "Culture trait and culture area survey" was a comprehensive integrated study of cultural traits in a smaller region. The themes of material culture, social institutional and ideational level of culture at the regional level were included. The study generally aimed at working within the framework of the anthropological concept of culture area. The material culture, socialization, the system of ideas and beliefs and even the creative aspect of culture such as aesthetics as revealed in dress and ornaments, music, dance, drama, architecture, sculpture and literature were dealt with within this framework of the concept of culture area.

The secondary data related to regional history, geography, art forms, literature, folklore and items of art and crafts were also used. Participant observation and interview techniques were used to collect empirical data. The study had the following main objectives.

Objectives:

1. To understand whether the smaller regions represent diverse cultural traits within the state and provide information on cultural elements;
2. To find out what is common among these regions/ zones and what are the differences among them. To draw the commonalities and differences among various regions of the State which leads to the emotional integration;
3. To see how ecological, social and ideational levels of the region correspond to or are at variance with each other.

Findings:

This research work provides an adequate account of the evolved cultural patterns of life in India. The study covered the ecological milieu, settlement pattern, economy, material culture, social organization, dress and adornment, diet and food habits, temples and worship, fairs and festivals, life cycle rituals, kinship and marriage, education and creative aspects of culture to get a holistic view of culture. This empirically rich volume is also related to traditional knowledge, cultural data and cultural zones in India.

6. All-India linguistic traits survey in conjunction with All-India cultural traits survey

The project titled 'All-India linguistic traits survey' was taken up by the linguistic division of the Anthropological Survey of India, in conjunction with the 'All-India cultural traits survey', in the year 1977, as an initiative to collect empirical data to test the established theory of 'India as a linguistic area' by M B Emeneau. The project aimed to determine the extent of the distribution of some selected linguistic traits across the boundaries of genetically related languages and dialects and further correlate the linguistic traits with the cultural traits of the area and thus derive a wider understanding

of the relationship between language and culture.

The project ambitiously covered about 160 languages/dialects distributed across four language families of India. Data on linguistic traits *viz* sentence structures echo formations, numerals, numeral classifiers, kinship terminologies, colour terms and terms for greetings were collected from various districts of 23 states of India. Information was collected to map out the cross-genetic distribution of selected linguistic traits. Analysis of data approves of the hypothesis that the language area and not the genetic family corresponds to the linguistic area; It adds substantive data to the idea of 'India as a linguistic area'.

DP MUKHERJEE
(01/01/1978 - 13/04/1978)

DP Mukherjee *worked as Director of AnSI for a short period of about four months*

Major Research Projects Initiated

Earlier studies continued

H.K RAKSHIT
(14/04/1978 - 30/04/1982)

H.K. Rakshit *served as the seventh Director of the Anthropological Surveyof India from 1978. He was crucial in the All-India Bio-anthropological survey which was acclaimed as a very valuable piece of work*

Major Research Projects Initiated

1. All-India survey on tribal education

At the instance of the Ministry of Education and Culture, Government of India, the AnSI took up the responsibility of assessing the nature and degree of spread of education among the tribal people in India. In a joint meeting of the representatives of the Ministry of Education, and the Planning Commission held in June, 1978, the blueprint of the project was discussed in detail and adopted.

The project was aimed at knowing the constraints in the spread of education in tribal areas where percentage of literacy is low. The operational design envisaged a two-fold program to be undertaken by the AnSI: (a) compiling the data on education collected as parts of earlier projects undertaken mainly during 1960-1970, and (b) collecting fresh

data on selected tribal communities from various parts of the country and to compile reports on them.

From about 55 reports during the reference period of 1960-1970, a few common features relating to education emerged. Some of the more important findings amongst them are enumerated below:

(a) Though primary education is within easy reach in many areas, secondary schools are not within easy reach of most of the villages.
(b) A communication gap exists between the teachers and the taught. The gap between content in textbooks and the student's mental preparations to receive anything from them on the other, specially at the primary stage is significant. The economic considerations also make them disgruntled some times.
(c) The bulk of the literates in tribal communities come from the age-group of 8-15 years. That meant that the spread of education is rather a recent phenomenon.
(d) A general demand for residential schools has been made from many tribal corners.
(e) Some of the notes indicate that the tribal people in the remote areas suffer from a sense of shyness to send their wards to educational institutions.
(f) High frequency of dropouts due to lack of awareness about the significance of formal education every year is conspicuous.

2. All-India survey on weaving in India

The AnSI conducted a national research project on weaving in India, focusing on various weaving communities across the country in the early 1980s. The project aimed to formulate and integrate welfare schemes for the development of the weavers in India taking into consideration their socio-economic factors and to provide a comprehensive socio-economic analysis of these communities, including the Kuruhinasetty weavers of Karnataka, the Saliyan weavers of Kerala, the Padmasali handloom weavers, and the Devanga community of Andhra Pradesh.

Objectives

1. To provide a realistic picture of the weaver's socio-economic conditions;
2. To understand the society and culture of the weavers; and
3. To understand the organization of production, technology, and economy of weavers.

In Karnataka, the study was conducted in 1984. During that time, the cottage industry was one of the oldest weaving industries and many of the villagers depended upon this industry for their livelihood both directly and indirectly. A holistic study of the Kuruhinssetty weavers in Karnataka is taken up in the first phase and field data was collected from three villages namely Lakkundi ani Narsapur weaver's colony of Gadag taluk, and Shigli village of Shirahatti taluk in Dharvad district of Karnataka. The Kuruhinasetty are the plains living weaving community, predominantly living in Karnataka, particularly in the districts of Dharwad, Bijapur and Belgaum. In Karnataka, they are classified as a 'Backward community under the broad name Naygi. The community consists of 66 clans which are hierarchically further subdivided under the groups of Nirabaari. Vishesha and Samanya. In Kerala (1983) the study took place among the Saliyank. In the past, the Saliyank produced only coarse white cloths by using throw shuttle pit looms. Today, the throw shuttle pit looms have been almost replaced by the frame looms. Considerable changes

have taken place in the years in terms of dyeing and gumming process. A new and better variety of chemicals are put into use which have resulted in improved style and decoration. The development of the paavumaran (warping machine) has increased efficiency and reduced fatigue. The switch over to frame looms and the adoption of improved tools and techniques of weaving has made it possible to weave cloth of fine texture with a variety of designs. Though the adoption of improved techniques of weaving has resulted in increased production capacity the increase in the cost of raw materials made the finished products beyond the reach of the common man.

Study among the Padmasali handloom weavers and Devanga of Andhra Pradesh revealed the pathetic plight of the handloom weaving industry in general and Padmasali community weavers in particular. Several Padmasali Mahasabhas brought forward the need for mobilizing their own resources for betterment of their socio-economic situation. As a result of this awakening several schools, and hostels have been started to educate their children. The efforts of their caste leaders and enlightened people have further helped in the progress of their community.

The Devanga is a typical Saivite weaver community of Andhra Pradesh. They have been studied at the village Pedana of Krishna District, Andhra Pradesh. The research particularly focused on the economy and division of labour, material culture, hierarchy and social division, daily life routine etc. The Devanga is the numerically predominant ethnic group in the village, Pedana. Thus, they enjoy the unique position at Pedana village. Many of the Devanges are poor weavers. They are at the behest of seventy master weavers and eighteen cooperative societies. They use pit loom and produce sarees, *lungis*, shirting cloth, door and window curtains and wall hangings. Only recently they have started giving designs to the borders of *sarees* and *lungis*. The Devanga dye the yarn themselves after purchasing from the market and produce the fabric. Weaving occupies the consciousness of the Devanga in toto. Another conspicuous feature of the Devanga society is their independence from the Brahmin caste. They have their own Brahmins for performing their ritual. This plus their occupational specialization freed themselves from caste hierarchy though living along with other castes in the village. Thus, the Devangas form a proud caste of the weavers even though they are economically weak. State Government of Andhra Pradesh have declared them a backward caste as lot remains to be done to ameliorate the socio-economic conditions of the Devanga.

Findings

The study in Karnataka, among the Kuruhinasetty community, living predominantly in the districts of Dharwad, Bijapur, and Belgaum showed that they faced challenges due to the rising cost of raw materials and the replacement of traditional throw shuttle pit looms with frame looms, which increased production efficiency but also the cost of finished products.

In Kerala, the Saliyan weavers were observed to have transitioned from using throw shuttle pit looms to frame looms, leading to improved weaving quality and design variety. However, this shift also made the products more expensive for the common consumer.

The Padmasali weavers in Andhra Pradesh, despite facing the deteriorating state of the

handloom industry, have shown resilience through community mobilization and education initiatives, leading to the rise of educated and prosperous members within their community.

The Devanga weavers of Andhra Pradesh, studied in the village of Pedana, were observed to be popular for their Saivite religious practices and occupational specialization in weaving. Most of the members of their community are poor weavers who rely on master weavers and cooperative societies. The Devanga community has managed to maintain a distinct cultural and social identity, despite their economic challenges.

Overall, the research project highlighted the diverse socio-economic conditions and cultural practices of India's weaving communities, as well as the challenges they faced in the 1980s, particularly due to changes in technology and market economics.

3. Sacred bath ceremony at Gangasagar

The primary objective of the study was to understand the meaning of the 'idea structure' which is reflected in the abstract idealization of certain beliefs in terms of the Hindu view of life as well as at the level of ritual functions which are but a series of expressive actions of the devotees.

Findings:

The study on the Sacred Bath Ceremony and myth-ritual complex at Gangasagar provides a comprehensive insight into various aspects of this annual pilgrimage event. The study highlighted a significant ownership dispute between the local community and the government regarding the *pronami* (monetary offerings) money. This dispute underscored the sacred right of the local community to manage temple affairs, reflecting the deep-rooted cultural and religious significance attached to the temple. The introduction of automobile transport was a recent development in the region. The study pointed out the challenges faced during the embarkation and disembarkation process, which was managed by dedicated volunteers from *Bharat Sevasram Sangha*.

The study noted a disparity in the representation of Southern and Eastern areas at the *mela*, with a larger presence of voluntary organisations from Calcutta. This finding highlighted the regional dynamics and the role of external organisations in providing essential services during the event. It also emphasised the need for broader regional inclusivity in the mela. The study looked into the historical challenges faced by pilgrims visiting Gangasagar, including risks associated with rough weather, pirates, and wildlife. By exploring the historical context, the study provided insights into the evolution of the pilgrimage experience and the resilience of pilgrims in overcoming adversities to fulfil their religious obligations. While surrounding areas witnessed significant improvements, the location of the *Kapilmuni* temple and *mela* ground maintained its sacred and rustic identity. The study highlighted the preservation of the sacred landscape amidst modern innovations, emphasizing the enduring cultural heritage and the unique character of the pilgrimage site. These elaborated findings offer a nuanced understanding of the historical, cultural, and logistical dimensions of the Gangasagar *Mela*, enriching the narrative with detailed insights into the pilgrimage events complexities and significance. The study incorporated the

theoretical framework of Little Tradition and Great Traditions proposed by Robert Redfield. It suggested that in India, where the so-called Little Tradition and Great Tradition coexist and survive, the members of the folk communities conceive the essence of Indian Culture beyond their village and local boundaries. The study also recommends that this type of work be extended to a broader plane and materials from other all-India religious fairs, like the *Kumbha Mela*, may be collected to build a comparative and meaningful picture of the psycho-social heritage of the diverse regional entities of this subcontinent.

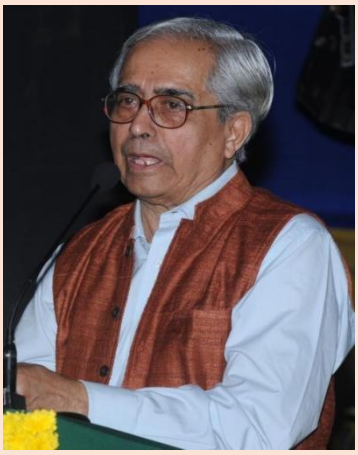
4. Human adaptation to extreme climate - Investigations were carried out in the western, central and eastern Himalayas and Jaisalmer desert of Rajasthan.

