

# ADIBASI

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# New Perspectives in Tribal Health Research

Almas Ali

## Introduction

The emphasis of research studies on tribal communities has been primarily on Socio-cultural aspects of their life. However, recent researches have also tried to unravel the process of social change, economic aspects and other dimensions revolving round the tribal way of life. As the issues relating to health, nutrition and genetical-environmental aspects among tribals have been grossly under-researched, it is decided to give primary emphasis on these issues in this paper. No doubt, through untiring individual efforts of a few curious, venturing and enthusiastic Anthropologists, Population Geneticists and Medical Scientists some amount of data have been generated in this field. However, such studies are confined to a selected few tribal groups and tribal regions of the country. Again, in these studies, beyond the academic interests, very little attention has been paid to the proper utilization of the knowledge in larger interests of the tribals and their development. It is thus imperative to examine whether the information available is dependable, reliable and comparable in terms of techniques and methodology and whether it is suitable, appropriate, adequate and applicable for use in preventive and promotive health care for the tribals. Therefore, an attempt has also been made in this paper to find out the data gaps relating to tribal health research and to identify areas of research thrust in this field so that more purposeful and planned research in the field of tribal health can be sponsored in future.

The genetic diversity of tribal groups inhabiting areas with widely varying geo-climatic

and ecological conditions poses a challenge to Medical Scientists and Anthropologists engaged in tribal health research in eliciting the causes of genetic variation and delineation of health and nutrition hazards due to genetical-environmental interactions.

In this context, proper knowledge of the tribal setting of India becomes an essential prerequisite for understanding the health problems of the tribals in a holistic perspective, for identifying the priority areas of research in the field of tribal health and for evolving effective and appropriate research strategies to tackle the problems of health, nutrition and genetics unique to tribal areas.

Against this backdrop, perhaps it might be appropriate to briefly discuss at the very outset the salient features of tribal demography and regions of tribal concentration in India.

## Tribal Demography

The term 'Tribe' is nowhere defined in the Constitution and in fact, there is no satisfactory definition anywhere. No standard term has been accepted to denominate the people who are classified as of tribal origin. According to Article 342 of the Constitution, the Scheduled Tribes are the tribes of tribal communities which may be notified by the President. The Census enumerates only such tribal communities as are scheduled under the relevant constitutional order in force at the time of the Census.

The Primary Census Abstract—Scheduled Tribes—Series 1, Part II-B (iii), Census of

India 1981, is the only source of latest information that provides reasonably comprehensive data on various aspects of Scheduled Tribe population of India. According to this source, in India the Scheduled Tribe population is 51,628,638 comprising 26,038,535 males and 25,590,103 females constituting 7.76 per cent of the total population. This figure for Scheduled Tribes excludes Assam where the 1981 Census enumeration did not take place. The population of Scheduled Tribes is unevenly distributed in various States and Union Territories. The largest population is found in Madhya Pradesh (11,987,031). The second largest number of the tribals is enumerated in Orissa (5,915,067) immediately followed by Bihar (5,810,867) and Maharashtra (5,772,038). But their largest proportion to total population is found in Nagaland (83.991 per cent) followed by Meghalaya (80.58 per cent). Among Union Territories, Lakshadweep (93.82 per cent) ranks first closely followed by Mizoram (93.55 per cent). The tribals in the 1981 Census were enumerated throughout the country except in three States viz. Haryana, Jammu and Kashmir and Punjab and three Union Territories viz. Chandigarh, Delhi and Pondicherry, where no Scheduled Tribes have been notified by the President of India.

The tribal population as a proportion of India's total population increased from 6.94 per cent in 1971 to 7.76 per cent in 1981. This gives the impression that all is well with our Scheduled Tribes. But this would be a highly misleading view. Interestingly enough, the Census publication nowhere mentions the growth rate of tribal population but one can calculate it from the absolute figures. The growth rate of Scheduled Tribe population works out to 35.62 per cent during 1971—81 compared to the growth rate of 25.00 per cent for the total population of the country during this decade. Lest one jumps to any conclusion about a sudden spurt in tribal fertility, I must hasten to point out that the 1971 and 1981 Census data relating to Scheduled Tribe population are not at all comparable. The 1971 Census figures of Scheduled Tribes were based on Scheduled Caste and Scheduled Tribe Lists (Modification) Order, 1956, whereas the 1981 Census figures of the Scheduled Tribes are based on Scheduled Caste and Scheduled Tribe Order (Amendment) Act, 1976. The effect of this amendment was virtually to remove all area restrictions with regard

to residence in specified districts or tahsils which prevailed previously in the matter of recognising persons as belonging to Scheduled Tribes. It was, therefore, expected that the 1971—81 growth rate of Scheduled Tribe population would be considerably higher than the corresponding overall growth rate. This important fact, however, is mentioned in a small foot note to the Census table but the tragedy is that most of the readers do not read the footnotes. Because the list of the Scheduled Tribes has been revised in 1976, the enumerated population requires a few adjustments to make the returns of the two consecutive Census comparable. The adjusted figures calculated on the basis of Scheduled Caste and Scheduled Tribe Order (Amendment) Act, 1976, reveal that the S. T. population in the country during the 1971—81 has increased by about 25.47 per cent against a growth rate of 25.00 per cent for the total population during this decade. When one examines the statewise figures, the complexities increase. For example, in Karnataka, the tribal proportion increased from 0.8 per cent of the State's total population in 1971 to 4.91 per cent in 1981 recording an unbelievable growth rate of 690.04 per cent. Again, an innocent footnote in the Census volume says "This figure would appear to include high return relating to certain communities with nomenclatures similar to those included in the list of S. T. consequent upon the removal of area restriction".

However, from the foregoing discussion it would be wrong to conclude that Census figures should not be believed. The diversity of the problems of enumeration faced by the Census of India, e. g., the geographical location of the tribal inhabitations, language, transport, illiteracy and of course the time factor are bound to be reflected in the limitations of the data for which certain adjustments are always justified. Among the factors responsible for high or low population growth rates among some tribal groups, no doubt, one reason is the limitation of the Census operation itself, but any meaningful discussion on growth rate among the tribal communities without reference at fertility and mortality components is incomplete. A high fertility rate with an equally high mortality rate or a low fertility rate and high mortality rate, frequency of infertility or a high fertility and low mortality rate etc. may substantially influence the growth rate. It is well known that the fertility and mortality in a population is the result of interaction between the biological,

cultural, socio-economic and nutritional factors in one hand and extent of medical facilities available on the other.

This extremely complex and confusing situation seems to point to the need for meaningful and detailed investigations in the field of research in tribal demography.

### Regions of Tribal Concentration

The areas of tribal concentration have been generally described as the forest and hilly areas of the country. No systematic classification of the tribal areas had been attempted until the beginning of the Fifth Plan period when a new strategy for tribal development was evolved and the areas of tribal concentration were systematically identified and demarcated on some objective criteria. A clear picture of the areas of tribal concentration in the national sense has emerged only thereafter. Now the tribal areas of India can be broadly divided into seven regions according to Dr. B. D. Sharma. The Southern-Central region comprising Southern Madhya Pradesh, Southern Orissa, Northern belt of Andhra Pradesh Eastern belt of Maharashtra, is mainly inhabited by Gonds. The Central-Northern Region including Chotanagpur tribal belt of Bihar, Eastern Madhya Pradesh, Northern Orissa, Western tribal belt of West Bengal, shows the highest tribal concentration dominated by Santhal, Oraon, and Munda tribes. The Western Tribal region covering Southern tribal belt of Rajasthan, Eastern Tribal belt of Gujarat, Western belt of Madhya Pradesh, Northern Maharashtra, Dadra Nagar Haveli and Daman has the predominant tribal groups like Bhils, Gamit, Dhodias and Warli. The North-Eastern tribal region which comprises of Hilly areas of Assam, Meghalaya, Arunachal Pradesh, Sikim, North-West Bengal, Nagaland, Manipur, Mizoram and Tripura, has tribal groups such as Naga, Khasi, Garo, Mompas, Mizo, Miri, etc.. The North-Western Tribal region extends over the Hills of Western U. P. and Northern Himachal Pradesh where Lahories, Kinnoras and Jaunsaries are the major tribal groups. The Southern Tribal region on the trijunction of Karnataka, Kerala and Tamil Nadu has such tribal groups as the Kurumba, Soluga, Irulas, Kotas, Todas, etc. The Island region represents the Islands of Andaman and Nicobar in the Bay of Bengal and Lakshadweep in Arabian Sea where the Oceanic Tribal groups such as the Jarwas, Onges, Great Andamanise Sentinelese, Shompens and Nicobarese live.

### Tribal Development

In the recent years there has been increased emphasis on tribal development. It is well known that the strategy for integrated development led to the launching of the Tribal Sub-plan concept in the Fifth Plan period. Three basic parameters of the tribal situation in the country were recognised in the formulation of the concept. First, that there is variation in the social, political, economic and cultural milieu among the different scheduled tribe communities in the country. Second, that their demographic distribution reveals their concentration in parts of some States and dispersal in others. Further, that the primitive tribal communities live in scheduled regions. Hence, the broad approach to tribal development has to be related to their level of development and pattern of distribution. In predominant tribal regions, area approach with focus on development of tribal communities has been favoured, while for primitive groups community oriented programmes have been preferred.

