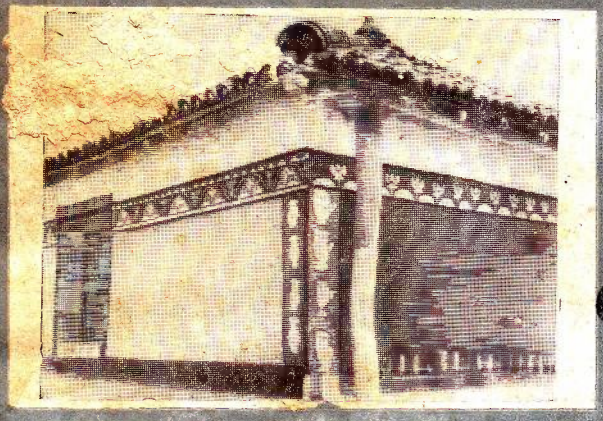

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Dr. N. PATNAIK

DUNA—Its implication in the Dongria Culture

P. S. DAS PATNAIK

As the name signifies, Duna is a bamboo-made money container, largely used among the Dongria Kondhs of Orissa and is considered as a key cultural device to achieve prosperity in both socio-economic level.

Numbering about 6,000 in population the Dongria Kondhs inhabit the lofty Niyamgiri hill ranges in the district of Koraput. From the point of view of cultural peculiarities they occupy a very special place. One can see in the Niyamgiri hills vast stretches of land in the hill slopes under banana and pineapple plantation amidst jack-fruit trees which the master hands of the Dongria Kondh have grown. Expert horticulturists as they are the Dongria Kondhs have proved that the skill, ingenuity and preservance of Man can tame any rugged terrain without even the application of any improved technology for the prosperity of mankind.

Like any other tribe, the Dongria Kondhs form a species for themselves as far as their social organization and cultural pattern are concerned. Almost a century and a half ago this tribe featured very prominently in the report of Mr. Russel for their heinous practices of female infanticide and human sacrifice. Their superstitious beliefs and practices made the tribe known to the administrators as well as accademicians. Preparation of the Duna among them is one of such peculiar beliefs. It will not be out of place to mention here in brief the details of Duna conception to appreciate the cultural sanction lying behind it. Every Dongria Kondh has in his house a Duna or number of Dunas which is either inserted at the roof of the kitchen or buried on his own swidden. Duna is a money container, about one foot in length, made of bamboo, one side of which is kept open and the other side is closed with clay to protect the papernotes to get insecticide. It is an apparatus for saving money. Any lump-sum earning is hoarded in this bamboo socket instead of being spent until the socket is packed up. Once it is packed up a tattered piece of cloth is covered round the opening space over which clay is plastered upon a siali leaf. Subsequently it is backed in the fire to protect it from the decay when it comes in contact with the soil in the pit. This apparatus is buried mainly near the Muldei (Ancestor's-spirit) or near the small hut (Ladi) constructed in his own swidden. Once it is buried it is considered as Sita-Penu (Goddess Laxmi) and tabooed to spend a pie from it during the life time of a person. It is believed such money represents Sita-Penu, the Goddess of wealth and to spend money out of it may entail loss to the family. Each family in the Dongria Kondh society is having one or two or more such containers, which are buried secretly without letting any other in mates of the house to know. Once the fact is disclosed the owner loses the entire wealth and thereby his virtues to be a good man. If the fact is kept concealed and the man passes his life time this treasure brings peace, prosperity and wealth for his successors.

This conception of Duna among the Dongria Kondh has its tremendous impact on the socio-economic life of the community.

Impact on the social life

The entire community is divided into various clans, such as—Niska, Kadraka, Huika, Pengeska, Wadaka, etc. Niska claims to be the superior most of all the clans as it is believed that almost all the predecessors of that clan possessed at least 5 of such Dunas. It is also believed that Niyam Raja who created this clan handed over such Dunas to the members of that clan. He commanded them to burry these Dunas in their respective swiddens to bring peace and prosperity for their posterity to come. As the story goes only five families of Niska clan who

lived in that vast wilderness could produce bumper crop without knowing any technicalities and technology of agriculture. Subsequently other clans inherited such conception of the Niyam Raja to be more prolific in their economic life. In the Dongria Kondh Society birth of a daughter is prized very much because she is considered to be an asset of the family. She occupies a key position in the family and virtually accomplishes all the activities concerning to her home and outside. It is believed a man if possesses at least two Dunas he becomes father of 2 daughters for which he is boastful of himself. Because right from the birth of a daughter in a family the parents are contacted for the former's marriage. Not only that but a competition is marked among the parents of the boys in so far payment of bride price is concerned to receive the girl as the daugher-in-law of the house. While parting natal family the daugher is only empowered to receive one such Dunas from her father which she hands over secretly to her husband to begin their family life afresh with a hope to be solvent in future. Her husband never discloses to anybody and inserts it at the roof of the house constructed newly. This gives an impetus to the male to start hoarding of his own in a new Duna. When it is filled up the earlier one is buried somewhere else and the second one is replaced at the roof. In case the daughter does not bring such Duna to her neolocal family, her husband is sure to face a ruinous economic situation. Though there is the system of divorce in the community, it is hardly practised in such family where the daugher brings Duna with her. It is believed that the force and magical power of Duna patch up dissentions and imbalances of the couple of the house. Even in the worst situation if the husband dies without any heir, the younger brother of the husband marries the sister-in-law so that the magical force of the Duna does not go away of the house. At the funeral of the head of the family the Duna, lastly inserted at the roof of the house is thrown to the pyre. It is believed the burning of the Duna in the pyre increases the virtues of the deceased and paves his way directly to the abode of Ancestor-spirits.

Impact on the economic life

Considering Duna, a supernatural device to bring opulence wealth to the family it is buried near about the swidden. It is an unaccounted money hoarded for all times to come in the bamboo funnel. In the olden days the people of the community used to hoard coins. But during my study in the year 1974 the people used to hoard all new currency notes of various dinominations. As the people say the funnel contains about Rs. 500 to Rs. 1,000 worth of notes which is definitely more than the coins which when hoarded was worth Rs. 100 to Rs. 200. Whenever any crop is sold, the cash which is received in the form of currency notes directly goes to the Duna excepting a few coins which are kept aside to meet the family consumption. This hoarding has led the people to Incur loan as and when required. On any emergent situation the money kept in the Duna is never brought out to be spent for the occasion, rather loan is incurred to solve the problem. This has indirectly pushed the entire community in the doldrums of loan. Habitually, the people incur loan on petty occasions-culminating the entire community into the dungeon of exploitation. The Domb who are the next door neighbours of the Dongria Kondh area extend loan and exploit the community out-right. Under no circumstance, even if a person dies and his or her funeral is to be observed on the next day, a pie is taken out from Duna. Once the money goes to the Duna, it becomes the property of Sita-penu. Sita-penu has given the land free of cost to the people and She must therefore, be paid in coins. This is the belief deeply rooted in the culture for which the people take resort to this method of hoarding. If neglected, the wrath and arrogance of Sita-Penu may bring collosal loss to the family.