In this national project it is attempted to examine two cases of extreme situations i.e. the lofty Himalayan region grouped into six divisions like: a) Jammu and Kashmir region, b) West Himalayan region, c) East Himachal region, d) Garhwal region, e) Sikkim region, and f) Arunachal Pradesh region; and the desert or arid zone in the west. The concept behind this project was that there is a correlation between the altitude, rainfall, and the economic and cultural life of the people of these areas. At low altitudes, agriculture is the primary livelihood, but as altitude increases, other activities such as animal husbandry and trade become more prominent. Moving from west to east, there is a noticeable shift in the economic and cultural dynamics. Pasturing animals is significant in the western Himalayas but limited in the eastern Himalayas. In the similar way, seasonal migration was also another aspect of this study.

Findings:

The findings suggest that in East Himachal, there is a unique geographical personality influenced by the people's adaptations to the environment. Developmental measures are reducing the region's isolation, impacting the traditional adaptive strategies. The Upper Sutlej valley is no longer isolated due to improved technology and the sale of horticultural products in major markets. It is emphasized that development in such remote areas should aim for progress without disturbing local traditions and socio-economic situations to establish a proper relationship between man and nature. In the Sutlej valley, ecological conditions significantly influence human settlement patterns and house types at different altitudes, with upper valley settlements differing from lower valley ones due to resource availability and climatic extremes. In Kashmir, survival strategies vary at different altitudes, with low altitudes supporting year-round agriculture but limited development in other sectors due to poor accessibility. Middle altitudes have developed agriculture, supporting larger populations, while high altitudes require supplementary livelihoods like animal husbandry. Sikkim Himalaya's agriculture and settlement patterns vary with altitude and cultural background, with agricultural activity and development observed in different districts based on various factors like area under cultivation and plough spade ratio. Even with the extremely arid climate of the Thar Desert, characterized by a scarcity of water, it stands out as the most humid, densely forested, well-cultivated, and highly populated desert in the world.

A K DANDA
(11/09/1984 - 11/09/1990)



Prof. Ajit K Danda, *FNASc is a PhD from Cornell University (U.S.A.). He started his career as a professional anthropologist in 1966 as a Senior Research Fellow and Deputy Director at the National Institute of Community Development, Hyderabad. By 1990, he sought voluntary retirement from the Anthropological Survey of India and joined as Professor and Head of Department in the Department of Social Anthropology and Sociology, North Bengal University.*

Major Research Projects Initiated

1. Tribes in contemporary India

The project entitled "Tribes in Contemporary India", was launched as part of the 6th Plan Project with an objective to determine the trends of change in the tribal ways of life resulting from the impact of external contacts, urbanization and industrialization. Under this project, initially four tribal communities from the Southern region, namely, The Jatapu of Andhra Pradesh, The Irular of Tamil Nadu, Malasar of Tamil Nadu, and Mukhadora of Andhra Pradesh were studied. Later, ten tribal communities namely, Andh, Binjhwar, Bharia, Dhanwar, Katkari, Kokna, Korku, Majhwar, Panika and Thakur were studied from the Central Region under this project.

Findings

The changes that have taken place in the socio-economic and political life of the tribes is mainly due to their exposure to external forces. Improved communication facilities and motorable roads resulted in a high degree of social interaction with other communities and culture. Affiliation with and involvement in the activities of political parties have brought changes in their various walks of life. Tribal welfare programmes initiated by the governments and voluntary organizations have broken the barriers between the tribal and the outside world. Establishment of educational institutions, post office, village office, Panchayat office have not only helped to improve the living conditions but also infused an awareness of development possible through the external contact.

2. Human origin and variation - Exploratory surveys in Narmada Valley, Siwalik hills, Coastal Tamil Nadu and Andhra Pradesh

The main objective of the study is to undertake exploration and excavation in the Central Narmada basin and other important prehistoric sites for the prehistoric remains of early humans, their cultural relics and the associated fauna in the wake of most of the sites being under threat of submergence.

Findings

The AnSI launched an extensive hunt for the fossil and lithic relics of the Palaeolithic man in the Central Narmada basin. Exploration was conducted between Jabalpur and Punasa

(Khandwa) covering 50 sites that yielded rich assemblage of over 700 lithic artifacts, mammalian fossils and hominid clavicle. The specimen is a fully fossilized right hominid clavicle and is well preserved except for a minor erosion near the medial end. The robust and rugose character of the specimen and the fused medial epiphysis indicated an adult person in the age group of about 25-30 years. The maximum total length of the fossil evidence is 90 mm, which characterizes it as the shortest clavicle among middle to late Pleistocene hominids, including east African Homo European and Middle Neanderthals/early homo sapiens.

The lithic culture evidence recovered from Hatnora comprises 36 late Acheulean to Microlithic tools. But most of these are surface collections from the top of the Boulder Conglomerate platform and probably were derived from the upper Concretionary clays and Black cotton soil. Only 11 tools chiselled out from the unit 1 Boulder Conglomerate bed may be considered of in situ nature. The detailed report was published in the journal Current Science Vol 73 No. 12 in 1997.

Further, exploration in the Central Narmada Valley have yielded a partial hominin femur and a humerus from a new locality, Netankheri located 3 km upstream from the previous hominin locality, Hathnora. The femur was recovered from the same Middle Pleistocene stratigraphic level that yielded calvarium at Hathnora and shares robust mosaic morphology of Homo erectus and archaic Homo sapiens. The mega mammalian fauna and large flake Acheulian artifacts excavated from the femur and the calvarium beds support the existence of a large robust hominin at ~250 kya. The humerus was recovered from stratigraphically higher and pre-YTA (~75 kya) stratum in association with unique Upper Palaeolithic fossilized bone artifacts and attributed to a 'short and stocky' earliest modern H. sapiens hitherto unknown in South Asia. This lineage probably evolved from a similar 'short and stocky' mode-3 archaic hominin documented earlier by two archaic clavicles and a 9th rib at Hathnora. The detailed report was published in the journal Current Science Vol 103 No. 12 in 2012.

3. Tribal situation in North-East India

The aim of the project was to bring into relief the facts of life of the major castes and tribes inhabiting the region. More specifically the objectives of the research project were: to study the changing links arisen out of disintegration of the institution of chieftainship in the area; the nature of tribe-caste continuum; and to identify the levels of community organization correlated to ecological and socio-cultural factors.

The regional pattern of inter-ethnic hierarchy, various kinds of integrative institutions, such as kingship, zamindari system, market, *jajmani* network, and sacred complex were also examined. Additionally, this project gives insight regarding economic development and the nature of participation of various ethnic groups in the emerging leadership and community associations, solidarity and mobility movements. This project also endeavored to find out the nature of intergroup exploitation and to identify the weakest elements in the ethnic spectrum of the region.

K S SINGH
(21/09/1984 - 31/03/1993 as Director General)

Kumar Suresh Singh *(1935-2006) was an Indian Administrative Service officer of the Bihar cadre. He obtained a Master's Degree, and a Ph.D. in History. Hewas appointed as the Director-General of the Anthropological Survey of India and also Director of the Indira Gandhi Rashtriya Manav Sangrahalaya. He is known for his vision and editorship of the 'People of India'*

Major Research Projects Initiated

1. Socio-political development & Area study: Northeast India

It was a collaborative project conducted by the AnSI and different Universities of North East India. It was conducted during the year 1985-87. The area covered under this study was Nagaland, Meghalaya, Tripura, Mizoram and Arunachal Pradesh.

2. Agrarian situation in India

Agrarian situation in India was a project undertaken in the 1980s partially coinciding and associating with the 6th and 7th Five-year plans. In this project the agrarian situation both in tribal and non-tribal societies and the associated conceptual and developmental issues were examined and analyzed. Tribal societies in Tamil Nadu, Andhra Pradesh, Odisha, Madhya Pradesh, Rajasthan, Bihar, Gujarat, Sikkim, and Assam, etc. and non-tribal societies in Bihar, West Bengal, Maharashtra, Uttar Pradesh, Kerala, Karnataka, and Andhra Pradesh, etc. were studied. Crop patterns, land use, indebtedness, the land tenure system, traditional farming methods, tribal agriculture, adaptation, unrest, role of animals, the impact of science, economy and developmental issues were some of the factors focused on under this Project. In connection with this, a National Seminar on 'Agrarian Situation in India' was organized from in November 1982. The seminar proceedings resulted in the publication of two volumes under the titles 'Agrarian Situation in India'.

3. Tribal transformation in India

The study attempted to understand the diverse process of cultural change under the title "Tribal India: Structure, Pattern and Transformation". This project was proposed during the 7th Five Year Plan (1985-1990) and executed during the 8th Five Year Plan (1992-1997). A total of 36 ethnic communities were studied, out of which 23 were published in the edited volume, *"Transition, Change and Transformation: Impacting the Tribes in India"* (2003).

Objectives:

1. Identify the diverse processes of culture change and transformation among various ethnic communities having varied socio-economic, geographical and historical backgrounds with neighboring communities;

2. Study the impact of cultural change in the sociocultural structure and economy of these ethnic communities; and
3. Understand the process of retaining its own distinct identity while assimilating elements/traits of other cultural communities among the tribes.

Findings:

A number of slow and gradual processes were identified by the researchers where tribes with close proximity to caste-based society tend to gradually transform into castes. The complete transformation of the tribes was observed by earlier scholars. However, in contemporary India, ethnic communities prefer to remain static in a transitional stage, which facilitates them to retain its tribal identity. These communities build up a culture of their own with elements of both traditional traits of tribe and certain characters of neighboring caste groups. The tribes of India have a tendency to project themselves as one of the components of local/regional culture, through acceptance of elements of cultural traits of the neighboring communities while modifying or even dropping a few of their own traditional cultural contents. In contemporary India, the process of transition is gradual which does not cause a complete transformation of a community, rather it tends to become static at some level for the continuance of its tribal identity.

4. Language maintenance and shift among selected tribal groups of India

The project 'Language Maintenance and Language Shift among the selected Tribal groups of India' was taken up by the linguistic division in the year 1984. The team studied the tribal groups with distinct linguistic identities who reside in the area with a principal/dominant regional language. The main objective of the study was to assess the attitude of the tribal speakers towards their mother tongue, the pattern of retention and shift from their mother tongue.

The socio-linguistic study of the selected tribal groups presented patterns for the two important linguistic phenomena in the multilingual society i.e. language maintenance by the community and shift to the language which bore a more intensive interactional load. Languages were assessed in the parlance of the socio-economic status of the region in general and the tribal community in particular.

5. People of India

The People of India (POI) project undertaken by the AnSI furnished the first indigenous accounts of the people of India. The project was launched on 2nd October 1985 and the data collection was completed in 1992. The publication of the findings came out in the following years.

Objectives:

To generate a descriptive anthropological profile, i.e., cultural, biological and linguistics dimensions of all communities of India, the impact of change and development process on them and the linkages that bring them together.

Findings

The study team was able to identify, locate and study 4635 communities spread across 4513 villages, 941 towns, 438 districts and 89 cultural regions of the country. It produced data on 776 individual elements/traits of identity, ecology, food habits, occupation, kinship patterns, marriage rules, art and music, as well as educational status and impact of development. The findings of the

study showcase the rich diversity and pluralistic reality of the people of the country. It highlights the basic identity, history of settlement, regional economy, and the salient cultural features of each community, by taking note of the traditional occupational distribution and diversification.

The study made a significant insight by delving into the identities that individuals attribute to their respective groups and a total of 57,401 identities were reported. It was found that there are 7403 synonyms of different community names which could be further divided into 18,888 exogamous clans, 2571 lineages, 3270 *gotra*, 74 moieties, 172 phratries, 12,893 surnames and 2492 titles**.**

The publication of the data collected and generated by the Project comes up to 120 volumes that included a total of 21000 photographs and nearly 4146 maps. It is in two interrelated parts. The first part consists of eight volumes of national series containing descriptive and quantitative material. Of these, two volumes are on the Scheduled Caste and Scheduled Tribes communities, three on all the communities of India and two volumes on the quantitative profile, language and biological structure of the Indian population. The second part comprises of volumes on state and union territories which has ethnographic write up on each of the communities studied. The language volume of PoI forms the first comprehensive and definitive database of the 325 languages and 25 scripts used by communities of the country.