This new strategy for tribal development can therefore be broadly divided into four parts to cover the entire tribal population of the country :—

- (i) States/Union Territories having majority Scheduled Tribe population (more than 50 per cent)—Two States viz. : Meghalaya, Nagaland and four Union Territories: Arunachal Pradesh, Mizoram, Dadra and Nagar Haveli, Lakshadweep;
- (ii) Areas of tribal concentration;
- (iii) Dispersed tribals; and
- (iv) Primitive tribals.

Areas of tribal concentration in the country, i. e., areas where more than 50 per cent of the population is tribal have been identified and project approach has been adopted through the formulation of Integrated Tribal Development Projects (I. T. D. Ps.). On the whole, 181 I. T. D. Ps. have been established in 17 States and 2 Union Territories covering 27 districts fully and 97 districts partly and 633 blocks fully and 280 blocks partly. These programmes through I. T. D. Ps. are being implemented to bridge the gap of socio-economic disparities between the tribal and non-tribal people. Development of human resources of the tribal communities has been identified as a crucial element of such programmes. It has also

been realised that improvement in the health and nutrition status in the tribal groups is fundamental to any programme of human resources development in such communities. Such programmes for improving the health and nutrition status in tribal communities require a multi-disciplinary understanding and approach and need to take into consideration the cultural and economic aspiration of tribal communities.

#### **Health and Nutrition Programmes for Tribals**

The project (I. T. D. P./I. T. D. A.) reports are supposed to subsume within it all aspects of development within the project area. The essence of I. T. D. P. approach or Sub-plan approach lies in the key-word "integration"—integration in planning, in execution through a single individual, i. e., the Project Administrator in financial arrangements at the State and the I. T. D. P. levels. For primitive tribal groups special Micro Projects are operating throughout the country. Therefore, any health/nutrition programme whether of *ad hoc* or long term nature, need to be fitted into the planning, implementational and financial frame work of the I. T. D. P. or the Micro Project. Monitoring and evaluation should also cover health and nutrition aspects.

#### **Tribal Health Research**

Comprehensive research studies pertaining to health and nutritional status among different tribal groups of India are very few, very scanty and often completely lacking. Again, one feels that there is a lack of broad inter-disciplinary approach to study this problem. Clearly the time has come to take a fresh look at the priority health problems of the tribals, which have been neglected for a long time and therefore, this vital problem of health, nutrition and genetics of the tribals can be investigated and studied only by using a multi-disciplinary approach which should necessarily be based on an integration of such components as :—

- (a) Assessment of the health status
- (b) Study of dietary habit and assessment of nutritional status.
- (c) Indepth study of genetic diseases and disorders (including chromosomal anomalies and haemoglobinopathics).
- (d) Demographic studies (specially mortality and morbidity statistics).
- (e) Basic assessment of the environment

(f) Socio-economic assessment, and

(g) Study of health culture and health related behaviours.

Recently the Indian Council of Medical Research (I.C.M.R.) has also initiated a number of projects to study systematically various health problems of the tribal population and unique to hilly areas. The health and nutrition problems of the vast tribal population of India are as varied as the tribal groups themselves who present a bewildering diversity and variety in their race, language, culture and are at widely divergent stages of socio-psychological orientation and economic, cultural and educational development. Because of these striking differences in their levels of development, each group has a number of problems of its own closely allied to its socio-economic situation, eco-system, historical experience and patterns of political articulation. Thus the health, nutrition and medicogenetic problems of most of the tribal groups are also unique and present a formidable challenge for which appropriate solutions have to be found by planning and evolving appropriate research strategies which should be need based and problem solving in nature, i. e., identifying the problem, defining the factors causing the problem and generating alternative solutions to the problem.

#### **Priorities in Tribal Health Research**

Recognising the inter-regional differences in the tribal situation in the country and recognising the differences in the problems of the tribal communities, it would seem that a different kind of effort for research in each case is called for. At the present juncture it might not be possible or desirable to study the health and nutrition problems of all the tribal groups of the country. Therefore, in tribal health research the primitive tribal communities deserve top priority. Primitive groups require sensitive and delicate handling, some of them are very small in size and often face the problem of bare survival. Therefore, in the case of primitive tribal communities indepth research studies on health, nutrition and genetics have to be given priority. The next item in the priority list should be health services operational research in tribal concentrated areas because transformation of the already existing knowledge/research findings into practice is woefully lacking. In the areas of tribal concentration since the I. T. D. P. appears to be the smallest administrative and operational unit at which the activities of

different sectors are co-ordinated, it is this unit, which we suggest, should be studied in the context of health services in order to find functional gaps in respect of various health/medical facilities in the I. T. D. P. area; and to achieve operational efficiency in the health care delivery programmes.

(a) *Health care delivery/Health services research (Operational Research) at I. T. D. P./I. T. D. A. level*—Health services research at the I. T. D. P./I. T. D. A. level may be required for the design of health services that will ensure efficient and effective delivery of health programme in tribal areas, and development and application of appropriate technology. In order to improve health services in the I. T. D. P., the Government should promote operational research studies to develop and test alternative ways of health service delivery on an experimental basis in some selected I. T. D. Ps. of India representing different eco-system. Research-cum-action programmes should be tried out in order to test the impact of the alternative and community based health care suited to each specific situation/I. T. D. P. The importance of replicability in alternative health activities should be kept in mind with necessary modifications suiting local conditions. Stepwise modalities relating to operational aspects of the proposed experimental research project are given below. To begin with a few I. T. D. Ps./I. T. D. As. can be selected from different States where there is a large chunk of tribal population to set up demonstration-cum-research health care delivery projects. This health service research project at the I. T. D. P. level should be carried out in three phases i. e. (i) An initial preparatory phase followed by, (ii) An intervention phase and finally (iii) Monitoring and evaluation phase. In the preparatory phase situational analysis survey for collection of data on demographic, socio-economic, cultural aspects, healthcare facilities in the I. T. D. P. especially in respect of (a) their spatial distribution, accessibility and utilization, (b) performance of health workers (c) identification of problems, deficiencies and bottlenecks in the existing system, (d) awareness of the tribal communities in respect of available health care facilities and (e) assessment of availability of manpower resources from the community itself for utilization in health care system. By the help of this initial exercise functional gaps in respect of various medical facilities like P. H. Cs., Sub-Centres, etc. at the I. T. D. P. level could be determined. Once this

is done, based on the norms, future requirements can be calculated in respect of each I. T. D. P. Then the next step will be to determine the exact location of the proposed medical institution.

The first phase should be followed by the intervention phase involving the entire I. T. D. P. during which health services should be strengthened and interventions like training, management information system, etc., should be instituted. Innovative schemes/intervention programmes should take into account all aspects of health including community participation and treatment of area specific diseases. This should include construction of Additional Hospitals/P. H. Cs./Sub-Centres (if any), recruitment to existing vacant posts, ensuring adequate supply of drugs, etc.

The final phase of this experimental action-cum-research project on operationalization of health care, delivery at I. T. D. P. level should include a sound inbuilt system of monitoring and evaluation. This should also include the assessment of the effectiveness and impact of the measures the implementation agency is taking and the monitoring of the progress and efficiency with which these measures are being carried out. Monitoring of implementation and evaluation of impact usually take place at two levels—at the policy level and the technical/grass roots level, but the two have to be interlinked. At the policy level there is need to know if the health status of the tribal population of a given I. T. D. P./I. T. D. A. is improving and if revisions of policy, strategy and plans of action are required. At the technical level there is a need to know if relevant health programmes are being properly formulated and if corresponding services and activities for implementing them are being adequately designed. At the grass roots level it has to be observed whether the programme is socially acceptable by the tribal communities. There is thus need for two types of indicators—those that measure the health status and related quality of life and those that measure the provision of health care. In both the cases, high selectivity has to be employed so that the use of indicators becomes manageable and meaningful. The two basic health indicators concerned with survival that we suggest are life expectancy at birth and infant mortality rate. Other indicators measure not only survival but also the quality of life. This implies that social as well as health indicators have to be used.

Examples of these are indicators of growth and development, indicators of nutritional status, and specific morbidity rates particularly in children. Other indicators relate to social conditions and factors that affect health status directly or indirectly, or the use of health services as for example, Indicators of educational and cultural levels, of the status of women, of housing and of environmental conditions. Yet other indicators relate to Psycho-social factors and mental health aspects of the quality of life. A number of relevant social and health indicators remain to be developed to be used in the tribal health context.

In monitoring implementation through provision of health care in tribal areas it is important to use as reference points those objectives and targets that will be set up as part of the process of formulating programmes and designing the health system. It is particularly important to monitor whether priorities are being adhered to, realising that these may have to be implemented progressively. Indicators can then be selected which can measure change towards attaining the objectives and reaching the corresponding intermediate and final targets at the I.T.D.P. level for example; the percentage of tribal population having safe drinking water, rates of women attended by suitably trained health workers during child birth, and the percentage of children immunized against common infectious diseases. It should also be the task of tribal health researchers to develop locally suitable indicators of coverage and accessibility of services as a measure of the provision of health care. Whatever may be the indicators selected, they have to be closely related to the means available for data collection and processing and should be gathered as an intrinsic part of the health care delivery system in tribal areas.