Impact on religious life

On the full-moon day in the month of December (Push) after all the crops are harvested Sita-Penu, representing a dry-gourd (Tumba) is worshipped by the house-wife at the eastern courtyard of the house. On this occasion, Duna is also worshipped ceremoniously along with Sita-Penu. For seven days, Duna is kept inside the dry-gourd as a token of reverence to Sita-Penu and then again inserted at the roof of the house. The Shamans (Bejunis) who are the white magicians are supposed to have possessed two such Dunas inherited from their husbands. The Shamans who are mostly widows inherit Dunas from their husband once during marriage and another during the course of training. Even after ten years of marriage if a woman does not beget any child, she prefers to be Shaman and undergoes training under a Pat-Bejuni (Head of the Shamans). During her life time if she cleverly acquires two Dunas from her husband, she is

believed to beget child in her next birth. During Meriah festival, the Jani (Priest), who summons Earth-Goddess (Dharani-Penu) on behalf of the people is only entitled to bring his own Duna and worships it along with Meriah animal. Since he is considered to be the most pious and virtuous, he alone is allowed to do so, and solicits benediction to be Jani again in his next birth. Since other people cannot do that as per prevailing custom of the society, they invite Jani to their respective houses to have his auspicious touch over Duna, which are buried secretly on the day of Meriah festival. This day is considered very auspicious and a Duna buried on this day brings fabulous wealth for the family. Occurrance of repeated deaths in a family is ascribed to non-possession of Duna by the head of the family. About half a dozen expert Shaman along with Jani are utilized to worship Sita-Penu and they prescribe to open the new Duna. The unusual cases of death such as—murder, suicide, persons dying of snake-bite, small-pox, cholera, labour pain etc. are ascribed to the expenditure of money from the Duna on emergent situations. To save other inmates from such unusual deaths, Jani and Shaman are called upon to satisfy Sita-penu with adequate rituals and sacrifices. The inmates are cautioned to compensate the amount spent from Duna immediately.

Impact on the Political life

The traditional leaders in the Dongria Kondh society are Mandal, Jani, Bishmajhi, Pujari and Dishari. Mandal is the Mutha head or territorial head. A territory constitutes about 8 to 10 villages. Whereas Jani, Bishmajhi, Pujari and Dishari are village leaders. It is believed these leaders could achieve such status only because they possessed Duna in their previous birth. The following leaders are supposed to have possessed various Dunas in their previous birth.

The following leaders are supposed to have possessed various Dunas in their previous birth.

Mandal	..	7 Dunas
Jani	..	5 Dunas
Bishmajhi, Pujari	}	4 Dunas
Dishari	..	3 Dunas

Since the above mentioned leaders could posses various Dunas, they were blessed to have achieved such status in this birth. Mandal, who has achieved the highest status is considered the real blessed son of Sita-Penu. He is therefore, highly ovated and his command are treated as the command of Sita-Penu. In the same way perhaps, other leaders are respected in the village and due importance is given to their decision. Even if the new leadership pattern has emerged, the new leader is treated in the same light and his selection is ascribed due to possession of Duna.

Thus this cultural element is so deep-rooted that, the Dongria Kondh can forego his food but not this sanction. To survive, this sanction is to be followed to keep their social structure in tact. It is a fact that there are various external agencies to influence them and their culture. From the year 1964, the Government and non-Government agencies are working in the Niyamgiri hills to develop the Dongria Kondh and to bring them par with the civilized society. But they have not been able to influence this aspect of culture. The core of culture is still in tact.

This can be substantiated with a few case studies, collected during the Year1980. Seven cases were collected from the villages-Hundijali, Tuaguda and Kadragumma. Five out of seven cases have been able to accumulate wealth in two Dunas even if they are within the age-group of 35 to 45. Only in two cases, thay have not yet started, because they are teen agers. In five cases, the number of Dunas may increase if they survive for a longer period. The Dongria Kondh now earn more. More cash crops are being cultivated on co-operative basis. Naturally surplus commodities are sold in the Fair-Price centre where from net cash is available. Barter economy has become obsolate. This net income has rather gone to the Duna instead of being spent extravagantly.

But the question arises, can we have realistic planning for this tribe, who really earn but utilize uneconomically ? The average annual income per household of a Dongria Kondh family during the year 1964 was Rs. 507 which has increased to Rs. 1,037 during the year 1974. With this extra income, they would have been more solvent. But are thay so ? Where does the money go ? The money goes to Duna. So we plan to give them more money but we do not plan to see how the money is utilized and whether the money is utilized properly. A holistic approach in planning is therefore important than a mere symptomatic-planning.

Sansis of Punjab-Haryana Region Some Aspects of Cultural Geography

S. S. CHIB

Sansis one of the most prominent ex-criminal tribe of Northern India is also known by the nomenclatures of *Bhedkut* and *Manesh*. According to 1971 census[1] 81,610 Sansis lived in the States of Punjab, Haryana, Rajasthan, Madhya Pradesh, Himachal Pradesh, Maharastra and the Union Territories of Delhi and Chandigarh. From numbers it appears that those found in Maharashtra (62) and Himachal Pradesh (470) were temporary migrants. Of late some Sansis have come to stay in that part of Kangra district (H.P.) that borders with Gurdaspur district of Punjab. However, their area of operation is Gurdaspur district. Moreover about 66·2 per cent of them (about 70·3 per cent including Delhi and Chandigarh) concentrate in the Punjab-Haryana region alone. This paper aims at highlighting some of their socio-cultural traits that have persisted the impact on the economic fabric notwithstanding the steps taken by the Governments to bring about their socioculture-economic resurgence.