6. Study of Andaman and Nicobar Tribes

The Andaman and Nicobar Islands are home to several Negrito and Mongoloid communities. These small, sensitive, and isolated groups became sensitive throughout East Asia and the Pacific in the early 1960s. Their dilemma needs to be viewed by the anthropologists in a broader context. The Nicobarese, Indo-Mongoloid group, which is reasonably strong and resilient, has taken the challenge of change and has thrived and proliferated. Another Mongoloid community, the Shompen, from Great Nicobar who are semi-nomadic and live in small, scattered settlements, were still wary of outsiders, but they were reportedly slightly better off than the other Negrito communities. The Great Andamanese and Onge, whose numbers have plummeted, were remotely locating as the Sentinelese and Jarawa, who have only recently begun to respond to administrative overtures. Even so, the Shompen deserve to be treated with the same concern and sympathy during the period.

Many works among the Islanders were of a generic nature. Beginning in 1921, some significant study in census ethnography was carried out. However, it wasn't until after independence that Indian researchers began doing long-term research. The AnSI was the most important agency participating in it during the period.

Following the Prime Minister's visit to the Islands in 1987, and in consultation with the Prime Minister's Office, the AnSI took action to develop a survival strategy for these endangered communities, as well as a plan for a series of publications, including monographs on six tribal groups of Andaman & Nicobar Islands. This entailed updating existing content and creating new material, notably for Nicobarese on all their islands. The Survey's scholars have spent many years investigating these groups and gathering anthropological data on their social, physical, and genetic traits.

Findings

The principal achievements of this project were the publication of six books pertaining to six tribal communities of the Andaman and Nicobar Islands. The Great Andamanese, belongs to Negrito group of tribes were almost on the verge of extinction during the initiation of the said project, with only about 29 individuals remaining. Dr. D. K. Chakraborty conducted this study on Strait Island, where the Great Andamanese were resettled. While critically investigating the nature of the community and their survival battle, it has been documented the changes faced by the community in terms of life and culture with special reference to family and kinship systems, life cycle rituals, myths and legends, subsistence economics, and political organization.

The Nicobarese, who are of Mongoloid descent, have a large population of over 22,000. They live on twelve Nicobar Islands and one island, Little Andaman, in the Andaman Group. They are horticulturists and pig herders who live in large, permanent villages, mostly near the sea. During this project's study, the field work has been conducted by Anstice Justin, a Nicobarese anthropologist from Car Nicobar Island, and who with extensive fieldwork and personal experience provided a comprehensive account of Nicobarese society and culture. For the first time, an attempt has been made to cover the majority of the major islands in the Nicobar Group during this project.

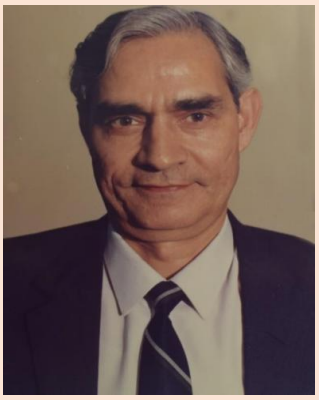
The Onge of Little Andaman, who were only in 100 in numbers while initiative of the project, have begun to interact with outsiders for the first time. The published monograph of Onge under this project is the result of an in-depth study by Basu, who spent more than five years in the islands. This book addresses the aspects of Onge social organisation, family and kinship systems, material culture, economy, habits and ways, and is intended for administrators and policy makers in the field of research and development of Onge tribal community.

The seminomadic Shompen people of Mongoloid stock live in the forests of Great Nicobar Island. After four years of fieldwork, Dr. S.N.H. Rizvi's monograph examines many facets of Shompen existence, such as their population distribution, demographic characteristics, and health status. Their economic organisation is explored in relation to hunting, food collection, horticulture, and the barter system. Their social structure is investigated in terms of the family. Their life cycle from conception to death is explained along with attendant ceremonies.

Among the Negrito tribes of the Andaman group of Islands, the Jarawa are one who have always been appeared with antagonistic behavior and when they have lately permitted some amicable contact with the visiting researchers, this study conducted by Dr. Jayanta Sarkar, covered elements of the Jarawa habitat, economy, eating habits, and social life.

T.N Pandit's expeditions to North Sentinel Island began in 1967 and were initially hostile as the Sentinelese people hid in the jungle and shot arrows at him and his team on later trips. For 24 years, Pandit and his team brought a variety of gifts and offerings that eventually led to the first friendly contact in 1991. On the basis of such rapport, Sentinelese were studied majorly based on observation.

R S MANN
(16/10/1991 - 31/01/1992)

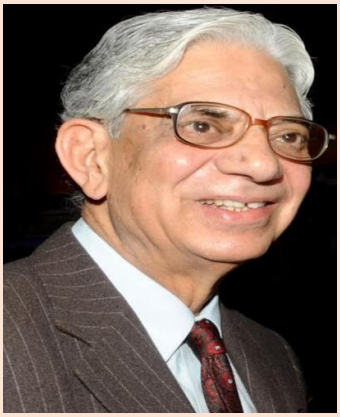


Prof. R.S Mann *got his Ph.D from Delhi University in 1973 on the topic of Social Structure and Social Change in a Delhi village. He served as Superintending Anthropologist at the Anthropological Survey of India (ASI) prior to his appointment as Director. He joined the Department of Anthropology, University of Delhi.*

Major Research Projects Initiated

Earlier Projects continued

TN PANDIT
(01/02/1992 - 12/04/1993)



Shri. T.N.Pandit *served for long as the Regional Head of the Andamanand Nicobar Regional Centre of the Anthropological Survey of India. His long tenure in Port Blair highlights his commitment to research and understanding in the region's anthropology.*

Major Research Projects Initiated

1. "People of India" Project continued

2. Nutritional status of Indian populations

The 'Nutritional Status of Indian Population (NSIP)' project, an ambitious endeavor which was initiated during the Seventh Five Year Plan (1987-1992), was a comprehensive effort to assess the nutritional landscape of India's diverse population groups across different regions. Originally envisioned to conclude within the plan period, the project's scope and complexity necessitated an extension until the Tenth Five Year Plan, culminating in 2002.

The objective of the NSIP project was to comprehensively evaluate the nutritional status of India's diverse population groups across different regions, capturing the intricate interplay between cultural practices, environmental factors, and socioeconomic conditions. The project plan meticulously selected 70 reference points across India using intersections of odd latitude and longitude degrees, aiming to study two contrasting ethnic communities, one from the upper strata and one from the lower strata, at each point. However, nine locations were deemed not feasible during implementation, reducing the reference points to 61. Nevertheless, the project's scope remained extensive, with data collected from 122 communities.

To ensure a comprehensive and standardized data collection process, four sets of structured schedules were developed specifically for the project. These schedules encompassed a wide range of information, including physiographic details about the reference points, demographic and

anthropometric data (height, weight, skin fold thickness, and hemoglobin levels), observations of clinical signs of malnutrition, livelihood patterns, food habits, socioeconomic condition, period of leanness or starvation, and a seven day household dietary survey.

The studies provided an invaluable overview of the nutritional status of India's population, contributing to a deeper understanding of the diverse nutritional challenges and strengths faced by the studied communities. By taking into account cultural practices, environmental factors, and socioeconomic conditions, the findings shed light on the intricate interplay between these elements and their impact on nutritional outcomes. Furthermore, the region-specific data collected through the project offered a comprehensive picture of the nuances and variations in nutritional patterns across different parts of the country. Ultimately, the findings of the NSIP project served as a robust reference data set, paving the way for evidence-based decision-making and informed strategies to address India's multifaceted nutritional challenges.

RK BHATTACHARYA
(13/04/1993 - 31/05/2002)

Dr. RK Bhattacharya had his Masters and Ph.D. Degree in Anthropology from the Kolkata University. He had a rich and diverse career within the Anthropological Survey of India, over several years.

Major Research Projects Initiated

1. **"People of India" Project continued**

2. **Crafts and Craftmanship: Studies in Traditional Knowledge in India**

Dr. Bhattacharya launched the project on the board games in India under the title "The Indian Board Game Survey" in collaboration with the British Museum, London. The project is to discover the games from the farthest corners of the country to learn the the origin of the games, rules of play, how these are fashioned, and their social implications and inherent values. The major findings are that even now the boardgames play a significant social role in rural India. Marriage customs in some communities are associated with board games apart from their popularity as leisure activities. "There are communities that include board games in their bridal trousseau's as a mark of prestige and status". However, gambling is also often associated with these board games and hence not so much encouraged as part of child socialization.

The project "Crafts and Craftsmanship" aims at bringing out linkages of craft activities with the structure of living societies, organization of production, marketing and the utilization of natural resources. It also dealt with traditional wisdom and skills involved in crafts, traditional value system and beliefs that are expressed through the crafts and finally the integrational perspective of the crafts and craftsmen in plural-cultural society where multi-ethnic mosaicness is a reality.

Objectives:

Documentation for the preservation of craft, crafts typology and detailed account of craftsmanship and the socio-cultural and techno-economic fabric of the country.

Findings:

The study documented the methods for the preservation of craft, an extensive history of the craft, and a comprehensive evaluation of craft concerning the nation's sociocultural and technological economic fabric. The study was published in book form titled as *Crafts and Craftsmanship: Studies in Traditional Knowledge in India*, in two volumes (2009).

Prior to 1950's craft has mainly perpetuated in unorganized rural and seldom in urban segments aimed at to supply their own needs and to some extent their patron's needs. The craft had flourished during this phase by the grace of royal patronage or the active support of the affluent sections of the society and dominant cases or communities of the region. During 1950s handicrafts was incorporated into India's economic planning which acknowledges not only its aesthetic qualities, but also its earning potentials. In fact, right from the First Five Year Plan, Government of India endeavored to preserve the craft and protect the interest of the craftsmen. Ministry of Textiles, Government of India, Crafts Council of India, Khadi and Village Industries Commission, Zonal Cultural Centers, Craft Museum and so on had done a commendable job in preservation, promotion and documentation of Indian crafts at national, regional and local levels. The AnSI right from its inception is also committed to preserve and document craft object and traditions. In spite of all these endeavors many of the traditional Indian crafts are constantly facing the threat of extinction or being replaced by modern items.

Against the backdrop, this study of crafts and craftsmanship is of paramount importance for three major reasons. Firstly, the hoary past Indian craftsmen have contributed significantly to the India's society and culture through their aesthetic and utilitarian heritage of craftsmanship and craft tradition. Secondly, crafts persons have contributed significantly to Indian economy as craft forms the second largest employment sector probably next to agriculture. Thirdly, in the modern changing scenario many of Indian crafts faced the threat of extinction or being replaced by the modern items or to modify its tradition by incorporating modern innovation and technologies and as such changes have occurred from crafts to cottage industries for all practical purposes.

3. Development and Regionalism

The national project "Development and Regionalism: Anthropological, Ecological and Psychological Perspective "is an outcome of the research study carried out among the people at grass root level of different regions of the country undertaken by the AnSI as its endeavor during the ninth five-year plan.

Objectives:

To understand the impact of planned development and inconsistent expectations resulting in disproportionate exploration and exploitation of natural resources and inequitable distribution of resources and its impact on the rise of regionalism.

The findings of the study were published in 2005 in an edited Volume titled "Development and Regionalism: Anthropological, Ecological, and Psychological Perspective". The project has two components: one dealing with the view point of villagers while the other concerning the elite segment of the society. For the last few years many societies have been witnessing the impact of planned development inconsistent to their expectations. This is said to have been the

cause of imbalance in development, disproportionate exploitation of the natural resources and inadequate distribution of these resources. Consequently, this has given rise to factionalism and regionalism, generally, based on language and ethno-centrism. The gap between the developed and backward states on one hand and within such states on the other, is increasing sharply with an uncontrollable pace. This situation has resulted in people's raising voice and attempt in forming factions of one kind or the other based on some criteria which bind them at some common ground of level and deriving strength from their culture, language, possession or control over natural resources and building. The discontentment has given spurt to factionalism, ethnocentric considerations and over concern for retention of natural resources; all this seem to be leading to ever increasing problem off regionalism in the country. Human societies present a highly heterogeneous picture in terms of social customs and traditions, beliefs and ideologies, geographical and ecological settings, population characteristics and demography. These differences are often said to be responsible for regional imbalance in socio-economic growth and development.