*(b) Nutrition Research in Tribal areas: observations*—1. While there is a broad understanding of the nutrition problems of the general population and while there is considerable data regarding nutrition status of several urban and rural communities of India, such information on tribal population is meagre. However, some of the available data show that among most of the tribal population groups staple diet is rice or minor millets except Mompas of Assam who consume wheat also. Birds, fish and other meat products are also consumed by the tribals occasionally. Studies carried out by the National Institute of Nutrition and Planning Commission

reported a high Protein Energy Malnutrition (P. E. M.) along the rice-eating belts. Studies conducted by Chitre on the dietary status of Bihar tribals and tribals of Maharashtra revealed deficiency of their diet in Calorie and Protein though not major signs of nutritional deficiencies. Similar results were obtained from the studies conducted by Rao among the pre-school children of Andhra Pradesh and by Pingle among the tribals of Kalahandi, Koraput, Madhya Pradesh and Maharashtra. A high incidence of malnutrition is also observed by us in some primitive tribal groups in Phulbani, Koraput and Sundergarh districts. Surveys on nutritional deficiencies carried out by Gopalan reported a high incidence of goitre and angular stomatitis among Mompas of Assam and Vitamin-A deficiency among Onges of Andaman. Data on the nutritional deficiency disorder among other tribal groups is scarce. This information is necessary in the formulation of action plans which will aim at improvement of nutrition status of the tribals.

2. The nutritional problems of different tribal communities located at various stages of development are full of obscurities and very little scientific information on dietary habit and on nutrition status are available at the moment due to lack of systematic research. Thus no serious attempt has been made so far to determine the food and nutrition problems of tribals in relation to health and survival.

3. The few research studies which are available on nutritional status in tribal population are not comprehensive in terms of data collection, analysis and in presenting an overview of the subject. In most of the studies, weightage is given either to dietary intake or clinical or anthropometric parameters. Multidisciplinary and comprehensive studies providing information on habitat, food products, local marketing, economic and social system and its relationship with nutritional status are lacking. The past work indicates that these areas need to be covered in future studies of the tribals since these would provide the data support for effective nutrition planning.

4. Some studies have shown that in spite of wide choice of food stuffs, tribal diet is limited by the traditional regulations of the society, so to say the selection of food is determined by what we call 'Social Heritage'.

5. Two most significant changes have taken place in some of the inaccessible tribal areas of India adversely affecting the nutritional status of the primitive tribal groups. Firstly, the wild life has almost disappeared and has deprived the local community of an important source of protein in their diet. Secondly, the forests have also dwindled and the pressure of population on shifting cultivation is increasing. Denudation of forests in turn has resulted in non-availability of different varieties of forest produce which formed an important part in people's diet. Therefore, the source of nutrition derived from traditional foods are declining and new varieties of important foodgrains are introduced for the first time in their diet patterns. The delicate balance of the nutritional system in these tribal areas is likely to have been disturbed and this disruption of the ecological balance is likely to adversely affect not only the nutritional status but also the health status of the tribals.

6. It is often said that the diet of tribals is insufficient in quantity and poor in quality. On the other hand statements are also made that the health and nutritional status of tribal people are good in spite of their manifest poverty. Such contradictory statements generally arise out of the fact that very little or no exact scientific information on these lines are available at the moment.

### Recommendation

1. In order to understand thoroughly the problem of nutrition of tribal people, interesting and useful material can be worked up by undertaking dietary surveys and assessing the nutritional status by anthropometric and clinical assessment of stratified tribal groups such as (a) primitive tribal groups living primarily on natural food resources; mainly forest produce including animals, birds, insects, etc. (b) tribal groups subsisting mainly on shifting cultivation (c) tribals who have taken to regular agriculture, and (d) tribals who have migrated to industrial and mining areas and have already been assimilated.

2. For an effective strategy to plan nutrition intervention programmes for tribals, base-line information is required on :

—the type, extent and timing of nutritional problems.

—the tribal groups particularly at risk in terms of biological, geographical (ecological zone) and socio-economic situation.

—the factors (underlying causes) responsible for existence of malnutrition in order to design and implement effective intervention programmes.

—the resources that can be utilized for improving the nutritional status of the tribals.

3. To develop and translate into operational activities, new knowledge that can be used to improve nutrition through action at the level of the tribal community itself.

4. Research has to be carried out for the fortification, supplementation and formulation of nutritionally superior products similar to the ones relished by the tribals.

5. It is necessary to identify, develop and evaluate different types of home appropriate technology for food preparation and techniques that can be utilised for local community action for improving dietary practices of the tribals.

6. Research has to be carried out in order to assess different approaches for the integration of nutrition activities into the various types of health care delivery systems and to provide appropriate learning experience in action-oriented operational research.

7. To evolve a suitable strategy to overcome the nutritional deficiencies among tribals and promulgate preventive and promotive health care taking the various socio-economic concomitants and cultural variants into consideration.

8. Nutritional needs should be solved by the tribal communities themselves through a better utilisation of their locally available, cheap but nutritious food.

9. Specific objective should be to test at the village level how locally acceptable and available food can best meet the nutritional needs of the tribal groups.

10. There is an urgent need to analyse the nutritional values of the food stuffs which are locally available and popularise such nutritious food as would provide a balance diet to the tribals.

11. Social and anthropological factors that decide the success in the implementation of any nutrition intervention programme have to be identified.

12. It is necessary to evaluate the changing patterns of dependence on traditional food and dietary practices.

(c) *Genetic—environmental research in tribal areas: observations*—1. The frequency of different genetic diseases and disorders among the tribal population of India are yet to be systematically documented and properly investigated.

2. In many of these studies attention has not been paid to nutrition, socio-cultural, socio-economic, inbreeding and environmental variables which might influence the manifestation of the genetic disease. Thus, no serious efforts have been made to understand the expressivity of the genetic disorders in different environmental conditions including Parasitic load, changed habitat, etc.

3. Reasonably detailed data on the incidence of some of the genetic disorders like Hbs. (Sickle-cell Haemoglobin) and G-6.-PD (Glucose-6-Phosphate Delydrogenase) deficiency are available for several tribal population. Distribution of Sickle Cell gene in tribal population varies widely ranging from more than 20 per cent among Gamit, Paniyan, Kurumba, Irulas, Kutia Kondhs Raj Gondhs, etc. to less than five per cent among Lambadi, Dhruva, Santhal, Todas, Kotas, etc. Despite this, the variation noticed in the incidence of Sickling in the same tribal groups by different authors (studies carried out at different points of time) proposes the initiation of a model study to understand the magnitude of the problem. Therefore, standardized techniques and uniform methodology should be adopted. Mortality among the carriers of Sickle Cell trait and the reproductive performance among mothers are yet to be explored in greater details which will provide the understanding of the mechanism of selection and maintenance of the gene through reproductive compensation.

4. Selective advantage hypothesis relating to the endemicity of *Plasmodium falciparum* malaria and the incidence of Sickling in Indian tribal communities is yet to be confirmed.

5. The incidence of G-6-PD. deficiency among the Scheduled Tribes of India varies from 1 to 20 per cent. Our own study among the Kutia Kondhs of Phulbani confirms this. There are also many tribal groups among whom there is absence of this enzyme deficiency e.g. the Dongaria Kondh and the Pauri Bhuinyan. Its relationship with Malarial endemicity and the therapeutic problems it generates with the usual antimalarial drugs (derivatives of quinine), are well understood. Fortunately, it has

been also observed in some tribal groups that not all G-6-PD deficient persons suffer from deleterious effects of drugs. Therefore, the freedom of adverse effects of drugs cannot be generalised to all categories of drugs. This observation also calls for intensive research into development of a rapid 'in vitro' model system whereby red cells from G-6-PD deficient individuals can be studied for sensitivity with the drug in question.

6. The other haemoglobin abnormalities like HbD, HbE, HbJ are yet to be explored on the tribal blood samples.

7. While the nature and extent of inbreeding among some tribal communities have already been documented, many more tribal groups are yet to be studied.

### Recommendations

1. There is an urgent need to undertake extensive and systematic investigations to estimate the frequency of genetic and other disorders and their physical, social and environmental correlations and their interactions. This information will form the basis of identification of high risk tribal groups.

2. Urgent studies are also required on primitive tribal groups of India, which are small in size and are inhabiting inhospitable environment, to elicit their fertility, mortality and morbidity patterns and factors affecting them in order to delineate high risk groups.

3. In the tribal groups showing high incidence of genetic disorders like sickle-cell diseases and G-6-PD deficiency, there is also an urgent need to study the clinical profile in homozygotes and the carriers as compared to the normal individuals to determine the extent of health hazards.

4. Investigation on the alternative methodology of treatment and the preventive and promotive measure to be adopted to avoid clinical embarrassment remain on the priority list of the health and welfare measure for the tribals.

5. The findings of properly planned genetic studies should enable genetic and pathogenetic mapping with a view not only to detect abnormalities but also chart lines of future action.

6. The prevention of common genetic diseases like Sickle Cell Anaemia or say G-6-PD deficiency can be effected either by population screening or genetic counselling to discourage reproduction in proven carriers.

7. The programme of genetic counselling must incorporate the help of a properly trained genetic counsellor who is able to deal with various psychological, educational and informational complexities of genetic counselling in an intelligent and humane way. A number of centres in suspected high incidence areas should be set up where individuals can receive appropriate blood tests and genetic advice. This approach should be augmented with laboratory facilities to the minimum extent possible from economic point of view but not at the cost of accuracy.