Name, Identity and History

From the available literature and field study one comes across many a legend related to the history of Sansis. However, after shifting different narrations one infers that, the Sansis derive their name from their Rajput ancestor Sansi, whom they call Raja Sansmal and who now is the supreme ancestor diety worshipped by Sansis universally. Raja Sansmal is said to be the son of *Sahastrabahu* and a grandson of *Shastradhana*[2]. He had two sons named Mahala and Behdoo and a daughter Rasalan. The two important sects of the Sansis derive their names after these two brothrs. Raja Sansmal is said to have ruled over Lakhi Jungle,[3] tract of Rajputana. In probability the Raja along with his followers was driven out by Muslim invaders around 1303 AD under Allaudin Khilji.[4] Some people opine that the word Sansi is a corrupted form of Hindi word *Sahasi* meaning brave while Bhargava says that the word Sansi is usually derived from the Sanskrit word *Shvasa* meaning breath.[5] Although these explanations appear to be irrelevant yet their (Sansis') acts over the years reveal that in genetic terms they are the descendants of a brave people and it is only under compelling circumstances that they rechannelled their valour to nefarious activities. Kaul has also supported their Rajput origin in his report submitted to the Government.[6] C. M. Seargin in his report asserts that Sansi and Sansmal were two great Rajput leaders and brothers living in the village of Biyana, Baroli district of Bharatpur.[7]

After Sansmal, the Sansis come to be divided into two clans under two sons of the King. At times the clan leaders quarelled for supremacy but their wise and far sighted sister Rasalan along with some elderly wise men of the community always intervened between the warring groups to patch up differences in the larger interest of the community. No wonder the community assembly became a permanent body like Panchayat and named *Rass* after the lady who had initiated it.[8]

Driven and chased out of their native land these Rajputs had to face many vicissitudes. Being disposed of their homeland they had to be wanderers and vagrants for a number of years, roaming in different parts of Northern India. Being Rajputs who had been land-lords, soldiers and rulers it was impossible for them in those days to compromise to menial and other inferior jobs. After all they were a

martial race and could not brook the idea of subjugating themselves to alien rulers, once they had dared to defy the Muslims. The want, hunger and destitution compeled the once valiant people to adopt predatory and pastoral activities, to take out livelihood. Both these activities turned them into nomads. For saving their skin after predatory raids they had to move out of their temporary dwellings. For pastoral pursuits, which they in all probability adopted to camouflage their nefarious acts, also required them to move from place to place in search of natural meadows in the absence of any land holdings or permanent grazing rights. In fine, poverty and destitution degraded the orjginal Rajputs into anti social people.

Punjab-Haryana region, an area adjacent to their native land naturally became their largest operation ground. With their scanty belongings and animals they used to choose the outskirts of towns and villages for their encampments, as these sites provided them with convenient bases of operation and also ease as well as convenience to shift their camp after being suspected of fowl play. Some of them are said to have settled permanently in some villages and got converted to Sikhism. Some scholars opine that Maharaja Ranjit Singh was a descendant of one such noble family,[9] but in want of a clear cut evidence it is not only doubtful but baseless too to accept such a deduction. Those who opted for nomadic living became more aggressive in their nefarious activities. So much so that the women whose sons or husbands were imprisoned or executed for their anti social deeds, were said to boast of the fact. Such an attitude is similar to that one expressed by valiant Rajput mothers whose sons were martyred for a cause.

By the time of the British occupation of erstwhile Punjab, the Sansis had become notorious for cattle lifting, crop stealing, broad day light dacoities and such other jobs. Thus British Government put them under the Criminal Tribes Act. Their movements were restricted under the criminal law and they were required to report their movements and whereabouts in the respective police-stations. They were also to report to the village Headman (*Nambardar*) before departure or arrival in a particular village. Whenever a theft, robbery or alike crime took place they were rounded up by the police for interrogation.[10]

In fine, field study and other observations reveal that the Sansis of Punjab-Haryana region are in all probability the descendants of some Bhatti Rajputs of Bhatner tract in Rajasthan and were driven out of their hearths and homes by Muslim persecutors during the mediaeval period. Their present socio-cultural traits as well as ocupations are the synthetic result of their original traditions, ordealsome privations they had to undergo during two centuries of wanderings and also the impact of the physical environment of the region they chose as their area of operation.

Present Socio-Cultural Scene

Attempt is made in the following paragraphs to relate their socio-cultural characteristics with the environmental interaction.

(*i*) In this region two types of Sansis i.e., *Desi Sansis* and *Bagari Sansis* have been found. The former came to this region more than five centuries ago and after wandering for a long time succeeded in getting permanently settled in the districts of Montgommery, Sheikhupura, Layallpur, Multan and Sargodha (Now in Pakistan), Where from they migrated to the districts of Amritsar, Gurdaspur, Firozpur, Jalandhar and Ludhiana after partition. The two most influential sub clans of these Sansis were Kirti Sansi and Raja Sansi who founded the town of Raja Sansi, near Amritsar in about 1570[11]. The Bagari Sansis are reported to have entered this region some where in the mid nineteenth century[12]. An over riding majority of them is now found in the districts of Karnal, Rohtak, Gurgaon, Hissar a tract which although not similar but in relative terms presents conditions nearer to Bhatner.

(*ii*) The *Desi Sansis* i. e. the earlier immigrants were got-settled in initial stages in the Chak and Canal colonies of Western Punjab, now in Pakistan by the British. Their preference for the border districts after partition may have come out of their desire to restart their nefarious activities vigorously to face the new situation.

(*iii*) The Sansi settlements on the outskirts of rural as well as urban habitations are known as *Deras* i.e. camps. Since for

centuries they led a camp life, no wonder their settlements even now continue to be known as *Deras*.

(*iv*) Their pradetory activities (thefts, burgalaries, illicit distillation, etc.) are the direct result of their permanent eviction from their homeland. Devoid of landed possessions they had nothing else to do especially when the economy in this part of the country lakced diversification at that time. They must have tried to adopt pastoral pursuits but their racial traits and no rights of grazing in meadows, pastures and jungles might have hindered its development. At later stage stock rearing was carried on to camouflage their anti-social acts. Herds of cattle also indirectly helped them to acquire more cattle. In the matter of cattle lifting their *modus operandi* used to be to mix their herd of cattle with other grazing cattle and then drive away some of the latter with their own herd of cattle.

(*v*) In matters of literacy in consonance with the Rajput populace they have shown very poor results. Instead of exhibiting any progress in tune with the rising literacy trends in the country they have actually shown a fall of 0·4 per cent during 1961—71 decade in the region under reference. This may partly be the result of in or out migration but on the whole in this context they are almost static.

(*vi*) Like Rajputs they discourage their daughters from going to School. This is evident from the poor female literacy rates (4·07 per cent for urban and only 3·9 per cent for rural areas) recorded in 1971. In a society where bride price is prevalent, the matrimonial necessity for female literacy has had no impact in a region where otherwise on the whole a significant value is attached these days to women education for matrimony.