4. Cultural Dimension of Tourism in India

This project was initiated in 2002 under the Tenth Five Year Plan. The project was conceived to find out the possibilities for growth and development of tourism in India through a study with eco-cultural perspective. India has a large number of tourist spots of different kinds spread in different parts. However, these have not been surveyed or studied. Literature on different aspects of tourism, tourist centers, available infrastructure facilities, scope of employment, tourist traffic in different centers, available resources for tourism promotion etc. are quite needed.

The study projected that tourism and conservation of nature should go hand in hand. It stressed on a stringent balance between economic gain and environmental health. Taking the example of the tsunami disaster in Malaysia, Indonesia, Sri Lanka, Maldives and India, which caused devastation to such natural tourism spots, the study suggested that development of tourism must also take into account its sustainability, which includes protecting the natural environment. Equally important to tourism is the development of the local communities and their economic benefit from it. The study suggested that economic gains should not overshadow the natural environment and cultures of the local communities.

5. Anthropological Study of syncretism in India: Multidisciplinary Approach

The national project on syncretism was taken up by the Anthropological Survey of India in order to understand the cultural and religious dynamics of Indian society. Syncretism is the hybridization or amalgamation of two or more cultural traditions. It is as old as Plutarch, who seems to have coined it in 300 B.C. The project Syncretism in India: Multidisciplinary Approach was initiated by AnSI, under the 10^{th} five-year plan in 2002, with a theoretical understanding as well as with an organized guideline. The strength of this project is its rich first-hand data collected through rigorous fieldwork in each situation. For a pluralistic society like India, syncretism is a continuous process and so the importance of this study. The project was undertaken with

the involvement of anthropologists, psychologists, and linguists of the Survey. The project proposed to cover two major dimensions of syncretism through an anthropological approach: religious and cultural. Language, of course, as a part of culture was another area of focus. It was proposed to observe whether the value and/or belief system associated with the semantics was also shared. Psychological issues included the processes of adoption or rejection of certain aspects of religious/cultural beliefs and practices, patterns of sharing, etc. through case studies for understanding the dynamics of the above processes. While studying specific cases of syncretism the thrust was on underscoring the historical dimensions of cultural contact giving rise to syncretism. Migration, colonization, proselytization, etc. often acted as the underlying forces of syncretism in the Indian scenario. The studies tried to identify the process of syncretism in different situations in different parts of India.

Objectives:

The purpose of the study was to determine the areas of cultural intermixing and interaction in the light of unremitting borrowing from continuous cultural areas and vice-versa. The study aimed to understand cultural, religious, and linguistic adaptations and reinterpretation towards the emergence of new cultural, religious and linguistic identity.

Findings:

Several studies among the communities depending on eco-cultural zones exemplified the cultural, religious and linguistic syncretism for continuous intermixing within the cultural area. The findings of the study are published as a book titled as *"Syncretism in India: Multidisciplinary Approach"*, in two volumes (2013).

Indian society being a pluralistic one with varied religious, social, cultural, and linguistic spectrums offers ample scope for the study on process of fission and fusion of religious and cultural traits and thereby emergence and arrival of new traditions. Buddhism and Jainism emerged out of Brahminical Hinduism but ended up as distinct religions in their own right. Buddhism originated much prior to Christ. Islam entered in to India through Arabian traders at the Malabar coast. The arrival of the Mughals as a permanent settler to India occupying the political supremacy resulted into a cultural synthesis in all the fields of music, art, architecture, and so on. The interaction between the Islamic religion and existing Hindu traditions gave rise to the much popular Bhakti cult and Sufi saints. Sikhism came up as a distinct synthesis out of the reform movement in Hinduism. Many religious sects and reformist cults at different local levels had been formed through the mechanism of fission and fusion. All of them contributed effectively towards synthesizing local cultures. The inroads of the British into India had a tremendous effect on all walks of life: social, economic, political, educational, and religious structures. Thus, the migration, colonization, invasion by various politically powerful ethnic, religious, and linguistic groups, and influence by different groups of missionaries in different historical periods are important forces of synthesis. The study focused on the process of fission and fusion of cultural traits and understanding the process of syncretism, among different communities such as cultural syncretism among the weavers of West Bengal, religious syncretism in Santal society, peaceful co-

existence of Animism, Christianity, and Islam in the Nicobar Archipelago, the religious syncretism among the Hos of Kolhan, Jharkhand, and Sahebdani Sect of Nadia district of West Bengal.

D. TYAGI
(01/06/2002 - 31/12/2002)

Dr. Deepak Tyagi *served as the Joint Director of the Anthropological Survey of India. His tenure in Survey involved diverse responsibilities and roles within the organization, contributing significantly to its work and research in the field of Physical Anthropology.*

Major Research Projects Initiated

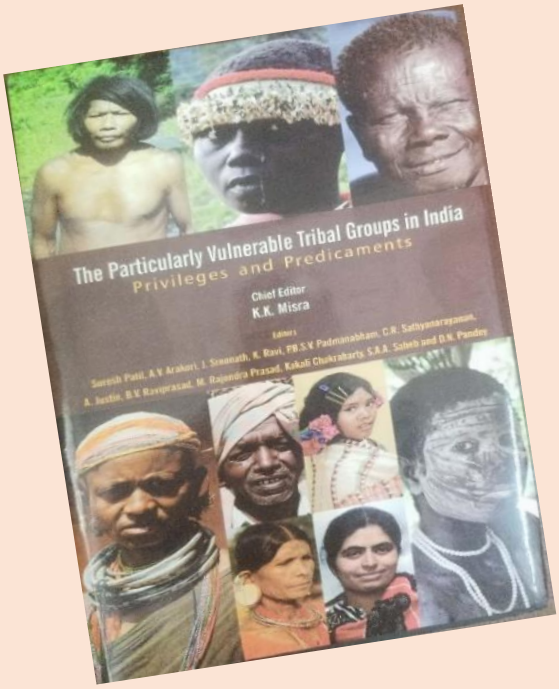
Earlier studies continued

J K SARKAR
(01/01/2003 - 31/05/2003)

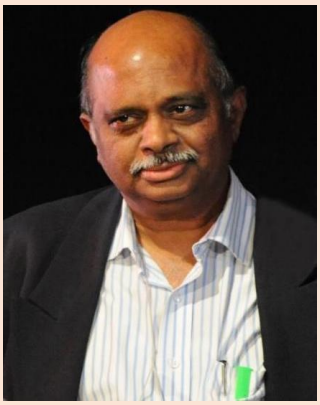
Dr. Jayanta Kumar Sarkar *had a notable career in the Anthropological Survey of India serving in various roles. He made significant contributions to the field during his employment in the Survey*

Major Research Projects Initiated

Earlier studies continued



VR RAO
(04/06/2003 - 30/12/2009)



Prof. V. R. Rao received his Master's degree in physical anthropology from S. V. University, Andhra Pradesh and Ph.D. from Bombay University, Mumbai. He taught in the Department of Anthropology, University of Delhi from December 2009 to January 2016 after his tenure at Anthropological Survey of India.

Major Research Projects Initiated

1. Man, and Environment Study of Biosphere Reserves of India

There are 18 Biosphere Reserves (BR) in India. The human population living within the BRs has always been a matter of conflicting interests and debate. It is so because the BRs of India are also the abode of many traditional societies that have always been an integral part of the ecosystem functioning there, living close to nature. Living in areas rich in natural resources, traditional societies fulfill many of their livelihood requirements from the rich biodiversity around them. However, the Biosphere Reserve regulations stipulate that the core area of BR should be free from human intervention for the conservation of forest resources. While the issues of biodiversity have been addressed at length and caught attention widely, the issues of cultural diversity have not been touched upon and are left to the point of oblivion. The main objective of the BR study was to understand and analyze such socio-economic practices that help in the conservation and sustainable use of forest resources; to explore the scope of eco-tourism.

The findings suggest that the forest-linked activities of the traditional societies are mediated through rich traditional ecological knowledge (TEK), having economic, ecological and socio-cultural dimensions. A participatory approach involving stakeholders will prove very effective in the management of natural resources and ecosystem conservation in BR.

The human population living close to BR is highly dependent on forests in the buffer zones. The imposition of biosphere principles in terms of conservation entails certain restrictions on the use of BR's resources and it translates into some costs, which people have to bear. The studies have shown that people are willing to accept as well as pay for the sake of conservation if their economic concerns are properly addressed. An effective conservation policy requires a strategy based on the provision of alternative livelihood options and additional resources, to defray the pressure and dependence on the BR resources. It is also important for efficient management and conflict prevention. This can be achieved by the building up capacity of the local communities to enhance productivity, thereby reducing their dependence on the resources that are likely to be subject to restrictions.

2. DNA Polymorphism of the Contemporary Indian Populations

The project "DNA Polymorphism of the Contemporary Indian Populations was initiated with the following Objectives:

1. To study Genetic diversity – mtDNA, Y Chromosome markers;
2. To understand the phylogenetic architecture of the Indian populations;
3. To identify new candidate genes through genome-wide studies;
4. To know the candidate gene association with various diseases; and
5. To generate a database of Indian tribes

The project was initiated to unearth the Genomic diversity of Indian populations. For this purpose, Uni-parental DNA markers mtDNA and Y –Y-chromosome have been studied in 75 communities comprising 7807 samples of India. The study identified about 61 maternal lineages and 35 paternal lineages in India and the major contributions of the study are as follows:

Findings:

- The study found four distinct ancestries in mainland India viz., Dravidian, Austro-Asiatic, Tibeto-Burman and Indo-European. Based on their ages it is clear that there are innumerable waves of migration to India from out of Africa.
- It was found that the Dravidian and Austro-Asiatic-speaking tribal communities were the earliest settlers in India, possibly arriving by the southern coastal route from Africa.
- As per the age calculation, differentiation between the Dravidian and Austro-Asiatic-speaking tribal communities took place after their arrival into India.
- The Indo-European and Tibeto-Burman-speaking tribal communities were, probably, rooted in the Central and East Asian populations who entered India by the north-western and north-eastern corridors.
- The M2 haplogroup of mtDNA and the M95-O2a haplogroup of Y-lineage are more frequent in the Austro-Asiatic (AA) of eastern India and Dravidian tribal populations of southern India. The latter places the origin of the AA in southeast Asia and Andaman Island.
- From the study, the founder ages (57,000 – 75,000 years) of macrohaplogroup M in India reveals the initial settlement of African exodus in India. Our database also reveals evidence that Andaman islanders and Australians have ancestral maternal roots in India.
- The mtDNA lineage R and U, which probably originated in Central Asia, has a high frequency in India predominantly among high-ranking northern Indian tribal populations.
- The Jarawa of Andaman Island, the Kattunayakan of Tamil Nadu, and the Chenchu of Andhra Pradesh do not possess European-specific lineage, while they have 100 percent Asian-specific lineage.
- The Nicobarese of Nicobar Island harbor hundred percent of European specific lineage and they do not exhibit Asian-specific lineage.
- The study confirmed the Out-of-African hypothesis regarding the origin, migration of anatomically modern human and India is a major corridor for peopling of South Asia.
- The study has shown that the Savara of Andhra Pradesh and Orissa, Paudi Bhuyan of Orissa, Munda of Jharkhand, Bohi Khasi of Meghalaya, and Jarawa of Andaman are from the same stock around ~45,000 years ago.
- Australian-specific lineage has been found in the Kutia Khond of Orissa, the

Savara of Andhra Pradesh and Orissa, the Munda of Jharkhand, Madia of Maharashtra and a sample of Pauri bhuiya from Orissa. The coalescence time estimate is 55.2 ± 10.8 KYA (Thousand years ago).

- For the first time the present study established that the Savara community of Andhra Pradesh and Orissa shares lineage with the Orang Asli group of Aboriginal Malaya, Cuyonin from Palawan and Mindanao of the Philippines.
- On the whole the study would be a milestone in Indian scientific research to understand the biological diversity of Indian people at the genomic level and fulfill the basic priority to identify different genes underlying various inborn genetic defects and diseases specific to Indian populations.

Further, to fulfil the 4th Objective, AnSI has conducted studies on the following diseases to find out the association between the diseases and the candidate genes.