### **Conclusion**

From the foregoing discussion, it can be concluded that comprehensive data on health,

nutritional and genetic environmental aspects among various tribal groups of India are still lacking. Therefore, now there is need for sponsors of more purposeful and planned research in the field of Tribal Health. The essence of this new strategy for research in tribal health should be to initiate task-oriented operational research programmes on areas which are directly related to the health/nutritional/genetic problems specific to the tribal region and to the tribal community where additional knowledge/knowledge already existing/new knowledge and advanced/appropriate technology would help in alleviation of morbidity from these disorders.

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# *Educated Tribal Women : A Study of Perception, Roles and Values*

K. C. Panda  
and  
Anita Panda

## **Background**

During the last few decades the traditional society of India has been undergoing a series of changes. The cumulative effect of emergence of urban culture, secularization and rational outlook has manifested itself in the individualisation of attitudes, values, role perception, attribution and many other significant facts of social life. But the techno-economic changes do not swamp the traditional structure and culture absolutely—this is more true of tribal culture which is cohesive and resistant to change. However, there is a beginning in the reorientation and restructuring of values of the existing pattern of beliefs, attitudes and values. The social environment prevailing in the tribal society offers a different background for individual and social functioning, in a zone where traditional and modern values co-exist.

At every stage of human life, the women have a significant place in society, no matter what culture or sub-culture we talk of. But with education, the traditional concepts of women are slowly changing in contemporary India and they also reflect behavioural changes.

In the perpetuation and regeneration of society, women are invested with relatively greater responsibility than men because they are responsible for bringing up their children, who are not only carriers of culture but also transmitters of culture.

It is in this context, the questions arise—what are the images and impressions of tribal women

who are recently entering into the educational rubric, about the society, the educational system? What are their values, aspirations, attitudes and behaviours? How do they perceive their role in the present society? What kind of society they visualise? How do they look at themselves? What kind of achievement orientation they do have in the struggle for existence? What are their basic value patterns and attribution process? Many such questions appear to one's mind about which hardly any study has been reported on educated tribal women. In recent years, a significant number of educated women from the tribal communities have entered the teaching profession and are under training in different training institutions of the State. Since answers to the questions would vary from group to group it was thought to look at the women teachers and trainees coming from tribal communities in order to have a profile of these characteristics.

## **Problem**

The purpose of the present study is to analyse the images and impressions, roles and values of educated tribal women teachers and trainees.

## **Objectives**

1. To analyse the perceptions of tribal women teachers and trainees with regard to educational system, necessity of schooling, society and social interests, religious beliefs, marriage, quality of life, tradition and culture, socio-cultural values, authority and youth.

2. To analyse the perceptions of tribal women teachers and trainees with regard to their role in family, society, education, politics, and occupation.

3. To analyse the value systems of tribal women teachers and trainees with regard to attribution process, self-concept, achievement, orientations and value systems.

### Method

*Sample*—The sample consisted of fifty women tribal teachers working in the elementary schools in the State of Orissa and fifty women tribal teacher trainees enrolled in elementary teacher training institutions. The sample was located through an initial survey and then were contacted through SIs, DIs and Heads of the institutions to provide a random sample of the groups.

*Tools*—The following tools were used in the present investigation.

1. Perception Questionnaire (Panda, 1982)
2. Role perception Questionnaire (Panda, 1984).
3. Self-concept checklist (Mahanta, 1980)
4. Achievement Orientation Scale (Ray-Lynn, 1975).
5. Value Scales (Allport et al., 1967; Rokeach, 1967).
6. Locus of Control (Rotter, 1966)

*Procedure*—The questionnaires were cyclo-styled and mailed to the addresses selected in the sample along with return postage. Interestingly, the procedure resulted in 100 per cent replies with a built-in remote control system working under intimation to their heads of institutions. The responses were scored as per the scoring key provided for each of the scales mentioned above. The scales were also tested for their test retest reliability with a sample of only 30. The reported reliabilities indicating stability coefficients were above 60, a fairly acceptable value.

### Analysis of Results

*Images and Impressions : Educational System*—Rated on a five point scale the women tribal teachers and trainees perceived the existing educational pattern meant for them as useful, relevant, job-oriented, and child-centred to a moderate degree, while the teacher group

appeared to be at a lower level. Whether education is possible without schooling was also a point of reference. Both the groups did not accept the deschooling notion which is in the air today. On the other hand, the trainees felt the need of trained teachers, vocational education, use of teaching aids and classroom and the teacher group felt the need of equipment and vocational bias in the educational system. Opinions were collected on the characteristics of teachers and the groups did look at the existing teachers in the school system as moderately honest, capable, intelligent, gentle, enthusiastic and helping type without any difference.

### Society

How do women teachers and trainees perceive society when they come from tribal background? What are their social interests too? The observations revealed that in both groups the tribal women showed on the average (above 40 per cent), interests in social studies and social activities, participation in organised and informal groups. The groups considered the present day society as ordered, just, having freedom, civilised, idealistic, religious, dynamic, hopeful, sympathetic, traditional, progressive and realistic. The Mean ratings on a five point scale were around 3.00 which is just average, without significant intergroup differences. Violence as a point of social change was analysed. Both women tribal teachers and trainees recognised violence neither as a need nor as an instrument of social change. Chi-square values of response distributions are insignificant.

### Culture

Emancipation of traditional morality from the society was viewed by women tribal teachers and trainees. They are against abolition of the concept of traditional morality from our society. Marriage is a crucial issue in any society and culture. It indicates the ideals of a family, kinship and moral values prevalent in a given social group. Both the groups accepted arranged and approved marriage pattern and the second in preference was love marriage. The preference for 'arranged only' marriages has declined for both groups. The differences are not statistically significant.

Both the groups, however, observed and perceived the society as moving towards stability but through failures and frustrations. Opinions of teachers and trainees were obtained on the

caste system and its existence and a significant majority (78 per cent) are against its existence in our society. The values emphasized by women tribal trainees were : social, moral, brotherhood feeling, independence, spiritual, and aesthetic, whereas those emphasized by women teachers were : social, spiritual, moral, peace and cultural. The women teachers and trainees did not differ in their interests for dance, music, but they did so in sculpture and sports. The trainees were not interested in sculpture but were more interested in sports than women tribal teachers, which was but natural in the context of their profession. But they all had appreciation for music and dance which are traditionally associated with their lives as opposed to modern photography. In fact, whether the traditional culture is to be preserved or will have to be replaced by the modern values did not get a clear focus although a majority in both the groups were in favour of preserving the traditional culture and taking the benefits of modern society at the same time. So a state of ambivalence in cultural perception is what is seen.

This idea is further reinforced, when we examine their attitudes towards the traditional culture of India. The  $X^2$  value is highly significant ( $X^2 = 14.719$  P.  $< 0.01$ ). Both the groups had very good attitude towards traditional culture in spite of the education they had in the new systems.

Whether religion stands in our way to modernity? In general, Indian people are more religious, orthodox, and tradition bound. They resist change if religious interests are not respected. What is the feeling of our educated tribal women who find themselves in a changing socio-cultural setting. They did perceive that the modern values which are being indoctrinated through welfare schemes do strike at the very heart of religion. It is this fact which probably, motivates the tribal women to cling to the traditional culture in spite of the modern education they receive. Therefore, they also want to spread, if given a chance, the values of Indian classical and instrumental music traditional and religious sculpture as opposed to film songs.

#### **Elders, Youth and Authority**

Indian society is characterised by respect for elders. This is a tradition which is imposed by home and education. But with westernized

education a decreasing trend in following this tradition is seen in many cultures. Is it true in our case? Has education affected adversely this type of behaviour? The results revealed that the elders are viewed by the educated tribal women as wise, kind, honest, efficient, patriotic, less apathetic and less selfish. This understanding is necessary because living in society is not in terms of self perception only but also perception of others. The presence of the characteristics outlined above are however, on the average "moderate".

The administrative elite have been perceived rather in more skeptical way and this is sometimes responsible for non-acceptance of planned programmes in the community. But the present investigation demonstrated rather positive ratings on all the six attributes for the administrators who represent the authority figures. The factors are : integrity, capability, intelligence, gentleness, enthusiasm and helpfulness. These rated characteristics are more proximal to 3 point in a five category system towards the positive direction for both groups. This is obviously a progressive step.

The youth represents a culture of its own in our society and for that matter in any society advanced or developing, agrarian or industrial, nomadic or civilised. Based on the general findings of Kirpal (1976) a set of 10 personality characteristics was selected. Certain firm conclusions can be drawn on the basis of data obtained in this study. The present day youths according to tribal women are not very idealistic nor do they have idealism. They are average on this score, which otherwise suggests that they are average also in realism. The tribal women teachers have invariably rated the youth to be less than average on idealism, selfishness, hardwork, aggressiveness, imaginativeness and destructiveness but slightly average on realism, maturemindedness, hardheadedness and sympathetic attitude than the trainees. However, none of the groups had extreme opinions either this or that way which is a healthy sign for maintaining ecological balance in society.

The tribal women teachers have a far greater international mindedness, i. e., perception of relationship beyond the fixed boundaries of one's own community but the trainees did not have any opinion on this issue. The difference in this perception has also become significant at 0.01 level in terms of  $x^2$  analysis of response distribution ( $x^2 = 9.930$ , P  $< 0.01$ ).