(*vii*) Over the years they were migratory people practising predatory and pastoral activities. Thus neither their settlement environment nor their occupational structure has ever made them feel the necessity of acquiring literacy. Of late in many towns the Sansi children have taken to shoe shining. Thus parents who think their children to be an economic asset would hardly care for their education since it does not necessarily need a shoe shiner to be literate.

(*viii*) A low sex ratio (876 in 1971) has also its roots in Rajput tradition of female infanticide. Bride price is also the result of this tradition. Many Rajput communities of Punjab, Himachal Pradesh and Jamu regions follow the custom of bride price even now and only the educated and well placed boys of these communities can aspire to get brides without any price.

(*ix*) The custom of groom's father narrating his whole genealogy to convince the gathering about himself being a true Sansi, again [13] stems out of the Rajput traditions. Rajputs as bond to their age-old traditions and steeped in the mirth of ignorance do not quickly respond to socio-economic changes. A majority of them continue to be fanatic in matrimonial affairs.

(*x*) The Chastity on the part of Sansi women is highly valued. A survey report reveals that the Sansi males are very suspecious of their women and keep a strict watch over them. Husbands often beat their wives even for a minor mistake. [14] This again is a tradition with Rajputs who do not favour an open society for their women folk.

(*xi*) Begging by Sansi women is a trick of the trade. The members of the fair sex who can not actively participate in doing jobs of theft and burglary contribute to the family earning by way of begging and also act as spies of their males for hunting a rich robbery field.

(*xii*) To aid and abett their criminal activities the Sansis have produced a criminal variation of their dialect. At present although the permanently settled *Desi Sansis* use Punjabi as their *Lingua franca* yet the *Bagari Sansis* who still carry on their predatory activities use Punjabi as well as the so called *Farsi*. They speak in Punjabi with outsiders but themselves convers in *Farsi*, a dialect with peculiar guttural accent.

(*xiii*) Only about 7·36 per cent of the Sansis of this region are so called urban dwellers. They mainly live in the slums. Whereas the children are sent as shoe shining boys the elders have taken to illicit distillation. Information with regard to the prostitution by the Sansi women of urban slums has also been received. Such acts have probably been followed mainly because many a time they find it difficult to commit thefts and burglaries in towns.

(*xiv*) In their apparel the collarless shirt (Kurta) and *Tahmat* (Waist sheet), indigenous shoe (*desi Jutti*) are reminscient of old Rajput dress. Keeping of moustaches, whiskers and wearing of ear-rings by the males again have their roots in Rajput customs. *Dhoti* and *Kurta* worn by women and the preference for black cloth for upper garments is a long preserved tradition of Rajasthan.

(*xv*) Some old Sansis narrate that in past their brethren were great hunters and trappers and they killed all sort of wild animals for their food, Such primary activities again came to be adopted during their wanderings when to make their both ends meet they had to become carnivorous and no wonder they might have eateen even carrion. Now though the Sansis have preference for mutton but they do not take the meat of dead animals.

(*xvi*) Child marriages which were very common among the Sansis in past are still in vogue though in decreasing incidence. The custom comes from Rajasthan and Rajputs while its shunning is the out come of new environment.

(*xvii*) Only about 3·3 per cent (1971 census) of the Sansis are Sikhs, rest being Hindus. Besides their ancestor-deities the Sansis worship almost all the gods and goddesses of Hindu religion. Never the less of significant interest is the continued worshipping of *Ram Deo Ji*, the legendary Rajput progenitor of *Baurias* whose shrine is located in Ranchal settlement of Bikaner[15]. On every tenth day of the bright moon offerings are made to the deity. Many people also visit the shrine of the deity in Rajastan. This again speaks of Sansis origin from a Rajput clan of Rajasthan.

(*xviii*) Although now the dead are cremated through burning, it is gathered that in past they used to bury the dead. That must be because of their migratory wandernigs.

(*xix*) Many of the rites and rituals followed by the Sansis during festive occasions show a strong impact of their new environment. The ceremonies of *Kurmai, maiyan Mauli, mamadan, mehandi, ghori, gane,* etc. are strictly adhered to by the Punjabis during matriages. The same have been adopted by the Sansis.

(*xx*) Some of the rites performed during marriage, etc. are reminiscent of their nomadic life. The custom of sacrificing a ram at the time of the departure of a marriage party towards bride's place has its origin in migratory living.

It has been observed that the Desi Sansis who are leading a settled life for quite some time are relatively less criminal and they have taken to cultivation, agricultural labour and other services for their living. Even among them there are few social problems and in event of a lapse they are punished by their village Panchayat. So much so that sex lapses among them are seriously viewed and severely punished. On the other hand the Bagari Sansis are not in a position to implement the decisions of their *Parikh* (Panchayat) effectively because of migratory, hard, risky and precarious living. And these are the Bagari Sansis living in the urban slums who have taken to illicit distillation, prostitution, etc., thus adding to the social problems of such towns. Rightly enough we have never tried to understand the social and economic compulsions which have been forcing these unawakended people to do the things which we feel they should not do[16].

It is clear from the above that living at low level of technology the Sansis have always fallen prey to the environment. Their unsettled life was responsible for their misery, poverty and criminal living whereas their predatory habits born out of economic compulsions led to their unsettled migratory living. Thus the vicious circle completely entrapped them. No doubt the British Government declared them a notoriously criminal tribe but took no interest to settle them in a socially acceptable manner. Although as per

enquiries some of them attempted for a settled life long ago but no village or town permitted them to have their habitation in the vicinity. So much so that wherever they succeded in establishing a settlement they were refused entry to the village well, shrine, school and even services of the functionaries. Closing of other opportunities to them conditioned their community living. It was only after 1952 when the Government of Free India denotified them as a criminal tribe that some wave of reformation though at a low ebb has been initiated among the Sansis. Being of Rajput origin they strongly react to retalliatory measures. It is only through persuasive methods and spread of meaningful education directly aimed at improving the quality of life that may put a complete check on their nefarious activities and they may emerge as useful citizens of the country. Let there be an attempt to completely transform their economy which leads to sectoral changes and well meaning diversification of occupational structure.

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Tradition and Modernity— A study on Baramunda village (within the Bhubaneswar City, State Capital, Orissa)

B. B. MAHARANA

Introduction

Social anthropological studies of village communities will have certain definite advantages. These studies contribute to a clear understanding of the totality of Indian Social system. Further, additional light would have been thrown upon the ruralbased villages by studying it not in a rural perspective but in a semi-urban setting. Since, these villages are the melting pots of rural and urban sector life, the process of rural-urban interaction in actual operation can be well studied.