Sl. No	Project	Regional Centers
1	Parkinson Disease	Head Office, Kolkata
2	Type I Diabetes	Head Office, Kolkata
3	Gallbladder cancer	Head Office, Kolkata
4	Breast Cancer	Head Office, Kolkata
5	Alcoholism	Head Office, Kolkata
6	Cardiovascular Disease	CRC, Nagpur
7	Diabetic Nephropathy	WRC, Udaipur
8	Coronary Heart Disease	NWRC, Dehradun
9	Type 2 Diabetes (TCF7L2 gene and mtDNA CNV)	SRC, Mysore
10	Type 2 Diabetes (ADIPOQ gene)	SRC, Mysore
11	Type 2 Diabetes (SNPs of HHEX, KCNJ11, MTNR1B, G6PC2, GCKR PPARG, IGF2BP2, CDKAL1, GCK, SLC30A8, CDKN2A/B, CDC123-CAMK1D and TCF2 genes)	SRC, Mysore
12	Type 2 Diabetes (Tagged SNPs of TCF7L2 gene)	SRC, Mysore
13	Handigodu Syndrome	SRC, Mysore
14	Obesity	SRC, Mysore
15	Dyslipidemia	SRC, Mysore

The major findings of the study are as summarized in the following table.

Sl. No	Project	Results
1	Parkinson Disease	The association found with Parkin gene polymorphism
2	Type I Diabetes	The association found with HLA-DQA1 gene
3	Gallbladder cancer	The study detected one novel polymorphism at codon 25 (CAG > CAT; Gln25His) in exon 1 of the KRAS gene in both germline and tissue DNA

4	Breast Cancer	Significant association of breast cancer with BRCA1, BRCA2 & p53 mutation carriers
5	Alcoholism	The association found with ADH1C*349Ile (A allele)
6	Coronary Heart Disease	The association found with ACE and CDK2B genes
7	Cardiovascular Disease	The association found with M268T polymorphism in the angiotensinogen gene
8	Diabetic Nephropathy	Association found with REN, GSTM1, CYP11B2 and AGT gene polymorphisms.
9	Type 2 Diabetes (4 Different Studies)	Found association with TCF7L2, ADIPOQ, HHEX, KCNJ11, MTNR1B, G6PC2, GCKR PPARG, IGF2BP2, CDKAL1, GCK, SLC30A8, CDKN2A/B, CDC123-CAMK1D and TCF2 genes. Further, it found an association with mtDNA copy number variation.
10	Obesity	This is the first study in India to find an association of Leptin (LEP) and Leptin Receptor (LEPR) Gene with obesity
11	Cardiovascular Disease	Association found with TCF7L2, IGF2BP2, G6PC2, TCF2, CDKN2A/B, MTNR1b genes.
12	Handigodu Syndrome	The association was found with Novel 39 bp deletion in the promoter region of the P4HA3 gene.
13	Dyslipidemia	The association was found with SNP's in LPL, ApoA5 and LDLR genes with Dyslipidemia. An association was found between the SLc2A9 gene and Uric acid level.

3. Physical Growth and Development of the Children of North East India

Under this project the Angami Naga and Garo communities were studied from Nagaland and Meghalaya respectively.

Angamis are a dominant Naga tribe in the state of Nagaland. The Angami country broadly forms the present-day Kohima district of Nagaland. Angami Naga is patrilineal. They are divided into several groups, such as Tengima, or western Angami, Northern Angami, Zounuo and Keyhonuo. There exist considerable linguistic and cultural differences among these groups. The Tengima are regarded as the Angami proper. The origin of the Angami is traced to the Kerge village of Kezakenoma in Manipur (Hutton, 1921). The Angami are also called

Monr or Tsungumi. The Angami language belongs to the Naga subgroup of the Tibeto-Burman family language. Their religion based on totemic worship has gradually shifted towards Christianity.

The Garo Hills form one of the major constituents of the state of Meghalaya and are inhabited predominantly by the Garos. The Garos are divided into five matrilineal sects or clans, namely, Sangma, Marak, Momin, Areng and Shira, who can intermarry. Every Garo is considered to be a member of anyone of these five matrilineal descent groups.

Objectives:

1. To observe the pattern of physical growth of children of less than18 years in terms of a number of anthropometric variables;
2. To evaluate the nutritional status of these children through the use of nutritional anthropometry; and
3. To compare the physical growth pattern and nutritional status of these children with those of the same age group of children elsewhere in different parts of India.

Findings:

The study showed that the growth pattern of the children of Angami and Garo children are in a better position than most of the communities of northeast India. The nutritional status of these children is much better than most of the children of other communities in northeast India. Underweight and overweight have been observed at around 2% among preschool children and 4% among both boys and girls.

In regard to age-wise, sex-specific nutritional status of Garo children, it is observed that the height for age (HAZ) among 6-month-old children (for both boys and girls) shows severe stunting in their heights. Girls have a stunting rate of 26.40%, while boys have a rate of 27.70%. However, among 3-year-old children, there are a higher percentage of moderately stunted individuals compared to other age groups, with 37.50% for girls and 26.90% for boys. In the 2-year age group, the highest percentage of children has normal heights, with 92.50% for girls and 88.00% for boys. The head circumference for (HCZ) children at 6 months of age reveals 22.60% for severe malnutrition, the highest among all age groups. In comparison, 85.50% of 5-year-old girls and 92.50% of boys are within the normal range. The upper arm circumference for children of all ages (MUACZ) exceeds 90.00% of that of normal individuals. In the BMI for age (BMIZ) category, only 6-month-old children have more than 10% severely thinned individuals, i.e., 18.90% of girls and 19.10% of boys. Lastly, 6-month-old girls have the highest percentage of severely underweight children (21.30%), and 1 and 3-year-old girls have the highest number of moderately underweight cases, at 26.80% and 32.10% respectively, as assessed through height for age (HAZ).

4. Community Genetics and Health: Bio-Cultural Adaptation

Under the 10th Plan program, the AnSI launched a national research project entitled, "Community Genetics and Health: Bio-cultural Adaptation". This study had specific objectives in understanding (i) mass awareness as well as mass screening for abnormal hemoglobin disorders in the Indian population, (ii) find out the prevalence rate of thalassemia, sickle-cell anemia, Hb-E and other abnormal varieties of hemoglobin genes at the community level, (iii) identification of gene mutations, which are responsible for hemoglobinopathies among

people through molecular characterization and (iv) to conduct cascade screening at family level of the carrier and patients. To attain those objectives, the study was carried out in some high-risk zones for thalassemia (eastern India), sickle-cell anemia (central India) and Hb-E (north-eastern India and A&N Islands).

This study covered altogether 26,978 individuals from 155 communities (including PVTGs, STs and SCs) of the central, eastern, north-eastern part of India and of A& N Islands) through health awareness camps at a community level. The prevalence of various types of abnormal hemoglobin genes as found from the study is: A&N Islands (12.27%), North-East India (13.54%), Central India (8.14%) and Eastern India (10.06%) either in heterozygote (carrier) or in homozygote (patient) conditions.

5. People of India: Bio-Cultural Adaptation, Genetics and Family Study

The Mysore Family Diabetes Study (MYFADS) is a unique and first of its kind in the history of research in the AnSI. Gangadikara Vokkaliga, an endogamous group of Vokkaliga, an agricultural caste cluster has been selected for the study, after discussing with the clinicians, endocrinologists and diabetologists. It is a multi-disciplinary study involving endocrinology, Diabetology, food & nutrition, psychology and physical activity besides anthropology.

The specific aims of the study:

1. Initiate a consortium for multidisciplinary genetic epidemiologic studies of type 2 diabetes (T2DM) and its correlated disease conditions such as obesity and metabolic Syndrome (MS) in three genetically and culturally diverse endogamous caste communities at high risk for T2DM and related phenotypes from the states of Karnataka, Andhra Pradesh, and Rajasthan by establishing a mutually beneficial collaboration between Indian and US scientists that have extensive experience in the fields of anthropology, biochemistry, endocrinology, epidemiology, genetics, medicine, nutrition, physical education, public health, and psychology.
2. Conduct a complex pedigree-based study from each of the three communities to examine the genetic determination of susceptibility to T2DM and its related disease conditions by recruiting 1,000 individuals from about 50 large families from each community that will be ascertained on type 2 diabetic probands. Approximately 50 families with a minimum of 20 individuals per pedigree were included. Thus, for a given community, the total target was 1,000 individuals. All first, second, and third-degree relatives of probands aged 18 years or above were asked to participate the study.
3. Collect phenotypic information relating to T2DM and its related phenotypes such as obesity, adipocytokines, impaired fasting glucose, impaired glucose tolerance, insulin resistance, dyslipidemia, albuminuria (micro and macro), markers of non-alcoholic fatty liver disease, markers of inflammation, hypertension, and MS.
4. Collect information on shared and non-shared environmental factors, including household information, diet (24-hr recall method), physical activity, cigarette smoking, alcohol consumption, socioeconomic status, and psychological/behavioral attributes (e.g. depression, anxiety, and positive well-being).
5. Localize genes influencing variation in T2DM, obesity, MS, and their related phenotypes uniquely conducting both association- and linkage-based genome

screenings for a given phenotype using extended pedigree data and variance components analytical technique and its extensions.

6. Perform multipoint multivariate linkage analysis to identify genetic locations with common genetic influences (i.e., pleiotropy) on a given trait-pair (e.g., T2DM and obesity) and conduct a modified multipoint linkage analysis that examines genotype-by-environment (e.g.. physical activity or diet) influences on T2DM and its related phenotypes.

7. As a part of T2DM gene discovery efforts, performed a preliminary analysis to identify the most likely functional variations within the two best positional candidate genes for T2DM identified in Aim 6. Selected SNPS that are most strongly associated with T2DM were validated in a replication sample.

To achieve the above aim the project, three organizations viz, Anthropological Survey of India, Southern Regional Centre, Mysore, Apoorva Diabetes Foundation, Mysore and JSS Medical College& Hospital, Mysore collaborated.

A Family Diabetes Research Centre (FDRC) has been established to conduct this study. The FDRC is a full-fledged clinic established in the premises of the AnSI, Southern Regional Centre, Mysore. A Medical Officer has been appointed to examine the diabetes patients and their family members participating in the study. A phlebotomist, a well-trained technician has been appointed to collect and process the biological samples such as blood and urine.

Findings

A total of 1359 blood and urine samples were collected from the subjects of the Gangadikara Vokkaliga community. The samples were subjected to various biomarker tests mentioned in the main report. DNA was extracted from blood samples using standard protocols and DNA sequencing was done for analysis.

Besides these, other information like food habits, physical activity, psychology, demography, anthropometry, etc. were collected from the subjects. The possible analysis was done and the results were presented systematically. Reporting of the prevalence of diabetes, and metabolic syndrome and identification of genetic mutations among the Gangadikara Vokkaligas of Mysore are some of the highlights of this project.

The study reveals that there are 28.4 percent of Type 2 diabetics among the subject population. The prevalence of diabetes, among the Gangadikara Vokkaliga of Mysore is very high (28.4 %) compared to coastal Karnataka (16%) and Chennai populations (15.5%). Most of the biochemical markers showed normal ranges among them. In genetic analysis three SNP mutations are identified. The prevalence of diabetes among Gangadikara Vokkaligas may be due to changes in lifestyle, food habits and genetic mutations. However, further intensive investigation is necessary to ascertain the exact risk factors for the cause of the high prevalence of Type 2 diabetes among the Gangadikara Vokkaligas of Mysore.

6. Siwalik Excavation (Paleoanthropology)

A team of anthropologists from AnSI excavated Ghumarwin Tehsil of Bilaspur district, Himachal Pradesh under the National project "Siwalik Excavation" during 2003-2009 with the following objectives.

1. To study the prehistoric faunal habitat of the region;
2. To understand the local paleo-environment from the naturally exposed sections in and around the site;
3. To develop an understanding of the lithic assemblages by analyzing various means of statistical methods in order to understand the typo-technological and morphological attributes of the stone age artifacts of the studied area; and
4. To understand prehistoric strategies and adaptation of Stone Age people to the local Quaternary landscapes and environments by analyzing the different lithic assemblages and associated sedimentary context.

Findings:

1. Altogether 385 artifacts were recovered from the studied area and among them 340 artifacts were selected for analysis.
2. The total lithic assemblage is comprised of pounded and battered pieces (such as end-hammer stone, side hammer stone and utilized clast), core and core fragment, split cobble, scrapper Acheulean peak, point and multifunctional pieces.