This section which presented results in terms of the objectives of study (No. 1) is quite interesting from the sociological point of view of construing social change in the tribal society through education. A co-ordinated view point will be presented later in this paper.

### Self-concept

The next purpose of the study was to analyse self-concept of tribal women teachers and trainees. The previous section dealt with perception of others and this section deals with perception of self using an adjective checklist. The scores on this test range from -36 to +36. The Mean selfconcept scores of the tribal women teachers and trainees were respectively 27.04 and 23.04 with corresponding SDs of 10.23 and 6.20. Obviously, the tribal women teachers have shown a greater positive self-concept than the teacher trainees which is a statistically significant difference. This is probably due to the fact that education raises the level of self-concept and the tribal women no longer feel less self-esteem. But involvement in teaching profession probably accelerates the development of selfconcept. This further ensures the role of education as an instrument of change in the individuals of tribal origin in particular.

### Locus of Control of Behaviour

Fate has been a permanent asset of tribals and that is the way they perceive causality or instrumentality of their actions. In the present study Rotter's I-E scale was used which has been in use on Indian sample quite reliably. The scores here vary from 0 to 23 and with built in lie items. The results showed Mean I-E scores of 7.08 and 7.18 respectively for the teachers and trainees with wide corresponding variations, i. e., 4.49, and 3.31. Both the groups are fatalistic inspite of education since the mean scores are more proximal to 0 than to 23.0 the point where faith is on one's own self. This might be the effect of tradition, religion and culture on the tribal life even after education. May be, further scientific education is necessary to make them more self-reliant; to see more of personal contribution in what happens to them than the contribution of others in their success. This is a logical step and a beginning step to increase self attributional processes in tribals.

### Achievement Orientation

Achievement orientation is a function of one's membership in a particular community or involve-

ment in a profession. The achievement orientation was measured by using Ray-Lynn questionnaire consisting of 27 items. The higher the score, the higher is the achievement orientation. The Means (and SDs.) are 62.28 (4.63), and 59.96(7.49) respectively for tribal women teachers and trainees. There is no significant difference between the two groups. However, the mean scores indicate a sense of higher achievement expectation in both the groups which appears consistent even with fatalistic orientations but this may be for a different reason. That is no matter how you attribute causality—one's orientations could still be at a higher plane.

### Role perception

Role perceptions of tribal educated women were examined on the basis of five aspects of life : the family society, education, politics and occupation.

The women teachers perceived their role in terms of household work and home management whereas the trainees perceived family role in terms of child rearing and home management. Both the groups felt no role in decision making even though they have been educated. Such differences in opinion are significant ( $\chi^2=20.254$ ,  $P<0.01$ ). Women's role in politics has been looked at from four points of view : disturbances in family life, lack of shrewdness, disinterest and male stigma. The responses of the two groups were analysed using  $\chi^2$ . The value is not significant. This indicates that opinions are divided almost equally on four categories within chance level. But the preponderance of opinion went in the direction of male stigma which does not permit females to get into politics as a way of life. Further work may highlight the issue.

Equality of educational opportunity has been our motto at the moment but has it been looked at in the same way ? The tribal women teachers and trainees perceived that lack of environmental facility, absence of promotional facilities, and lack of definite orientation followed by lifeless and inactive role characteries women's role in education. These are uniformly perceived by both groups but these factors deserve our consideration since women are to function and play a major role in the educative process, in the emerging Indian society.

Leading an occupational life has been a major source of expectation in every one's life.

This was analysed in relation to type of occupation, professional improvement, prestigious nature of jobs, needs of special association. The  $\chi^2$  analysis revealed a significant value of 7.643 ( $P < 0.05$ ). The tribal women teachers felt their involvement in prestigious jobs and the need for an association with a greater emphasis than the trainees. They also perceived lack of professional improvement in occupational career. These simply indicate the possibility of discriminating practices in the field which for greater social cohesion have to be dispensed with.

How do the tribal educated women find their place in the larger society? Do they feel that they have to play the role of a social worker, hold low social positions, play no role in social decision and policy making, just to show family identity? The response distributions on the four counts are significant ( $\chi^2 = 18.636$ ,  $P < 0.01$ ) for the teachers and trainees. While a great majority (60 of per cent) women teachers feel that they are meant for social welfare activities, the trainees emphasize that they are meant only for social welfare, they have no role in decision making and they can only reflect family identity. In other words, perception of women's role in all the areas mentioned here have hardly changed in expected magnitude but the trends are seen in a few cases; possibly one gets a feeling that the women's place is still in the home after enough education. Such a sign is inhibitory for any social upliftment.

### Values

Values were analysed from the point of view of two conceptual framework.

(a) Instrumental and Terminal

(b) Value types of Allport et al. (1967)

A person has a value and a value system. A value is an enduring belief that a specific mode of conduct or end state of existence is personally or socially preferable to an opposite or converse mode of conduct or end state of existence. A value system is an organisation of beliefs.

The first five Instrumental/Terminal values for the Tribal women teachers and trainees were as follows:

#### INSTRUMENTAL

##### Values

ST Trainees	ST Teachers
Freedom	.. Family security

A world of beauty	.. Freedom
A sense of accomplishment	Salvation
A comfortable life	.. Pleasure
Family security	.. National security

#### TERMINAL

##### Values

Courageous	.. Clean
Polite	.. Ambitious
Clean	.. Polite
Independent	.. Independent
Loyal	.. Loving

While the instrumental and terminal values can be seen from the most preferred ones stated above the values of teachers and trainees are related significantly at each level. All inter-correlations are above 0.95. The findings simply suggest that education can bring transformation of values and work towards convergent of social and moral values in our society. The findings of this study are a step in this direction.

### Value Systems

Allport et al. (1967) outlined the values in terms of six patterns: Theoretical, Economic, Aesthetic, Social, Political and Religious. These are some of the fundamental value. Tables 1 will present the nature of values (Means) in both groups.

TABLE 1  
Mean Scores of Values

Value	ST Teachers	ST Trainees
Theoretical ..	45.00 (7.41)	42.10 (5.70)
Economic ..	35.10 (6.46)	39.16 (6.64)
Aesthetic ..	35.34 (7.17)	36.32 (5.61)
Social ..	45.80 (5.55)	43.88 (6.05)
Political ..	42.16 (6.75)	40.24 (5.23)
Religious ..	35.12 (7.49)	39.12 (6.54)

N=50 in each group  
SDs are in parentheses

From the results, it seems that women tribal teachers are oriented towards theoretical, social, and political values whereas trainees are more oriented towards the economic, aesthetic, and religious values. But the overall findings indicate that value consciousness exists in the mind of tribal women teachers and trainees. But status did not produce any significant variation in values.

### Discussion

The study focused its interest in understanding sociology of educated tribal women in relation to perception of others, self, role, and value systems. In this context two groups of tribal women (teachers and trainees) were selected and were studied since these women have to play a major role in the emerging Indian Society. The study revealed that in many respects the educated tribal woman of today is more progressive in thinking without becoming unrealistic and without destroying the better aspects of traditional life. The educated tribal woman finds herself in a harmonious balance between modernity and tradition, between realism and idealism, and at the same time is conscious of the taboo placed on women in relation to role perception and role performance. These factors need kept in view while examining and introducing educational and social change in the tribal community. While there may be specific/marginal variations in such perceptions within a given tribal community, the present sample having included several tribes, the assumption of commonality has been the line of reasoning in this study. In fact, any microscopic analysis may not pay dividend for any large scale intervention of attitudinal or educational change in the community of tribals nor it may be feasible in terms of other visible and invisible constraints.

Both women teachers and trainees had positive self-concept and the role of self-concept has been emphasized in bringing about social change (Grawney, 1977). Crittenden (1983) has also emphasized the sociological aspect of attribution. In view of the fact that even the educated tribal women teachers and trainees expressed extrenality or fatalistic attributions, it is necessary that a strong self attributional process of orientation should go into the educative process of tribal children from a very early life. There is more striking resemblance between the value

patterns expressed by tribal women and values expressed by people in general (Rokeach, 1979), a fact which indicates the consciousness of the educated tribals for finer aspects of life.

### Conclusion

Within the limitations of the sample and measuring tools used, the findings of the study revealed many significant facts about educated tribal women and removed many of the misconceptions brought out by the label 'Tribal'. Further indepth study may be planned to highlight certain findings in the area of perception, role and values.

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# Earlobe attachment and eye brows among the Bonda of Koraput district in Orissa

M. Haque

The paper deals with the earlobe attachment and eye brow ridges among the two sections of Bonda of Koraput, Orissa. Altogether 200 males have been observed. The Bonda is the most primitive, wildest, rudest and interesting tribe of Orissa found in Malkangiri subdivision. The modern civilization has not changed them very much. They remain unaffected maintaining their primitive social customs and traditions. On the basis of their habitat the Bonda have been subdivided into two sections namely, Talo Bonda (Lower Bonda) and Upar Bonda (Hill Bonda). The Upar Bonda live in mountainous and hilly ranges of Bonda hills. Generally marriage between the two sections is prohibited.

The two sections are marked by their difference in name, dress, way of living, food, behaviour and culture.

## Earlobe attachment

Observation on the earlobe was made under two categories—attached and free. Table-1 shows that highest frequency (55·00 per cent) in attachment of earlobe is observed among the Talo Bonda. Among the Upar Bonda it is found to be 42·00 per cent. The studied groups show non-significant (3·3830) difference so far as this character is concerned. The present study satisfies the earlier hypothesis of Dutta (1963), Dutta and Ganguly (1965) and Das (1967).