My problem of study is confined to a local within the Bhubaneswar city area, the State Capital of Orissa. So, it is quite plausible to hypothesize that the area close to city precinct acquire more complex and urban way of life. But, the area I took up for my study, is predominated by rural characters and thus from sociological standpoint, I treated it a village. This paper is the outcome of my detail survey work along with a general eye-view of the village and it intends to point out how traditionality supersedes the modernity i.e. the rural setting of the village dominates over the direct influence of the city image.

Village Situation

The village Baramunda is situated within Bhubaneswar city which is about 6 Kms. from the Government bus stand and 8 Kms. from the Railway station. Further, National Highway No. 5 connecting Calcutta and Madras, runs through the village in north-south direction. Before the establishment of State Capital at Bhubaneswar, this area was a jungle. Still, it has a historical significance. During the reign of Kharavela, this area was an important place and centre of civilization as some coins have been found-out nearby, of that age. Moreover, the Khandagiri and Udayagiri caves which are situated about 3 Kms. away from the village, are the relics of past civilization, a cultural centre and centre of Buddhism and Jainism of 6th Century BC.

The village Baramunda lies in the area which is approximately, 500' above the sea-level. The highest part of this area is occupied by the Khandagiri and Udayagiri hills. The soil is hard, dry and gravelly. The red ferruginous sandy loams occur near the laterite rocks. There is slight variation in climatic temperature from season to season.

All the inhabitants including Saara and Bauri speak Oriya dialect, write Oriya Script and worship Hindu Gods and Goddesses.

Due to gradual deforestation of nearby Chandaka forest which is about 15 Kms. away from the village, the availability of fauna and flora are scarce. The fauna include deer, mangoose, jackal, hare, wolf, leopard and some times elephants. The flora include Sal, Teak, Mango and Mahua etc.

Baramunda, a multi-ethnic village comprises of 17 ethnic groups along with Saara and Bauri who settle in two separate hamlets towards the western side and the rest in the eastern side. Further, Khandagiri and Udayagiri hills are situated towards the southern side of the village. As per my census taken during November 1981, the total population of the village is 2,363 comprising of 1,217 males and 1,146 females. For my purpose of study, the total ethnic groups are broadly classified under three major social categories viz., Scheduled Tribe, Scheduled Caste and Higher Caste Hindus and the population of each category is 222 (male 109 and female 113). 212 (male 110 and female 102) and 1929 (male 998 and female 931) respectively. Further table-I, showing Caste/Tribe-wise population indicates that the Khandayats occupy the highest rank i. e. the population is 975 while the Kachara, the lowest i. e. 12 only.

TABLE I

(Caste/Tribewise population by sex and number of households)

Sl. No.	Name of the Caste/Tribe	Number of household	Total population	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)
1	Saara ..	47	222	109	113
2	Bauri ..	14	75	41	34
3	Hadi ..	7	52	25	27
4	Washerman ..	6	39	19	20
5	Weaver ..	7	46	25	21
6	Khandayat ..	169	975	435	540
7	Karon ..	4	19	11	8
8	Confectionary ..	15	101	51	50
9	Distiller ..	10	40	51	39
10	Oilman ..	31	299	166	133
11	Milkman ..	34	182	96	86
12	Carpenter ..	9	40	23	17
13	Blacksmith ..	6	28	11	17
14	Potter ..	3	15	10	5
15	Barber ..	6	38	18	20
16	Brahmin ..	5	25	15	10
17	Kachara ..	2	12	6	6
	Grand Total ..	375	2,363	1,217	1,146

TABLE II

(Persons in different Occupations by sex and percentage of total workers)

Sl. No.	Nature of Occupation	Male	Female	Total	Percentage to total
(1)	(2)	(3)	(4)	(5)	(6)
1	Cultivation ..	56	×	56	8·1%
2	Labour ..	241	80	321	46·5%
3	Rural Artisan ..	43	×	43	6·3%
4	Livestock rearing ..	2	1	3	0·6%
5	Business ..	107	×	107	15·5%
6	Service ..	149	6	155	22·4%
7	Hotel Keeping ..	4	×	4	0·6%

Occupational Structure

Different ethnic groups, settled in the village are Khandayat, Karan, Brahmin, Oilman, Confectionary, Distiller, Potter, Milkman, Blacksmith, Carpenter, Kachara, Barber, Washerman, Weaver, Hadi, Bauri and Saara. The occupations they follow, are classified under the following heads—cultivation, labourer (both agricultural and non-agricultural), rural artisans, business, hotel keeping, live-stock rearing and service. The persons engaged in different occupations, are cultivation (56), labourer (321), service (120), rural artisan (43), hotel keeping (4) live stock rearing (3) and business (107), (Table II). Thus, it indicates that the labourers group stands first while the least is the live stock rearing occupation. Further, the traditional jajamani system in the village has totally undergone change excepting the fact that members of the Barber caste receive cash-payment annually in liew of their services.

Infrastructure

Communication—There are two separate Kachha roads run straight to the Jakalandi Sahi (Saaras) and Kabari Sahi (Bauris) and another metalled road towards the village from the National Highway in the western and eastern side respectively. The village road extends up to the centre which further bifurcates into 4 branch-roads. After the village is being included within the Bhubaneswar Municipality area, all these roads become accessible throughout the year.

Water and electricity—Pipe-water facilities have not so far been provided and the available source of drinking water is well. Electricity is supplied to the village and the expenses towards the street-lights are borne by the Municipality. Besides about 70 per cent of the total households have also availed of this opportunity for their domestic purposes.

Housing Condition—The general house-pattern of the village is brick-made houses with thatched roofs. Moreover, the walls and floors of many houses are cement-plastered also. But, the Saara and Bauri-house-pattern is simple, rectangular and made of mud and twig with thatched roofs. The houses are compact, arranged in linear fashion and facing towards the road. The only exception is the presence of three R. C. C. and two tile roofed houses.

Marketing—The main market building of Bhubaneswar city is about 6 Kms. from the village even though the nearest market is Siripur market in Unit VII. Since the people, very often, come to the city for different purposes, they usually purchase the required goods from the main market-building. Besides, at the time of urgency, they collect the goods from the grocery shops of the village. Moreover, the labour-class people purchase their daily requirements from the village shops and also, at times, get the privilege of taking on credit, while in need.