KK BASA
(31/12/2009 - 20/12/2010)

Professor K. K. Basa *was the Former Head, Department of Anthropology at Utkal University. He was a Commonwealth Post-Doctoral Academic Staff Fellow at the University of Cambridge in 1999- 2000 and was a recipient of the Indo-French Cultural Exchange Fellowship in 1997. He also served as Director, Indira Gandhi Rashtriya Manav Sangrahalaya, Bhopal (2004–2008) and the Director, Indian Museum, Kolkata (2008–2010).*

Major Research Projects Initiated

Earlier studies continued

KK MISRA
(20/12/2010 - 31/07/2013)

Prof. K.K. Misra *was educated at Utkal University, Bhubaneswar; Jawaharlal Nehru University, New Delhi; and University of Kent at Canterbury, UK. He taught at Utkal University and the University of Hyderabad. Prof. Misra was the Director of the National Museum of Mankind, Bhopal. After his tenure at AnSI, he joined the University of Hyderabad and served as Professor of Anthropology and Dean, School of Social Sciences. Subsequently, he also served as the Vice-Chancellor Utkal University of Culture, Bhubaneswar.*

Major Research Projects Initiated

1. Earlier Projects continued

2. Bio-Cultural Diversity, Environment and Sustainable Development (Restudy of Indian Villages and Border Area Studies)

Objectives:

1. Documentation of bio-cultural diversity with reference to the people of India in different eco-cultural zones;
2. Identify and document the resource bases, their ownership and utilization from emic perspectives; and
3. Review of development programmes from multiple perspectives to identify of critical gaps.

Restudy of Indian Villages

Findings:

Since villages have been studied from different bio-cultural zones, varied differences were found based on the eco-climatic conditions and availability of resources. To map the changes more scientifically, the study was conducted in those villages which had a history of earlier studies conducted by anthropologists, sociologists and/or were studied as Census monographs. The study was conducted with a comparative approach and it was found that the village had undergone numerous changes which are summarized below.

1. Growing urbanization;
2. Increased peasantry and maximization of wealth;
3. Discarding traditional occupation and taking up of more enterprising activities for subsistence;
4. Utilization of development schemes by those who are more educated;
5. Decrease in inter-personal relationships and rising enmity;
6. Increase of nuclear families resulting in increased competition for resources; and
7. Migration to urban areas for survival.

The study also observed some anomalies while reviewing the development programs from multiple perspectives and reported that the developmental benefits were not reaching the deserving candidates.

Border Area Studies

Objective:

The objective of the project was to study the border areas, especially targeting the villages located close to the international border so as to study the experience and effects of the border in its day-to-day life. The research also aimed to study the issues relating to identity, migration, economic behavior, and political activities. The issues related to displacement, migration and rehabilitation of the displaced people can be a major political agenda of the people and the political parties in a border area. The relations of social, cultural and economic aspects across borders were an important aspect of the study. As the concepts of space and time of the people inhabiting border areas may considerably differ from people of the hinterlands, this aspect has been covered.

With these objectives, the study was conducted in Indo-Nepal Border, Indo-Sri Lanka Border, Indo-Vietnamese border, Indo Nepal Border, Indo-Tibetan Border (Arunachal Pradesh, Sikkim), Indo-Bangladesh Border and Indo- Bhutan Border.

Findings:

In South Asia, most of the present-day borders were demarcated by the British to overcome their security anxieties. These borders, therefore, are the result of war, conflict and victories while sometimes they were drawn as an outcome of diplomatic efforts and administrative convenience.

The India-Nepal border is a good example of how initially war and then diplomacy led to the creation of a border between these two countries. The formal demarcation of India-Nepal borders started after the Anglo-Nepali war in 1814. Later, the border between India and Nepal was consolidated, owing to Nepal's help to British during the 1857 "mutiny" in India, and Nepalese troops joining the British in the World War-I (Tripathi 2019). There are other examples showcasing how social realities were ignored and arbitrary lines drawn in South Asia. The controversial Durand line is another reflection of British strategic interests in the South Asian border making process. Durand line between Pakistan (Pre-1947 United India) and Afghanistan politically divided people of the same ethnicity, turned Afghanistan into a "buffer state", thereby, consolidating the British control over India.

The India-Bangladesh border is another illustration of border politics in the region. These two neighbours do not have hostile political relations but border problems at times make things acrimonious. Owing to its geographical stretch, large numbers of people are directly and indirectly dependent on this border region. As true for many other parts of the world, India-Bangladesh border has its peculiar economy connecting the dwellers of both sides. Sometimes these ground realities are ignored by states. India is fencing the border on its side with Bangladesh citing security concerns to check infiltration. New Delhi decided to fence the India-Bangladesh land borders in 2012 and as per the official report, the total length of Indo-Bangladesh border sanctioned for fencing is 3326.14 km; out of which about 2731 km of fencing has so far been completed (31. 12. 2016)" (Government of India 2016, 37). These fences again symbolise the general sensitivity, bordering anxieties, towards borders in South Asia. In South Asia, borders are overwhelmingly viewed as a matter of national security.

It is a truism that it takes two to make a boundary and a "secure" and securitizing border cannot be sustained for a long time without convincing justification from either side. In a region that is culturally so connected it is even harder to keep people apart and divided. This is where psychological-mental borders become so important to territorially bounded statecraft and boundary sustaining practices. Once "we" are convinced about an impending threat, we view people on the other side of the border with suspicion. This is also true in the case of South Asia where states have devised several methods to keep people separated from each other. Nationalist and populist rhetoric by the political leadership of different South Asian states appears to be a daily affair. Some of the popular methods for creating mental borders include state-sponsored propaganda through media and other means. A closer analysis further reveals how several boundaries are created by societal practices that surround everyday life in South Asia. Caste discrimination, religious fundamentalism, patriarchy, economic deprivation etc. are some of the common visible boundaries that exist throughout the region.

The findings of the project are published in a book titled "Boundaries and Beyond: Studies in Trans-Border Communities and Cultures" in 2021.

3. Particularly Vulnerable Tribal Communities (PVTGs) of India

In the independent India, certain communities were placed under Scheduled Tribes under article 342 of the constitution of India. After introduction of several schemes and programs over the decades, the government understood that these benefits are not percolating uniformly among the communities. So, to differentiate these communities who are getting less benefits are first categorized as PTGs or Primitive Tribal Groups. But this term has been replaced by PVTGs as 'primitive' is derogatory and ethnocentric. The term PVTGs introduced in 2006 refers to groups that were declining or maintained stagnant population, had very low level of literacy and possessed pre-agricultural level of technology. Although PVTGs are said to be 75, it is only 63 according to the study. This is due to similarity in the synonyms used for the community names. Also, two tribes out of the list are the same when it comes to ground reality. Further some communities are distributed in more than one state. Some communities may be listed as PVTG in one state but may not be in another.

Although several states /UT's have their own measures of implementing schemes, but these are restricted to specific areas in the state thus not covering the entire population. The Special Central Assistance (SCA) for the welfare of PVTGs is provided by the Central Government, but its implementation is left to state or UTs, leading to confusion and a tendency for states to ignore the directive. Conservation-cum-Development programs are introduced, but their implementation is varied across states, making it difficult to assess their impact on individual PVTGs. Reports are often not prepared, making it difficult to make objective assessments. It is recommended that state governments implement these programs and provide periodic status reports on individual PVTGs. The intention of conducting periodic Base Line Surveys for each Particularly Vulnerable Tribal Group was to precisely identify the PVTG families, their habitat and socio-

economic status. The findings revealed shocking facts about the 75 PVTGs; Base Line Surveys exist for about 40 groups only, even after 40 years of declaring them as PVTGs. The state of Karnataka did not even set up a Tribal Research Centre until 2012, leave apart conducting Base Line Surveys of two PVTGs of the state. Even where the Base Line Surveys are conducted, they are restricted to specific blocks or areas within a state. Thus, a comprehensive picture of the socio-economic status of the PVTGs hardly emerges in such cases.

As far as population size of the PVTGs is concerned, there is huge variation, ranging from a few individuals as in case of the Great Andamanese, Onge and Sentinelese, and about a little more than a thousand people as in the case of Kota and Toda of Nilgiris, to about four and a half lakh population each of the Sahariya and Baiga tribes in Madhya Pradesh. Study recommend that considering a number of difficulties involved in arriving at accurate demographic and socio-economic figures of the PVTGS, Base Line Surveys at the earliest are highly desirable. This will at least ensure that vital statistics are available for implementing development schemes for the PVTGs.

An analysis of the census data reveals that in case of some PVTGs, there is a sudden multi-fold decadal increase in population, defying any logic. It has been observed that some other groups with a similar, or similar sounding name, living in different places, even with different socio-economic status, have claimed themselves as PVTGs. This results in anomalous fund allocation and distribution, and possibly misuse of funds. Sometimes the caste populations with a similar sounding name apparently have claimed the benefits extended to the PVTGs. Such incidences have been very serious in southern India with several intriguing cases with regard to nomenclatures. For example, the Kattunayakan is listed as a Scheduled Tribe in all the four southern states. The confusions in the lists of Scheduled Castes and Scheduled Tribes (PVTs) in British India stem from the use of lists from various administrative entities under British rule. The reorganization of states in 1956 led to the creation of a mother list combining these lists. However, not all states were willing to exercise this exercise, leading to confusions and distorted allocation of funds. Despite this, the literacy rate among PVTGs has generally increased, with a rise in the age at marriage for girls. However, the rise in female literacy rate is slower than males. The increase in literacy rate is typically limited to primary education, with only a few succeeding to secondary and higher levels. Education among PVTGs has not significantly impacted their livelihood opportunities, leading them to live on cultivation and traditional occupations.

Objectives:

1. To assess the living conditions of the PVTGs in terms of availability of resources and livelihood, literacy, and health; and
2. To understand the impact of the development initiatives by the Government and how much the PVTG communities could access the benefit of the development initiatives.

Findings:

1. It was found that the PVTGs living inside the micro project jurisdiction receive all development benefits targeted to them, but those outside the area from the same PVTG group were deprived.

2. Anomalies were noticed in the implementation of the CCD programs
3. In a good number of cases, Base Line Surveys were not conducted by the respective State Governments.
4. Literacy Rate has generally increased appreciably from a very low level to 30 to 40 per cent.
5. Considerable increase in the age of marriage is observed. The incidence of girl child being married while still being a minor, among these tribes is on decrease.

GS RAUTELA
(31/07/2013 - 29/02/2016)

Shri G S Rautela studied M.Sc. Physics from Kumaun University in 1976. He served as Director General of the National Council of Science Museums, India

Major Research Projects Initiated

1. Earlier studies continued

2. Studies on Heritage Sites under the HRIDAY & PRASAD (Ministry of Tourism & Culture)

The AnSI conducted studies of Heritage Cities under the "National Heritage City Development and Augmentation Yojana" i.e. HRIDAY for conserving and preserving the heritage characters of the cities and the National Mission on Pilgrimage Rejuvenation and Spiritual Augmentation Drive i.e. PRASAD are the initiatives of Government of India implemented through Ministry of Tourism and executed by the local district administrations of the respective States wherever these Heritage Cities are located, with the financial allocation from the Central Government.

Objectives:

1. To know urban planning, economic growth, heritage conservation, beautification, cleanliness, safety, accessibility and service delivery;
2. To know heritage management plan outlining heritage resources and develop policies for guiding conservation, restoration, future use and development;
3. To know facilities for women and senior citizens, accessibility and last mile connectivity, and conservation heritage sites as envisaged in HRIDAY and PRASAD; and
4. To know the role of HRIDAY in preservation and rejuvenation of the rich cultural heritage of the country.

With the broad guidelines, the project was initiated to study the rich cultural, historical, religious and natural heritage of the heritage cities that provide huge potential for the development of tourism and job creation as an industry, with an anthropological perspective, i.e. focusing on the life, culture and livelihood of the different communities or people who live in the heritage cities. Under this project, the sacred cities of Varanasi of Uttar Pradesh, Gaya of Bihar, Amritsar of Punjab and Velankanni of Tamil Nadu were studied.