TABLE 1  
*Earlobe Attachment*

Group	Sex	Number	Attached		Free	
			Frequency	Per cent	Frequency	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Upar Bonda ..	Male	100	42	42·00	58	58·00
Talo Bonda ..	Male	100	55	55·00	45	45·00

## Eye Brow Ridges

For the study of eye brow two distinct categories were used:—Continuous—where both the eye brows are connected by hair follicles; and separated—where the eye brows are not connected.

Table 2 shows the distribution of eye brow ridges among the Bonda. It is evident that 31·00 per cent of the Talo Bonda and 15·00 per cent of the Upar Bonda have connected eye brows. In this respect the difference between the two groups is significant (7·2276).

TABLE 2  
*Eye brow Ridge*

Group	Sex	Number	Connected		Separated	
			Frequency	Per cent	Frequency	Per cent
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Upar Bonda	.. Male	100	15	15.00	85	85.00
Talo Bonda	.. Male	100	31	31.00	69	69.00

**Summary**

As there is no published physical anthropological report on this primitive group, it can be stated on the basis of this investigation, that in respect of both attached earlobe and connected eye brow the Talo Bonda show higher frequency. In case of earlobe attachment the groups show non-significant difference whereas in case of eye brow ridges they show significant difference. The previous hypothesis of more attached earlobe in tribal population is also proved by this study.

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— X —

## Notes on Kalangas—

# A Colourful Community of Bolangir, Sambalpur and Kalahandi districts of Orissa

Mohan Behera

Orissa is a beautiful State with her picturesque landscapes, mountains and forests. Her tribal sons and daughters sing beautiful songs and perform colourful dances. In Kalahandi, Sambalpur and Bolangir districts many tribal communities live with their distinctive life style.

A community called 'Kalanga' who claim to be declared as Scheduled Tribes, live in the village Nuapada and those adjacent to it with their typical habits and ways of life, which attract many tourists, sociologists and anthropologists to the area. The village Nuapada was selected for study by the Tribal and Harijan Research-cum-Training Institute, Bhubaneswar to ascertain the caste-status of Kalangas.

This village lies on 20°—28' E latitude and 83°—27' N longitude in Tusra police-station of Bolangir district. It is in Kudasinga Grama Panchayat of Bolangir Sadar I Block. The village is connected by an all-weather semi-pucca road to the main road running from Bolangir to Kantabanji at Kudasinga which is about 20 Kms. from the district headquarters.

The village is having some infrastructural facilities like electricity, pucca wells, tube-wells, shops, upgraded M. E. School, etc. Other such facilities like Post Office, High School, Veterinary Centre, Bus stop are available at Kudasinga which is hardly a kilometer distant from the village. To the East of the village lies a beautiful hill called Budhadangar and the rivulet Naikianijor flowing at its Southern side adds more beauty to the village. A small Minor Irrigation Project constructed on the river Naikianijor provides irrigation facilities to the lands of Nuapada and Kudasinga villages where various crops are grown.

The village is a multi-caste village where as many as 12 communities with 162 households and a total population of 962 of which 499 (51.87 per cent) are males and 463 (48.13 per cent) are females, live together. The total number of literate persons in the village is 289 out of which 228 (78.89 per cent) are males and 61 (21.11 per cent) are females. The Table 1 indicates the caste composition of the village and the literacy of the villagers.

TABLE 1

*Caste composition and literacy of Nuapada village in Bolangir district*

Sl. No.	Community	Name of the Caste/Tribe	No. of households	Population			Literate		
				Male	Female	Total	Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Community in question.	Kalanga	64	160	144	304	38	2	40

Sl. No.	Community	Name of the Caste/Tribe	No. of households	Population			Literates			
				Male	Female	Total	Male	Female	Total	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
2	Scheduled Caste.	Ghasi	..	2	12	11	23	8	1	9
3		Ganda	..	15	41	39	80	19	2	21
4		Keut	..	16	52	38	90	27	3	30
		Total	..	33	105	88	193	92	8	100
5	Scheduled Tribe.	Gond	..	11	24	32	56	9	1	10
6	Other Castes	Brahmin	..	10	56	48	104	34	29	63
7		Thanapati	..	2	7	9	16	6	5	11
8		Mali	..	15	43	45	88	8	2	10
9		Dumal	..	3	7	10	17	1	..	1
10		Teli	..	5	30	25	55	19	8	27
11		Gauda (Milk man).	..	12	39	36	75	11	4	15
12		Bhandari (Barber)	..	7	28	26	54	10	2	12
	Total	..	54	210	199	409	89	50	139	
	Grand total	..	162	499	463	962	228	61	289	

### Language

The language spoken by the Kalanga is called 'Leria'. It is a mixture of Hindi and typical Oriya of Western Orissa.

Some examples of the language with their English renderings are given below:—

1. My name is Dhoba Majhi.  
Leria—Mor Nam Hate Dhoba Majhi.
2. I have two sons  
Leria—Mor thu than Beta.
3. Both the sons are married.  
Leria—Dona Beta biha Karen Ne.

Though Leria is their spoken language, they talk Oriya fluently and write everything in Oriya. There is no specific script for the language.

### Housing pattern

As has been mentioned earlier, Kalanga villages are mixed villages. The Ghasis and the Gandas who are considered as untouchables live separately from the other Castes. The Brahmins, who have a higher status, also live separately in a different sahi. But all other communities live together in a compact area in a different sahi.

### Dress and ornaments

The males use dhoti and kurta and the females use sarees of typical Sambalpuri design. They do not use any under garments. The females wear bangles called 'Bandriya' and 'Rang' which are made of an alloy of certain metals. They also wear anklets called 'Nepur'. Ladies of well to do families use golden earrings called 'Jhalka' and 'Ganthia' and necklaces called 'Sanmala'.

## House hold articles

The household articles of a Kalanga family are very limited—just sufficient to meet the bare necessities. These are :—a few cooking vessels, some baskets of different sizes and designs for keeping different articles, some hunting and fishing equipments and a few bellmetal pots. Agricultural implements comprise of 'Nangar' (Plough), 'Hansia', (Sickle), 'Rompha' (Spade), 'Juadi', (Yoke), 'Tanga', (axe) and 'Kudari (Pick-axe). In some families spinning implements are also found. They are—'Dhunath', 'Dhunati and Tat', 'Rahanta' and 'Natei' which are no more in use since cotton cultivation is not a practice of Kalangas now a days.

## Economic life

The Kalanga economy is of subsistence type. They take up wet cultivation in low lands and grow minor millets in high lands. Agriculture is substituted by wage earning. The average land holding per family being less than one acre, they live from hand to mouth. The children are engaged in grazing goats of the villagers. They are not allowed to get primary education though there are schools near by. Traditionally, they were cotton cultivators and suppliers of quality thread to the Gandas living with them. The Gandas used to weave cloths. But after commissioning of the irrigation project the cotton crop was replaced by paddy crop by the local people and in consequence spinning disappeared. Some of them had to sell their land to Non-Scheduled

persons to sustain themselves and as a result were forced to give up the habit of spinning. The people rear bullocks, cows, goats and poultry. The average annual income of a family is Rs. 1,780 which is indicative of the fact that the people are below the poverty line.

## Political Life

The Kalanga do not have their traditional leaders. They appeal to the village council to get justice and go by general norms of the Hindu Society.

## Social Organisation

The Kalanga, though limited in number in Orissa are found in Balangir, Sambalpur and Kalahandi districts. The community, as revealed from the study, comprises of nuclear families, the smallest components in the over all organization of the society. The nature of family is conjugal for it consists of husband, wife and children who live in a two-roomed domicile. After marriage the sons seek partition. On demand the sons get equal shares. The daughters are debarred from getting any share. The father is the head of the family and exercises authority in every sphere.

The community is endogamous. The people have various titles such as Rendia, Bhat Pahari, Chikat, Pandey etc., numbering 44. Groups with different titles live in different villages as would be seen from Table 2.