General Information of the Village

Even though the Saara and Bauri have been settled-up in this village for last 20 to 30 years back, they have no cultivable land for their own. The house-sites which they forcefully occupied, have so far been not leased out in their respective names. Of course the other ethnic groups have their own plots of house-sites. The people in general do not use any kind of modern latrine, rather they all follow the traditional method of defication, i. e., they go to the open

field. Most of the people never use mosquito-nets excepting a very few among the higher caste Hindu group. There is a Government Homoeopathic Dispensary in the village and the facilities are mostly enjoyed by the children and poor class people. The people usually prefer to visit Allopathic Hospitals for quick relief from the sufferings and the nearest one is the Unit VIII Government Allopathic Dispensary. Besides, people also, at times, visit the Capital Hospital, the biggest in Bhubaneswar city when they feel the necessity of consulting the Specialists. The nearest post and telegram office is the Baramunda Colony Post and Telegraph Office, Unit VIII, Bhubaneswar which is about $1\frac{1}{2}$ Kms. from the village. Besides, there also a High School in the village, managed by the municipality.

Ecological Response

The inhabitants of the village Baramunda are the original settlers except the Saara and a few Bauri who have been settled in this area for about 30 years. By that time, the nearby forests were dense and the lands were left uncultivated, thus these people availed of these opportunities and maintained their livelihood very smoothly. The original settlers have also occupied quite large quantities of land and the yield of their land were sufficient enough to meet their annual financial requirements and thus the problem of economic deficiency was never felt by them. In 1954, State Government have taken over land from the people of peripheral villages including Baramunda, of the Bhubaneswar Capital city for its future expansion and development, through payment of cash-compensation. All the people were not wise enough to think of their future and thus the amount they received, was spent lavishly by them excepting a few who have purchased land in some far-off villages. However, the people have not felt the loss, they have made, because of the fact that the land taken over by the Government, have also been unauthorisedly cultivated by the same people. But, a real change in their way of life was marked in the year 1962 when the "Orissa University of Agriculture and Technology" was established at Bhubaneswar and acquired a total area of 628 acres of land including some Government land, to which the Saara were in possession of since long, for its agriculture research farm. So the villagers and the Saara have been debarred from exploiting the same land. Further, gradual deforestation of the nearby forests caused scarcity of forest resources which further deteriorated the financial condition of the Saara.

Education

Education is the measuring rod in the developed countries to evaluate the socio-economic status of a society. In the village Baramunda, there was a Government U. P. School since long. So, the interested students after completing U. P. stage, are forced to go to the Tapobana High School which is about 2 Kms. from the village. Gradually, people felt the necessity of an M. E. School in the village. In the meantime, Bhubaneswer municipality area extended up to Baramunda village and the municipality authorities had been kind enough to provide financial grants for opening of an M. E. School there in the year 1975. Further a High School started in the M. E. School premises in 1981 with the financial assistance of the municipality.

TABLE III

Literacy rate among S. T., S. C. and H. C. Population and the village as a whole

Social Category	Male			Female			Total		
	Total	Literate	Percentage to total	Total	Literate	Percentage to total	Total	Literate	Percentage to total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Scheduled Tribe.	113	47	43·1%	109	6	5·3%	222	53	23·8%
Scheduled Caste.	110	43	39·1%	102	10	9·8%	212	53	25·0%
Hindu Caste	998	463	47·0%	931	207	22·2%	1,929	676	35·0%
Village as a whole.	1,217	559	45·9%	1,146	223	19·4%	2,363	782	33·0%

Table III indicates the literacy rate among the three major social categories and the village as a whole. Literacy rate among the Scheduled Tribe, Scheduled Caste and Hindu Caste is 23·8 per cent, 25 per cent and 35 per cent respectively. So it is quite more among the Hindu Caste, the least is the Scheduled Tribe while the intermediate is Scheduled Caste. Thus it shows that the higher caste Hindus are more conscious of taking modern education than others. Further, it indicates that the male literacy rate among the Scheduled Tribe, Scheduled Caste and Hindu Caste is 43·1 per cent, 39·1 per cent and 47·0 per cent respectively and the female literacy rate is 5·3 per cent, 9·8 per cent and 22·2 per-cent respectively. Thus, female education among the higher caste Hindus is quite more while among the Scheduled Tribe, it is the least.

TABLE IV

Rate of Interest towards school education among the children of School going age-group

Social Category	School going age-group	Total No. of Children			L. P. School		
		Total	Male	Female	Total	Male	Female
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Scheduled Tribe ..	6—14 years	46	23	23	6	6	..
Scheduled Caste ..	6—14 years	54	32	22	9	8	1
Hindu Caste ..	6—14 years	446	246	200	119	61	58
Village as a whole ..	6—14 years	546	301	245	134	75	59

U. P. Standard			M. E. Standard			High School Standard		
Total	Male	Female	Total	Male	Female	Total	Male	Female
(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
2	2	..	..	..	..	..	..	..
5	3	2	1	1	..	..	..	..
84	45	39	40	25	15	12	9	3
91	50	41	41	26	15	12	9	3

Concept of Wastege and Stagnation

Table IV indicates that among the Scheduled Tribe out of 46 children of school going age-group, only 6 children continue in L. P. and 2 in U. P. Schools. Similarly among the Scheduled Caste out of 54 children, 9 children continue in L. P., 5 in U. P. and 1 in M. E. Schools while among the Hindu Caste, 119 children continue in L. P., 84 in U. P., 40 in M. E. and 12 in High Schools out of 446 children. Thus, it is quite pertinent that there is no stagnation among the higher caste Hindus while among the Scheduled Caste and Scheduled Tribe it stagnates in M. E. and U. P. School stage respectively.

Stagnation is prosecution of further study is regarded by the Scheduled Tribe and Schedu'ed Caste as a factor of wastage in the sense that the people are economically poor, being dependent upon labour through out the year. The money they get in a day is not even sufficient to meet the cost of two meals a day for the family members. They say, when minimum food is not available to the family members, modern education is never felt by them as an essential part of their social life. Thus, a child, after attaining the age of 12—14 years, accompany his/her parents to work as a labourer. But among the Higher caste Hindus, reactions towards modern education is very encouraging. Of course, all the people are not capable enough to allow their children for prosecution of higher education due to their financial liability. Moreover, the Caste Hindus think themselves more

sophisticated than others and thus, the female-folk hesitate to work as labourer excepting in a few exceptional cases. Consequently, the income is solely earned by the males which does not satisfy their minimum demands for day-to-day expenses. The Government, even though, encourage the Scheduled Tribe and Scheduled Caste population to take up higher study, the people do not avail of these opportunities, while the Higher Caste people have the greater interest towards the scope of modern education but financial handicaps discourage the low-income group parents to provide study materials for their children.