Findings:

The studies suggest that the cities of Varanasi of Uttar Pradesh, Gaya of Bihar, Amritsar of Punjab and Velankanni of Tamil Nadu are sacred to their religious beliefs. The study highlighted that certain communities are historically connected to preserving the heritage of the cities. The study found that the life and livelihood of these communities are very essential in the development of tourism in heritage cities and preservation of these sites. Especially importance is to know the various kinds of locally viable occupational opportunities, involvement of local communities as stakeholders in tourism promotion.

MUNDAYAT SASIKUMAR
(29-02-2016 - 01-07-2016)

Mundayad Sasikumar *obtained his Master's degree in Anthropology from the University of Calicut. He was the former Director of the Kerala Institute for Research, Training and Development Studies of Scheduled Castes and Scheduled Tribes (KIRTADS), Kozhikode and Maulana Abul Kalam Azad Institute of Asians Studies (MAKAIAS), Kolkata.*

Major Research Projects Initiated

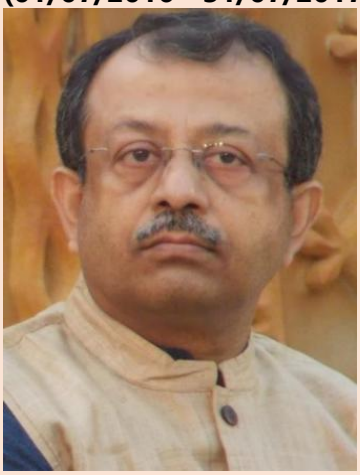
1. Community Health, Disease and Genetic Structure of the Indian Population

The research project entitled "Community Health, Disease and Genetic Structure of Indian Population" was taken up to address the health-related problems/burdens emphasizing on classical as well as genetic epidemiological level and to understand the diversity within Indian population. The study was initiated with the objectives viz. a massive screening program for assessing community health and evaluate the existence and magnitude of the problem related to hemoglobinopathies and other single-gene genetic disorders; raise public awareness by organizing health awareness programmes among different tribal areas across India; carry out an epidemiological survey to assess disease characteristics and also the prevalence and incidence of the disease; identify the phenotypic variations of the diseases through bio-chemical or other approach; identify the disease-responsible genetic marker through fine sequencing; assess the relationship between genotype and eco-cultural factors to understand genome diversity between Indian populations.

From 2019 to 2023, 12 screening camps were conducted across India. The communities include Bhatra, Gondh, Lodha, Kamar, Pahari Khorowa/Hill Khorowa, Lepcha, Bhutia, Limbu, Drokpa, Gadaba, Karbong and some mixed populations. A total of 2164 individuals were screened. The study found a very high frequency of beta thalassemia trait among the Lodha (6.33) and Khorowa (6.04). A high frequency of sickle cell trait (17.70) has been found among the Gondh of West

Bengal. A very high frequency of hemoglobin E trait (58.33) has also been found among the Karbong community of Tripura. During this extension program, the importance of considering other health parameters like malnutrition based on anthropometric measurements, the prevalence of hypertension, diabetes etc. was also felt necessary to understand the increase of non-communicable diseases among the tribal communities. The dynamics of these outcomes were analyzed and made available to the concerned tribal communities in the form of genetic cards.

JAYANTA SENGUPTA
(01/07/2016 - 31/07/2017)



***Prof. Jayanta** Sengupta was the Secretary and Curator (Director) of the Victoria Memorial Hall, Kolkata. he was also Director-in-Charge of the Indian Museum, Kolkata. He was Educated at Presidency College, Kolkata, and the Universities of Calcutta and Cambridge. He has taught History for more than two decades at Jadavpur University, Kolkata, and the University of Notre Dame in the United States.*

Major Research Projects Initiated

Earlier studies continued

VINAY KUMAR SRIVASTAVA
(01/08/2017 - 23/12/2020)

***Prof. V. K. Srivastava** was a Professor in the Department of Anthropology Delhi University. He was trained in anthropology and sociology at the Department of Anthropology and Delhi School of Economics, University of Delhi. He earned his Doctorate in Social Anthropology from the University of Cambridge. He as Principal of Hindu College from March 2010-2012, prior to his appointment as Director, AnSI.*

Major Research Projects Initiated

1. Earlier Projects continued

2. Development and Sustainability

Objective:

1. To elucidate and analyze what are the projects/programmers being carried out at a particular locale and since how long these projects are running.
2. What are their impacts, how do the people and officials view it; what are the viewpoints of civil society about these projects/programmes.

3. To assess the sustainability of the projects in the long term.

Findings:

To evaluate the above objectives, fieldwork was conducted in the following areas, Neil Island and Jawawa area, Andaman and Nicobar Island, Saheb Nagar of Odisha, Panbari of Madhya Pradesh, Candolin area of Goa, Abujmaria of Narayanpur District and Hill - Korwa of Balrampur – Ramujgang District and Ghatgaon village of Chhattisgarh, Nehrai village, Khejadlikalla" village and Kejarla village of Rajasthan, Nilgiris District of Tamil Nadu, Majuli Islands of Assam, Kodagu district of Karnataka, Arakku Valley of Andhra Pradesh, Kinnor of Himachal Pradesh, East Singhbhoom district of Jharkhand and Sepahijala district of West Tripura.

Above mentioned 17 Villages have been studied to critically assess the Development Projects in the broader framework of their impacts and sustainability.

3. Anthropological Study of De-Notified, Nomadic and Semi-Nomadic Communities

Objectives:

- To understand the situation of the 'denotified communities', along with the nomadic and semi-nomadic, the Government of India appointed two Commissions, Renka and Idate Commissions, which have submitted their reports to the Government respectively in 2008 and 2017. Although both these reports carried out some survey work with one or the other community, it certainly was not sufficient. Needless to say, a good knowledge of the communities is essential before the start of planning their future development. Realizing the gross dearth of information on these communities Anthropological Survey of India initiated the National Project "Anthropological Study of De-Notified, Nomadic and Semi-Nomadic Communities" Under this project, Denotified communities which are nomadic and semi-nomadic communities and also Nomadic, semi-nomadic communities which are not denotified are covered. The study broadly covered the following:

- To give a holistic description of the community, looking at its relationship with nomadism.
- To study the relations between different groups of the same community.
- To describe the nature of the social organization of the community.
- To elicit the oral history of the community and comparison of the same with other available archival resources.
- To find out the livelihood of the people in relation to the ecological cycle, gender roles and children's contribution.
- To collect data on savings and security, illness patterns, educational status of household members, patterns of employment, skills, social mobility. Gender relations deserve special attention.
- To know the relation of these communities with the outside world.

In the following years, NITI Aayog entrusted AnSI, to take up work on 64 De-Notified, Nomadic and Semi-Nomadic Communities which are listed in List C of Idate Commission report and this project was funded by the Ministry of Social Justice and Empowerment.

4. Consumer Expenditure Survey among the De-Notified, Nomadic and Semi Nomadic Communities

The Survey has initiated the study of 'Household Consumer Expenditure Survey among De-Notified, Nomadic and Semi-Nomadic Communities' with the aim at generating estimates of average household monthly per-capita consumer expenditure (MPCE), its distribution over households and persons and others.

Extensive fieldwork was conducted among Bantu of Andaman, Sansi of Haryana, Madhya Pradesh and Rajastan, Pahul of Jammu & Kashmir, Bhar of Uttar Pradesh and Punjab, Kaikadi of Maharastra, Lodha of West Bengal and Odisha, Domban of Kerla, Relli of Andhra Pradesh, Yerava of Karnataka, Boyas of Tamil Nadu, Bansphor of Meghalya and Chhara of Gujarat. Data collected was compared with the National Standard published by NSSO.

From the study it is estimated that the monthly per capita expenditure (MPCE) for Cereal consumption stands to be Rs 90.75 compared to Rs. 188.50 which is the MPCE of Rural India. Generally cereal consumption should be higher for rural India compared to any other food intake since the primary economic activity for the rural mass is agricultural activity. But for most of these communities the expenditure on cereal is too less which can be explained from the fact of excessive consumption of alcohol. The average expenditure per person per day on rice beer is Rs. 6.50. Since they are consuming too much rice beer right from the morning their urge for rice intake decreases and hence there is less consumption of rice or other cereal. The Lodhas of Odisha consume fish, egg and meat almost every day in their diet which indicates their inclination towards Non vegetarian items. The expenditure on the consumption of milk is almost zero and they donot raise livestock like other people of rural India. Negligible consumption of milk results in malnourishment in children and mother. The expenditure on education and health which are the indicator of Human Development Index is far less than the national average.

Expenditure on Food Item & Non-Food Item:

The Expenditure on food items is on an average Rs 479.96 while on the Non-food items, it is Rs 427.96. The expenditure on Non-Food item includes consumption of intoxicants which is Rs 190.40 i.e 44.49% of the Non-Food item is covered by the alcohol. Excluding the expenditure on intoxicants from non-food items the MPCE stands to be Rs 237.55 which is 50% of the MPCE on food items. This indicates that though the community is having almost close expenditure on both food items and non-food items still they are having poor standard of living.

GOURI BASU
(14/01/2021 - 26/06/2022)

***Mrs. Gauri Basu**, Consultant Member, AKAM, Ministry of Culture, Govt.of India and Former Director, Eastern Zonal Cultural Center, Ministry of Culture, Government of India. Kolkata.*

Major Research Projects Initiated

Continuation of earlier project

SANJUKTA MUDGAL
(14/07/2022 - 17/08/2023)

Mrs. Sanjukta Mudgal studied M.Sc in Bio-Chemistry from Orissa. She is an IFoS Officer, of Madhya Pradesh cadre of 1990 batch. She served as Joint Secretary, and Additional Secretary, Ministry of Culture, Government of India

Major Research Projects Initiated
Continuation of earlier project

B V SHARMA
(18/08/2023 – continuing)

Prof. BV Sharma obtained his Master's Degree from University of Poona and subsequently M.Phil and Ph.D Degrees from the University of Hyderabad. He taught at University of Hyderabad and served as the Head, Department of Anthropology and Director, College of Integrated Studies at University of Hyderabad. He served as Consultant Medical Anthropologist and undertook projects for W.H.O, World Bank, DFIDI (U.K), F.A.O and also undertook several projects funded by many National Organizations and State institutions of Tribal Welfare and Education Departments.

Major Research Projects Initiated

1. Rural Livestock Markets in India: Anthropological Exploration of Economic, Social and Cultural Facets.

The many dimensions of the livestock markets are proposed to be studied in an in-depth anthropological perspective. As economic institutions of the rural and tribal societies, they are being studied from different economic dimensions. Such economic dimensions include the estimation of the economic transactions and the nature of these economic transactions. The direct

sale transactions, the exchange transactions, the buyback facility, the transactions with credit and instalment facilities etc., are the important items relating to the nature of transactions, that are attempted in the study. The other economic dimension that is proposed to be covered include the proportion of traders and livestock farmers among the participants of livestock markets. Likewise, the enquiry on the proportion of 'distress' and 'comfort' sale operations by the livestock farmers and the reasons for 'distress' sale are being studied as they may inform on the economic situation of the marginal farmers and the social security the cattle rearing provides to marginal farmers.

The social dimensions relating to livestock markets that are attempted to be studied are: how these markets are enablers for establishing and expanding social networks and forming social groupings cutting across caste, religion and such other factors; how they are the sites for social reconciliations and promotion of interethnic relationships. The aspects like who takes to the livestock trading in these local markets and how they establish their credentials for successful trading are also studied as important social dimensions of the markets. Similarly, investigation on who acts as middlemen in the exchanges and trading of livestock and what their qualifications are is looked into. The study also covers the aspect of the extent to which the traditional knowledge relating to cattle health and behaviour is considered important in these economic transactions and how such knowledgeable persons are identified from amongst their social circles and involved.

The fact that these local markets have sustained for generations in India without stringent regulations also calls for understanding these markets' cultural facets. The social norms and more (morals) followed in the trading and exchange operations, the means of disseminating such codes of conduct, and the enforcement mechanisms of these codes of conduct are some aspects covered in the study. The speech styles, symbols, metaphors, and body language that become part of the economic transactions between the buyers and sellers and exchangers are important as they reflect the core Indian ethics and character, and hence these aspects are also included in the study.