TABLE 2  
*Distribution of Kalangas having different titles*

Sl. No.	Major Lineage	Minor Lineage (Gotiar)	Dwelling village	Distance from the study village in Kms.
(1)	(2)	(3)	(4)	(5)
1	Randia	2. Darra	Kendubhatta, Praskhal	70 72
3	Barik	4. Bhatpahari	Kerbeda	32
		5. Kapatnayak	Pali, Budhibahal	20 38
6	Nayak	7. Khamri Nayak	Kerbeda, Patkinal	32 64
		8. Chikat	Sareikala, Bijadhol	96 64
9	Gadar Majhi	10. Bisesaria Majhi	Darmunda, Kuthuila	38 3

Sl. No.	Major Lineage	Minor Lineage (Gotiar)	Dwelling Village	Distance from the study village in Kms.
(1)	(2)	(3)	(4)	(5)
11	Majhi	..	Darmunda	38
12	Pandey	..	Sibtila	6
13	Banda	..	Sibtila	6
14	Gairi	..	Sibtila	6
15	Karahipradhan	..	Luhasinga	38
16	Managar Rout	..	Lachhimal	38
17	Barha	..	Kalangapali	20
18	Ganda	..	Babijor	38
19	Chhata Barha	..	Budhibahal	38
20	Nang Rout	..	Gambermal	16
21	Bhil	..	Baidpali	112
22	Ginna	..	Gambermal	16
23	Dinda	..	Badimal	72
24	Kalari	..	Sibtila	6
25	Sagar	..	Badabandh	6
26	Karwar	..	Baidpali	112
27	Kusundi	..	Luhasinga	38
28	Dass	..	Sibtila	6
29	Chhati	..	Ghumar	22
30	Sarigan	..	Ghumar	22
31	Chhuri	..	Kendubhatha	54
32	Singi	..	Bamuntal	112
33	Karsal	..	Patrapali	38
31	Raon	..	Patrapali	38
35	Bichhi	..	Parask	120
36	Raxiapradhan	..	Dhumabhata	6
37	Ghari	..	Badhapali	42
38	Tati	..	Munekol	120
39	Baira	..	Patrapali	38
40	Bagh	..	Kendubhatta	54
41	Sarap	..	Kerbada	35
42	Satriya	..	Kerbada	35
43	Dhanria	..	Ghumar	22
44	Gual	..	Sibtila	6

Marriage relationship can be established between two families having different surnames. This is however not possible in case of Darras, Bhatpāharis, Kapat Nayaks, Khamri Nayaks, Chikats and Bisesaria Majhis who are considered to be blood-relations and know as 'Gotiar'. Excepting this restriction, the community does not go by exogamy as it has no clan or lineage system. The whole community is having only one Gotra of Hindu origin called 'Nageswar'.

### Birth rites

Birth of a baby is arranged in a separate room. The help of an experienced woman is availed of as mid-wife. The umbilical cord is cut by the mid-wife with an ordinary knife and buried by the father of the child in a deep hole in the backward. Both the mother and the baby are considered pure on completion of a ritual bath. A purification ceremony to be free from pollution due to birth of a child is observed on the day the naval cord dries up and falls. It may take 5 to 7 days or more from the day the birth takes place. On that day in a corner of the house 'Patmisri' the supreme being, is worshipped by the father. A cock, in case of a male child, or a hen, in case of a female child, is sacrificed. Mahua liquor is also offered as sacramental food to the goddess. This is called 'Mutka'.

### Marriage

Generally adult marriages take place. Though arranged marriage 'Bartia' is the rule, cases of marriage by capture are also found. In the arranged type of marriages, negotiation is done by a middle man 'Mahaliajathan'. In this type bride-price 'Sukmul' is paid in the form of cash and kind by the boy's father. Wednesday and Friday are considered auspicious for marriage. On the appointed day the groom comes to the bride's house for marriage. A he-goat and a she-goat is sacrificed for the groom and the bride respectively and their foreheads are marked with the blood of the respective animal before they step on to the marriage altar. A branch of a Mahua tree represents 'Patmisri' before which the nuptial-tie is solemnised by way of tying together the ends of the bridal clothes of both the bride and the groom.

Marriage by capture 'Paisachudi' is also prevalent. The boy who captures the girl is required to pay a penalty in addition to the normal bride-price that he has to pay.

In case of death of the elder brother the younger brother can marry the deceased's wife

even if she has begotten children. This is called 'Lagchudi.' Sororate and levirate marriages are also prevalent. Widows marry widowers without any bride price. In fact the marriages are celebrated in the most Hinduised fashion as observed in the field. But significantly the Hindu Brahmins do not officiate in the marriage and the maternal aunts virtually tie the nuptia knot.

### Death rites

In case of death 'Sarad', the corpse is buried but not cremated. It is believed that the soul after death goes to 'Pretpuri' the abode of ancestral spirits. After the corpse is buried water is sprinkled with a coconut shell over the grave to allow the soul to go straight to the ancestral abode. Pollution is observed for 3 days. On the third day which is called 'Telghar' the agnates get themselves ritually purified by shaving their heads clean and putting on new clothes. From that day the deceased's wife cooks rice in her house in new earthen pots and invites the agnates to share it. On the eleventh day the purification ceremony comes to an end when all blood-relations get together and share a sumptuous feast. The Hindu washerman serves them and cleans their polluted clothes. The village barber 'bhandari' also serves them in this connection. 'Masan tihar' the annual sradha ceremony, is also observed in which the spirit of the deceased is invited and its fare well ceremony which is called 'Batiathan' is performed. In this ceremony, the family members and relatives of the dead person finally give farewell to the ancestral spirit by offering rice, dal and sweets and saying 'E Chaur Dier Roti Tuman Dharka ja Bat Ghat Men Khate Ja' which means "You take these rice, dal and roti and eat while going on the eternal path".

### Cultural life

The Kalanga observe many festivals during which they rejoice with their traditional dances 'Danda Natch' and 'Karama Natch'. The following festivals are observed with much enthusiasm.

1. *Patmisri*—This festival occurs during Dasahara on the 'Navami day' usually in the month of October every year. All the Kalanga gather at the end of the village on the stipulated date and offer puja to their Supreme being 'Patmisri' with incense, flowers, sweets, and coconuts. Sacrifice of goats and fowls, is also made before the deity and the festival is rejoiced with feast and dance.

2. *Budha dangar*—The hill so called is regarded as the Goddess of land, Goddess of property, Goddess of diseases and above all the Goddess of all happiness. The festival of Budha dangar is observed on the 'Kumar Purnima Day' in the month of October every year. It is regarded as the greatest festival of the area wherein all people irrespective of caste and community participate. A 'Jhankar' of Kondh tribe solemnises the festival and heavy sacrifice of goats, sheep, fowls, and buffaloes is made before the Goddess Budhadangar. The entire area remains agog with the festivals of Budhadangar and specially the Kalanga rejoice with various kinds of cakes, sweets, liquor, meat and new clothes. Dances are performed in many villages by young boys and girls in groups throughout the night to enjoy the festival.

3. *Halari Tihar*—This deity is worshipped by all Kalanga families in their respective houses. It is regarded as the Goddess of family welfare and the Goddess of cultivation. Generally the festival so called falls in the month of August every year on the 'Sravana Amabasya day'. The head of the household, after bath and purification of his body offers puja to the Goddess with sandalwood paste, turmeric powder, raw rice, flowers and sweets in the kitchen room and offers wine to the Goddess. After that, as many cocks and hens as there are males and females respectively in the family are sacrificed and their blood is offered to the deity.

At noon, the female head of the house offers puja in the cattle shed. Agricultural implements, bullocks and the shed are worshipped and this is called 'Nangar Tihar'. No sacrifice is made in 'Nagar Tihar'. Only cakes and sweets are offered in the puja. Guests are invited and the Kalanga make merry throughout the day and the night.

4. *Karam-sani Tihar*—This is regarded as the Goddess of welfare by the Kalanga and she is worshipped in the month of September every year on the 'Bhadra Purnima day' by the Goontia on the main street of the Kalanga village. Flowers, sandalwood paste and raw rice are used in the puja and wine is offered to the deity. All Kalanga families offer cakes to the Goddess and Karama dance is performed in the night by the young Kalanga boys and girls.

5. *Pat Khanda*—The holy sword which is brought by Brahmins from Patnagarh represents the 'Goddess Patameswari Samaleswari'. It is universally worshipped by all communities resi-

ding in the village and the neighbouring villages. The ceremony is solemnised in the centre of the village near the village deity 'Mauli'. Sacrifice of goats and fowls is made before the deity in which the Kalanga take part with much enthusiasm. It is observed on the 'Dasahara day' in the month of October every year.

6. *Thakur Deo*—Thakur Deo represents the God of the traditional dance 'Danda Natch' of the Kalanga. This God is worshipped with incense, flowers and sweets before performance of the dance and ceremonially the dancing troupes come out to the platform after the puja.

7. *Hara gauri*—This is a typical Hinduised puja exclusively performed by the newly married and unmarried girls of Kalanga community.

The Haragauri puja can well be compared with the 'Khuduru kuni Osa' of the non-Brahmin girls of the coastal districts of Puri, Cuttack and Balasore. It is for the welfare of the brothers and paternal relatives. The girls collect earth after a holy bath in empty stomach early in the morning and bring it in a procession to the accompaniment of Madal and dance, place it on the main street and prepare idols of Shiva and Gauri. After the idols are made they worship them with incense, flowers and sweets and rejoice with a dance called 'Sua Natch' which is performed with plants of new paddy. This ceremony is observed on the 'Kumar Purnima day' usually in the month of October every year. On the next day, the idols are immersed in the river by taking them in a procession to the accompaniment of the same music and dance as at the time of bringing the earth. The boys help the girls in making arrangements for the puja and playing musical instruments.

#### Music and dance

The traditional music of Kalanga has earned a good name and fame and quite a good number of institutions of music have come up in the villages, troupes from which go to different places to perform music and dance. Thakur Deo Sangh is one such institution which has earned reputation by winning a number of certificates and medals from various dance and music competitions held in Bolangir and Sambalpur districts. The musical instruments used are a drum called 'Madal', which is an earthen drum covered with leather and a pair of cymbals called 'Gining' made of bellmetal. Now a days modern musical instruments have also been introduced to make the music attractive.

'Danda Natch' is the traditional dance of the Kalanga and is performed with the rhythm of sticks. Eight or more persons adorned with colourful dresses perform this dance. The dress comprises of coloured clothes, well decorated turbans made of coloured cloth, peacock feathers and glazing beads. The head gear is very attractive, Ornaments like armlet, Bajubandh, ear beads 'Karmali' and ghungur 'Gulghulla' are used by the dancers. Each dancer holds a mirror and a stick and rhythmically dances to the tune of the songs and music played by others. Before the dance, the ceremonial Puja of 'Thakur Deo' is performed and the troupes enter and exit ceremonially.