Further, the nature of occupation of the parents reflect upon the interest of their children towards education. Because, an artisan always encourages his son to assist him in order to complete the work sooner than the work to be done alone. Similar is in the case of a labourer, hotel-keeper, businessman and a man having livestock rearing occupation. But, in case of a farmer or service holder, little more interest is observed because to somehow or other, they can manage to meet the requirements of their children for continuing study.

Economic aspect

The economic position of any rural community can be understood through its land-holdings. It is characteristically emphasized on peasant economy. The traditional economy of Baramunda has under-gone a sporadic change largely due to acquisition of their land by the Orissa University of Agriculture and Technology for its research farm.

TABLE V

Distribution of Households by size of land-holding and ethinc groups

Size of land holding in acres	Number of Households in different ethnic groups								
	Khanda-yat	Milk-man	Oil man	Confec-tionary	Distiller	Carpenter	Blacks-mith	Karan	Barber
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
No land ..	96	26	15	11	5	9	5	3	1
0·1 to 1 acre	29	4	1	..	2	..	1	1	5
1·1 to 3 acres	33	5	10	1	1	..	..	..	..
3·1 to 5 acres	8	..	4	3	2	..	..	..	..
5·1 to 7 acres	1	1	1	..	..	..	..	..	..
7·1 to 9 acres	..	..	..	..	..	..	..	..	..
9·1 and above	2	..	..	..	..	..	..	..	..

Number of Households in different ethnic groups								Total	Percentage to total household
Brahmin	Potter	Kachara	Washer man	Weaver	Hadi	Bauri	Saara		
(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
4	3	1	6	7	7	14	47	258	68·8%
1	..	..	..	..	..	..	..	44	11·73%
..	..	..	..	..	..	..	..	50	13·33%
..	..	..	..	..	..	..	..	18	4·8%
..	..	..	..	..	..	..	..	3	0·8%
..	..	..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..	2	0·54%

Table V shows that 68·8 per cent of the total households do not have any kind of land who depend on either labour or service or business or any other house-hold industry to earn their daily livelihood. Only 2 households possess more than 9 acres of land and 3 holds between 5·1 to 7 acres of land i. e. about 0·54 per cent and 0·84 per cent of the total households respectively. Further, 18 households possess 3·1 to 5 acres of land while the rest possess between 0.1 to 3 acres. The middle-ranged land holders also supple ment their income through other means since the agricultural production does not meet the economic demands for the whole year.

TABLE VI

(Workers and non-workers on the basis of of Sex and social category)

Social Category	Workers			Non-workers		
	Male	Female	Total	Male	Female	Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Scheduled Tribe ...	60	63	123	49	50	99
Scheduled Caste ...	56	17	73	54	85	139
Hindu Caste ..	486	7	493	412	924	1436
Total ..	602	87	689	615	1,059	1,674

Further the above table shows the number of workers and non-workers by sex and broad social categories. The total number of workers and non-workers are 689 and 1,674 respectively coming to 29.1 and 70·9 per cent of the total Populataion respectively. Among the workers, male and female are 602 and and 57 respectively and among the non-workers, male and female and are 615 and 1,059 respectively, However, the non-workers .i., ,e., 70.9 per cent of the total Population always depend upon the income of 29.1 per cent of the total Population ,i.,e., the worker-non-worker ratio is 1:2·4.

The nature of occupations followed by the workers group, broadly fall under the following seven categories, such as cultivation, labour, rural artisan, live- stock rearing, business, service and hotel-keeping who occupy, 8.1 per cent, 46.5 per cent. 5.3 per cent, 0.6 per cent, 15.5 per cent 22.4 per cent and 0.6 per cent respectively (Table-II). so about half of the total workers group are the labourers who according to worker-non-worker ratio, are forced to maintain at least 2.4 persons each within one' s income. Thus, their economic situation can very well be imagined, who do not even get two meals a day. The people practising cultivation, always have to depend upon rain water since there is no perenial source of water through irrigation facilities, as a result of which they always remain under uncertainity. No other crop except paddy is produced by these people. So, this occupatian. in some households, is further supplemented by availing of urban employment.

The male-female participation rate among the workers group is 87.3 per cent and 12·7 per cent respectively and the female workers involved in labour occupation is 11·6 per cent. Thus, it suggests the impoverishment of the people, the circumstances under which the females are forced to seek employment elsewhere. Consequently, the consumption habit has also been deteriorating. Moreover, the occupational structure of the village is more or less diversified because of people' s discontentment in following their traditional occupations due to insufficiency in earning their daily livelihood and ultimately they seek either employment in the city. mostly in the form of labourers, or take up business as one of their occupations. As a result, the traditional jajmani system has been disrupting and the social structure of the village is also affected in several ways.

The people, practising live-stock rearing occupation, mostly depend upon milk-selling. Their internal market is confined within the

village and at times it is also supplied to the city customers, when they have surplus. Because, there are few Government employees who have jobs in Bhubaneswar but are staying in this village, purchase milk for their daily consumption. Also milk is supplied to the three tea-stalls, one inside the village and the other two at the junction between the village road and national highway, for their business purpose. Besides, there are also few households, which do not have own milch cattle or cow or they are dry, require milk for their domestic use.

Besides, there are few people, who sell goats periodically to the city-agents. This is a very small scale trade. Also during off-seasons, the Saara women collect firewood from the near by jungle, cut them into sizeable pieces and sell them at a higher rate in the city. At times, the Saara also sell fowls to outsiders.

The livestock position of the village is Cows-Dry-217 Milch, 222, Buffaloes-He-32, She 20, Calves-274, Goats-262, Bull-9 and fowl-44.

In regard to modern economic opporutunites a few villagers became sensitive to the new demands of the city and started growing vegetables mostly brinjal in the Government land, which they sell in Bhubaneswar market and it provides an additional income to their normal occupation. There are also few people, who purchase the vegetables from the whole-sellers in the market and sell those to the customers on the spot in little profit.

Thus, there is a transformation of the subsistence economy into a market one, basing on various occupational activities, to which people assume new roles and status and further accept appropriate values in order to exploit new opportunities. Thus, ultimately they establish new relations to reorganise their source of income both physical and human at a level different from the traditional one.

Political aspect

Political consciousness is quite apparent among the people of Baramunda and more over the activities are more prominent in the village.

An action is identified as the focal point of power structure which seek to promote their own interest and activities rather than the community as a whole. Thus, a faction creates hostile opposition to another faction and develops close Interaction among its members.