The emerging issues relating to the local cattle markets that are part of the study are like how the markets have absorbed the changes in the lifestyles of people and facilities, especially in the transport sector. The study also focusses on the availability and increased use of smartphones and other devices and the consequent changes in the nature of operations, including the digital dissemination and exchange of information, digital payments, keeping of records of payments etc., and also changes that may have occurred in the other ethical practices followed earlier.

2. Gut Microbial Genomic Study among the Particularly Vulnerable Tribal Groups of India

The study aims to understand the gut microbial abundance in vulnerable tribal communities (henceforth PVTGs) across India, living in diverse geographical settings while maintaining traditional subsistence practices. PVTGs often have unique dietary practices, and their food sources differ from the other population groups. Thus, the proposed research can help explore the genetic diversity of PVTGs, and compare gut microbiota in different contexts. Additionally, it may shed light on antibiotic-resistant microbes and their association with diet and exposure to biomedicine. Furthermore, the study will inform how dietary shifts impact the gut microbiome and thus may provide insights into the biomedical consequences of changing dietary habits in diverse populations. Enhancing our understanding of the gut microbiome allows us to observe the direct evolutionary effects of dietary shifts and their impact on nutrition and health. The study will also be of special interest to understand the health issues of the PVTGs and recommend strategies for improving their health status.

As part of the study, feacal samples will be collected from 40 healthy individuals. DNA will be extracted from the stool sample using the DNA Stool Mini Kit as per the manufacturer's protocol. DNA will be re-suspended as per the protocol of the Kit. The extracted DNA will be quantitated at a 260/280 ratio using UV- visible spectrophotometer by absorption technique. The quality of the extracted DNA will be checked by agarose gel electrophoresis. Illumina deep metagenomic sequencing is a powerful technology for studying the gut microbiome, providing insights into the genetic composition and functional potential of the microorganisms residing in the gastrointestinal tract. The extracted DNA is processed to create a metagenomic library. This involves fragmenting the DNA into smaller, manageable pieces and attaching adapters for sequencing. The goal is to generate a library that represents the genetic diversity of the microbiome. The prepared metagenomic library is then subjected to deep sequencing using Illumina sequencing platforms. This technology can generate vast amounts of short DNA sequences, known as "reads," in parallel. The generated sequencing data will be subjected to extensive bioinformatic analysis to make sense of the genetic information.

The study is expected to provide base data for comparisons and serve as a reference to compare and reveal the commonalities and variations that have been induced in the gut as a result of the socio-economic lifestyle patterns and the occurrence of different chronic and non-chronic diseases. The gut microbial profiles of the present research are expected to represent an unadulterated gut that has not been influenced by fast food and preservative-dependent commercial products. Further, these guts are still shielded from the overuse of medicines and antibiotics; thus, antibiotic-resistant microbes are expected to be a rarity in the studied profiles.

3. Ethnic groups in Inter-State Borders of Chhattisgarh, India: Identities, Intra and Inter-ethnic relationships and Developmental Concerns

Considering the uniqueness of the geography and ecology of Chhattisgarh state, a study is proposed to be conducted with the following objectives:

Which tribal and caste communities are significantly present in the border areas of Chhattisgarh state and what is their demographic composition?
Do tribes and other caste communities in border areas strategically sustain or curtail relationships with other communities and members of their own community in preference for affiliation to a state and the opportunities for better standards of living and also for fulfillment of demands for new constitutional status?
Do certain castes and tribes that share similar ecological niche, natural resources and social and cultural characteristics adopt practices of other caste and tribal communities selectively for their socio- economic and political advantages keeping in view social hierarchies, State, linguistic affiliations etc. Whether caste communities in these ecological niches have tribalised their practices for a new identity and how in such instances, local communities resisted or supported claims of a new identity and what are the ways and means adopted for the same?
How do tribes and caste communities in specific regions acquire multiple labels? How these multiple labels pose problems to the communities? Do multiple caste/tribe identities provide opportunities for expansion of social networks and so for socio-economic and political mobility?
What local tensions among the castes, tribes and castes-tribes that keep them together or divide them at different levels of integration as community in the region vis-à-vis other regions or adjoining states.

4. Assessment of Health, Hygiene and Sanitation of the Khasi in North-East India, with special reference to Women and Children

The study has the following specific research objectives:

1. Undertake a survey on the morbidity and mortality of the community with special reference to the health of women and children and
2. Assess the anthropometric parameters of the children and mothers of the Khasi community;
3. Understand the existing facilities and practices for community and personal hygiene to know the role of cultural, social, economic and other factors in the hygiene behaviors of Khasi women and children.

The study is of the nature of cross-sectional among women (15-49 yrs) and children (0-5 yrs) from the Khasi community of Meghalaya. The study is proposed to be conducted in two districts of Meghalaya, based on the criteria of child malnutrition levels.

5. Digital Literacy and its Impact on Cultural Heritage Preservation

The focus of the study is:

1. To know the current status of digital literacy in the Garo community of Meghalaya.
2. To know the initiatives taken for the digital preservation of their own culture at community and individual levels.
3. To understand the reasons for the digital preservation of the culture at both community and individual levels.
4. To know about the viewers of those videos and gender-specific preferences of these videos among the viewers.
5. To understand the impacts of the videos on viewers and if they are also disseminating those videos among others.

Himalayan Border Villages: Impact Assessment of Vibrant Village Programme with Special Reference to Tourism Development

The Government of India has committed itself to enhancing the quality of life of people in the border areas by providing various infrastructural facilities and opportunities for growth. A cumulative total of 2,967 villages, distributed across 46 blocks within 19 districts, situated along the northern border in the states of Arunachal Pradesh, Sikkim, Uttarakhand, and Himachal Pradesh, as well as the Union Territory of Ladakh, have been designated for holistic development under the flagship programme of 'Vibrant Villages Programme' (VVP). Under the VVP, a multidisciplinary approach will address the complex interplay of factors influencing the quality of life, livelihoods, and environmental sustainability in these border regions. Some of the prime objectives of the VVP are: Infrastructure development (roads, housing, village infrastructure), Livelihood generation (agriculture, horticulture, tourism, skill development), Cultural preservation (promotion of local culture, heritage, and traditions), Social empowerment (education, healthcare, women's empowerment) and Economic growth (entrepreneurship, cooperative societies, financial inclusion). This programme was formally announced in the Finance Minister's Budget Speech for the financial year 2022-2023.

The Tourism Department has prioritized the inaugural phase of this VVP initiative, focusing on the comprehensive development of 17 villages situated in the States of Arunachal Pradesh, Sikkim, Uttarakhand, Himachal Pradesh and Ladakh. Through this strategic initiative, the Government aims to harness the tourism potential of these border villages, thereby stimulating local economic growth, showcasing cultural heritage, and enhancing the overall quality of life for residents.

It is in this context of the VVP, a comprehensive study of the above mentioned 17 'Vibrant' villages situated along the India-China border is proposed to be studied through the lens of established anthropological concepts and theories. Specifically, the investigation will focus on the emic perceptions of 'border', unique life experiences of people in border villages, issues of identity, social contacts and relationships with 'insiders' and 'outsiders' of the village communities. The study will inform on social and economic impacts of developmental initiatives, dynamics of cultural continuity and change, as well as the role of community participation in development initiatives. Furthermore, the study aims to elucidate the complex patterns of development and sustainability with special reference to tourism, culture and human resources. The study will facilitate evidence-based policy decisions and understanding issues of sustainable development.

The study proposed to cover initially 17 villages as identified by the Tourism Ministry. Due to the sparse population and dispersed settlement pattern of Himalayan Border villages and owing to the limitations of time and other resources, a sample of 150 households in each village is proposed to be covered for certain basic details relating to the objectives following a stratified sampling procedure, if necessary.

The study villages:

Arunachal Pradesh: 1. Zemithang; 2. Tuting; 3. Taksing; 4. Chayangtajo; 5. Kibithoo
Sikkim: 1. Lachen; 2. Lachung; 3. Gnathang
Uttarakhand: 1. Niti; 2. Mana; 3. Malari; 4. Gunji
Himachal Pradesh: 1. Gipu; 2. Lalung; 3. Charang Khas
Ladakh: 1. Chushul; 2. Korzok

Impact of Changing Agricultural Practices on Rural Health: A Study in Vidarbh Region of Maharashtra

The research gap related to changing agricultural practices and health burdens in the Vidarbh region are evident across various studies, highlighting critical aspects yet to be fully explored. While studies do indicate that health problems have arisen as a result of changes in agricultural practices, particularly among farmers (such as mono-cropping and increased use of pesticides), the studies on the overall morbidity burden are not adequate. Further, dearth of studies focusing on tribal farmers is evident.

The proposed study aims to explore the epidemiological assessment of the impact of intensified agricultural practices among the tribal farmers of the Vidarbh region of Maharashtra.

Objectives:

To gain insight into the current socio-economic conditions of the farmers at the household level.

To understand the changes in agricultural practices in the last few decades and establish the current cultivation practices with specific reference to use of fertilizers, pesticides, mechanization etc.

To understand the health consequences of changes in lifestyle in general and food cultures in particular that were more specifically attributed to the changed agricultural practices, and changes in socio-economic and political institutions of studied communities.

To study the health status including the reproductive health of tribal farming communities through comprehensive mortality and morbidity survey along with the perceived disease aetiologies;

To understand the health and illness behaviours of the tribal farmers.

Assessing Transformative Change Through the Jal Jeevan Mission in Rural India: Social Impact Evaluation and Community Engagement Through an Anthropological Lens

The Jal Jeevan Mission (JJM) is a flagship program of the Government of India launched in 2019, aims to ensure universal and equitable access to safe and affordable drinking water for all which have a timeline to provide functional tap connections to every rural household by 2024. The program focuses on water conservation, rainwater harvesting, and groundwater recharge while promoting community participation and sustainable water management practices. Studies conducted to assess the impact, effectiveness, and challenges of JJM have yielded insightful findings, and areas for improvement. However, the attention paid to the socio-cultural dimensions of community engagement and the Mission's social and economic impacts seems inadequate.

The main objectives of the project are to examine the effects of JJM on community health, hygiene practices and overall wellbeing with reference to both experiential health and functional health, as well as to measure changes in waterborne disease incidence and sanitation practices. The study will also focus on: a) understand and elaborate on how water, sanitation and hygiene are deeply embedded in the cultural beliefs, values and practices; b) examine through both emic and etic perspectives how the opportunities provided by JJM impacted on the savings and investments in enhancing socio-economic status; c) to explain the qualitative change in regards to women empowerment and gender relationship; d) to understand the community participation in measures relating to sustainability, including the source water sustenance, grey water management, water conservation, water surveillance, water safety planning and execution; e) to provide the typology of community-led water management systems, to identify gap analysis regarding policy and implementation and suggest necessary changes to enhance the program's effectiveness.

Exploring Healthy and Successful Ageing in Smart India (EHSAS) : Integrating Epigenetic, Digital Divide, and Energy Expenditure with Reference to IoT, AI and ML

According to the World Health Organization's report on Ageing and Health (2015), the percentage of people worldwide who are 60 years or older is expected to nearly double between 2015 and 2050. Sometimes elderly population fail to get adequate care that they deserve the most. Taking cognizance with the same, the United Nations declared the present decade as the "Decade of Healthy Ageing (2021–2030)" with a global collaboration, aligned with the last ten years of the Sustainable Development Goals (SDGs), to improve the lives of older people, their families, and the communities in which they live. The prime concern is to maintain a healthy balance between health and wellbeing among the elderly.

This research aims to comprehensively investigate the multifaceted factors influencing the health, well-being, and overall quality of life of the elderly population. Specifically, it will examine: how living conditions, healthcare access, and the integration of AI/IoT/ML technologies within smart city initiatives impact the daily energy expenditure and nutritional needs of the elderly; the current level of technological access among the elderly, their ability to utilize government measures, and the prevalence of age-related health conditions; the influence of social structures, family dynamics, and cultural norms on the care and quality of life for older adults across different social networks; and the intricate interplay of biological, social, and environmental factors, particularly through epigenetic phenomena, on the overall well-being and biological aging process of the elderly.

By exploring these key areas, the research seeks to gain a deeper understanding of the complex factors that shape the lives and experiences of older adults in contemporary society. This study is proposed initially in six purposive clusters that includes one non-smart city i.e Mysore.