Another type of dance called 'Karama' is generally found in Sambalpur area. In this dance both boys and girls participate.

'Sua Natch' is a dance performed by the newly married and unmarried girls on the 'Kumar Purnima day' on the occasion of Hara Gouri Puja. They hold bunches of new paddy plants and dance to the tune of music played by the boys of the same village. There is also no restriction for performing the dance in other villages if invited by the girls of those villages. The dance is very colourful though, is not performed on any occasion other than 'Hara Gouri Puja'.

### **Benefits given previously**

It came to notice during the study that two Kalanga landless persons named Dhansing Khamri and Samitra Bhatpahari of village Nuapada had been given half an acre of land each as landless Scheduled Tribes in the year 1971 but such benefits are not extended to the Kalanga now-a-days.

It is also revealed from the study that Naresh Sirdar, Rangadhar Sirdar and Padmanarayan Sirdar, three Kalanga students of Nuapada village were given stipend for some years in their school career as Scheduled Tribe students. But subsequently it was stopped as a result of which Rangadhar Sirdar and Padmanarayan Sirdar were forced to discontinue their studies. But inspite of discontinuance of the stipend Naresh Sirdar continued his studies and passed I. A. and underwent C. T. training with much difficulty and suffering. The reasons for denial of the benefits to them are not known.

### **Conclusion**

On the basis of the above findings, it can be said that the claim of the Kalanga to be included in the list of Scheduled Tribes in Orissa is justified and they deserve all benefits given to the Scheduled Tribes in Orissa.

—X—

# Impact of an emerging town complex on a traditional fishing community at Paradip Port, Orissa

Mrs. Sangita Mohapatra

Sandhakud, formerly a small isolated village of fishing community, has now become an every day word in the fast growing town complex of Paradip Port Trust, Orissa. With the rapid industrialisation and urbanization, the small fishing community living in the village is undergoing a socio-economic change, that is, a process of modernization. This characteristic change in the immediate physical and cultural environment has been effecting diversification of economy and occupations of this little community. On the other hand, this has affected the traditional socio-cultural life of the community minimising communal harmony and social cohesion. The monetised market economy and competition in the open market have implications in the growing disputes and tensions at the inter personel inter-communal and intracommunal levels.

## Introduction

As Davis ('51) states, with industrialisation, forces tend to accelerate the movement of people from one status to another. Further, such movements begin to increase, keeping pace with population growth, urbanization and secular education. Moreover, the democratic set up and economic changes also favour this trend of movement (Jain'69).

From these stand points, it may be assumed that the traditional fishing community at Paradip Port area must have been experiencing a socio-economic change in the gradual process of occupational competition in the field of catching and marketing fish along with the trawler owners and the new entrants in the field.

Sandhakud is one of the Revenue villages within the jurisdiction of the Paradip N. A. C. in ward No. III. It is bounded by the village Udayabat on its North, Bay of Bengal on its South, Musadia forest on its East and the villages Ranigarh, Chauhiapada and Udaya Chandrapur on its West.

The inhabitants of these villages are marine fishermen, mostly migrated from South, i. e. Andhra Pradesh.

## Village Profile

Village Sandhakud just like a hamlet of Paradip Port and as myth says due to its natural elevation it is termed as "SANDHAKUD". There is a flat sea beach visible from a distance of about a kilometre. This area used for keeping the fishing crafts and also for drying and repairing the nets.

Village Sandhakud has a compact settlement pattern. The houses are mostly rectangular in shape and are scattered. These are mostly low roofed, thatched with palm leaves and mud walled. Individual families generally have one to three rooms. The inner most room is used as the kitchen, if there are more than one room. All the houses are provided with a outside verandah. In the entire village, there are four cemented houses. The village headman's house is of developed type in front of which there are two cement benches for holding the village meetings or for the guests to be seated. The village roads are narrow and uneven.

At the entrance of the village, there is Gram Devi or village Deity, and at the centre a "Ram Mandir" has been recently established. On the Ram Navami day of 1982, this temple was first inaugurated. This village had a primary school, but it has been destroyed by the cyclone of December, 1981.

Recently, a small Telgu teaching school with a single teacher and ten pupils on roll has been started. There is no post office here and for postal communications they have to go to the Port area.

There are six tea shops, five liquor shops, four grocery shops and two tailoring shops in this village. There are also four tube wells and six wells which give saline water only. So, for sweet water they depend on dug-out water holes. These are generally two to two and a half meters deep from which women scoop water in earthen or aluminium pots. But during the owing season water becomes salty due to over drinking of the sea. Hence the situation of satisfactory supply in this village is not at all

### Social Profile

Common language spoken by the villagers is mainly Telgu. But now five Oriya families have settled in this village whose main occupations are business through tea-shops, grocery shops, etc.

The fishermen use conical Palm leaf caps in which they take tobacco, match box etc., when they go out for fishing into the sea. This cap helps them to cut through the high waves as well. Men wear a small piece of cloth from the waist below during fishing and occasionally use dhoti and shirt. The women usually wear sarees and put on very few ornaments. Their families are of nuclear type and generally after marriage, the couple establish a separate household. Extended family is a rare occurrence.

Birth ritual is not so important though they observe it by giving a feast on the 21st day of child birth. The first hair cutting ritual of the new born is most important in their society, which is performed by a Telgu barber only. It is done when the child completes one year of age.

Monogamy is the rule and residence is patrilocal. Inter-caste and inter-lingual marriage is strictly prohibited. There is no economic

idea of dowry or bride price as selection of mate is done mainly on the basis of ability of the boy in catching fish from the sea.

Generally the dead body is cremated and after cremation the people cremating the body take bath. The family members of the deceased then offer liquor to the villagers and kin members on the sea-shore as the burial ground is now shifted to the eastern side of the sea-shore. On the 11th day the bereaved family members arrange a feast for the villagers according to their economic status.

### Political Profile

There is still prevalence of traditional system of leadership and social control in the village. Kambal Aleya, the head man of this village is accepted as the secular head. His office is not hereditary but elective. Villagers select a person who is usually affluent, educated and has leadership qualities. In the administrative set up there are two Vice-Presidents and five members. The village head man generally takes the opinion of other members and the villagers as well, in the cases of disputes. So, absolute authority is never vested on the head-man.

### Technology and Fishing Organisation

The fishing craft includes Dangi and Tappa. Dangi made up of sal or teak wood is bigger which is always kept floating on the water. Tappa is a light craft, made up of Chakunda wood and is taken out of water soon after fishing is over. It is prepared out of two pieces of wood which are joined in the middle, front and back side. In Tappa, the expenditure is more whereas the catch is less, yet in this craft life can be saved as it never sinks in water. In Dangi, though the catch may be more, yet risk of life is always there.

Now they have gradually started using nylon nets of nearly sixty types intended for different varieties of fish. They start fishing in the month of April after worshipping Gram Devi. Exception cyclonic or rough weathers, there is an off-season for them and they catch fish like shark, prawn, kantia, pampret, lactanius etc.

The nature and quantity of the catch depends on the weather and oceanographic variations. The peak season for fishing is from October to April, and from May to September only few catches are made. The fishermen leave the beach at about 4 A. M. and go up to 5 to

10 K.ms. into the sea for fishing. After the catch, they return to the shore at about 3 P. M. Fishes of different sizes and shapes are sorted out and then brought to the beach in baskets or nets for selling. The first preference goes to the merchants. At times dry fishes are also made. After a proper wash of the nets in back waters they are dried on the sand. If necessary they are also mended or repaired. The people observe certain taboos and prohibitions in their traditional pursuit. They never go out for fishing on Thursday which is observed as the day of Goddess Lakhmi. Women are not allowed to touch the fishing craft as they are considered to be ritually impure.

### Economic Profile

The primary and secondary occupation of the villagers are fishing and selling the catch. The catch is shared among the boat owner and the fishing labourers. A major portion of their income is spent on tobacco and alcohol and the rest for food. Most of them are indebted to the money-lenders and middlemen from whom they get advance and in return they surrender their catch at a low price. They pass through economic hardships as the living in Port area is becoming too costly.

### Process of Change/conclusion

They have gradually switched over to nylon nets from cotton ones, on account of durability of the former which also gives them a good catch. Gill net is preferred as it gives them a catch of double the quantity than that given by the cotton nets. As a consequence, in this sphere investment has automatically increased giving rise to a heavy load of loans on individuals. At present there is a competition between the modern mechanised craft (trawler) and the traditional craft in the field of fishing. So to say, "Social Selection" has started to operate in this process of struggle and change.

In course of time people of other castes, who carry on business other than fishing have come

and settled down in this village. Thus the multi-ethnic structure of the village has led to group instinct and group sentiment as well. The younger generation are now more bent upon to work as labourers in trawlers or transect business on marine products than to pursue their traditional trade. Similarly in the religious sphere, both the traditional and modern religious functions are celebrated with pomp and ceremony.

Being influenced by monetised economy, they struggle hard to earn more at the cost of their health. They hesitate to have leisure and pastime, spend a lot for alcohols and narcotics rather than food. Simultaneously their social life is going under stress and strain as the family structure is weakening.

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