In village Baramunda, 4 factions are functioning for the self-interest of its members. The Saara and Bauri have their separate factions who always emphasize for the development of their respective wards. The enchroached land for house-sites among the Saara, have not so far been leased out by the Government for which 5 elders,. selected by the people, have been attempting to put forth their problems to the concerned Tahsildar several times and also the Minister Harijan and Tribal welfare thrice. Of course, no fruitful results have been achieved by them so far. Further electrification has been installed into their ward since two years and the cost of the street light has been borne by the Municipality. But, very often, the fused bulbs have not been replaced for which the concerned authorities have been intimated by the people. Similar is the case among the Bauri. Factions in Rampur, which were mainly unlike kinship groupings, the main village has two factions, one is upper ward and the other is the lower ward, the members of which are irrespective of any definite caste group. Of course, the political awareness among these peoples as more active than the Saara and Bauri ward, still the latter is never followed by the former. CARE feedinq Programme is actively functioning in the Bauri and Saara ward, so that one time food is supplied to the Children and pregnant women, which is not availed of by the Higher Caste Hindus as a result of which internal conflict has awakened between them.

Factional activites present significant dimension in the context of elections in the democratic political structure. The members of a faction are more active in the State Assembly Election and Municipality Election than the General Parliamentary Election. All the villagers were strong supporter of Congress party from the beginning. But, during the last Assembly Election in 1980, the Scheduled Castes people and Saara turned towards the Communist party overnight through their confidential discussions within the members of each faction.

Direct involvement into the political power structure is found primarily among the landholders and businessmen which they feel as an activity of aristocracy. But among the Saara and Scheduled Caste people, they feel it an urgency to demand their minimum necessities before the authorities and consequently a few people, selected by the group are forced to make themselves involved into politics, leaving aside their

financial liability. Thus, undergoing through the midst of several hurdles for their existence, it necessitated the people to shift over to new urban political structure from their traditional system, which was at the village level organisation, functioned under the control of a few selected elders.

Conclusion

Since the village Baramunda is situated within the Capital city precinet, it is quite natural that the feed-back effects of urbanization would be more effective as Epstein has pointed out that the feed-back process, concerning the influence of town on country and the implications of urban growth for social change. In this paper, attempts have been made to know their ecologicai situations along with the economic, political and educational aspects of the village at the present context. It is revealed that in spite of the feed-back process of urbanisation, still the people have allowed to retain a few norms and values of their traditional social structure to remain relatively undisturbed. As a very few are the land-holders, agriculture is not a dominant economy in the village. More over, the pattern of land-use is changing. Still the village retain its rural characters. At the same time, the people are directly involving in the political activities of the city.

The feed-back process in the context of change in social life through urban influence can be analysed under two levels of study, i. e., the direct involvement of the villages in the village situation and the city. But the process itself does not complete, for which both traditionality and modernity play their roles in activating the people to adjust themselves by accepting varied occupational structure in order to maintain their social life. I feel it a necessity for them to cope with the present urban situation of Bhubaneswar city, failing which social development may not be effective.

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Impact of Formal Education on Socio-Economic Development and Awareness in Tribal Communities

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Abstract

The present study is an attempt tot est the impact of formal school education on socio-economic development and awareness in the under-developed communities. The study has been undertaken among Gond and Bhumiya communities, of Koraput district, Orissa, To measure socio-economic development three variables (viz. *per capita* land holding, *per capita* income and the ratio of literates total number of individuals in the house-hold) are taken. The inter-correlation co-efficients of these variables are very low and indicate these variables are independent of education. The literate and illiterate group differ with respect to their level of awareness and the mean of awareness scores indicate that the literates (having formal schooling) are more aware than the illiterate respondents. From the regression analysis it is found that education increases awareness but awareness contributes very little for the increase of educational level in a tribal family.

Introduction

The mechanism of development within a society owes its effectiveness to the levels of people's knowledge and awareness of various factors of development both inside and outside the social structure. In this regard, education plays a major role in the process of development and for the spread of knowledge and awareness among the people. Margaret Mead[1] also has emphasized the need of education for the people in under-developed societies because education is related to socio-economic development. Richard Gill[2] suggests to expand education as a means for economic modernisation among the back-ward communities of the under developed regions. Bhatanagar[3] found that education is for creating awareness, changing attitude, changing occupation, and many others. Cental[4] established a working relationship between education and occupational mobility. Review of all above findings indicate, education as a powerful instrument for generating socio-economic growth and awareness.

Objectives

The present study is an attempt to analyse the impact of education on the development process operating within Tribal communities. The main objectives are to test (a) the impact of education on socio-economic development and the pattern of relationship between both, (b) the impact of education on awareness.

Methodology

The total sample consisting of 76 house-hold heads are ($n = n_1 + n_2 = 38 + 38$) taken from the Gond and Bhumiya (tribal) communities of Koraput district, Orissa. Subjects were asked regarding their educational qualification and the level of education of the family members, and in this way 38 house-hold heads having school

education were choosen and to compare it 38 illiterate (control group) household heads were choosen.

Three socio-economic indicators (viz. *per capita* land holding, *per capita* income, ratio of literates to total number of individuals in the household) were selected. The subjects were asked regarding the size of land in acres from different category (viz. irrigated, unirrigated, waste, high land and shifting land) to find out the *per capita* land holding. The income from different sources (land, labour, service, and others) were taken to find out the *per capita* income. The ratio of literates to the total number of individuals in house-holds were taken to explain it in a standarized form. Twenty closed ended items related to agricultural development, forest laws, general socio-political aspects pertaining to awareness were taken and in the field this was tested over 25 subjects of the same area where finally 11 items retained expecting to provide differential bits of information and the other nine items were rejected since in these item responses were almost same for all the individuals.

Analysis

In awareness questions the subjects were given two alternatives; whether aware (yes or not (No). So the 'yes' response was given score + 1 and the no response since just opposite to the 'yes' was attributed score of 1. This scoring was determined on the logic that from the core point, the 'yes' and 'no' response were supposed to be equally same distance since both are opposite to one another. To find out the composite index of all the individual score of awareness, all literate and illiterate group scoring was added separately. To find out the relationships between socio-economic variables a inter correlation matrix was computed. The households having no education level have been dropped in the present analysis. To test the significant difference in awareness score between literate and illiterate group, students'; test was applied. In order to assess the impact of education (ratio of literates to the total number of individuals in the household) on awareness, least square method was adopted.

Discussion and Conclusion

TABLE No. 1

Level of education among the studied Families

Educational status of parents	Number of household heads	Educational level of children				
		L. P.	U. P.	M. E. & H. S. E.	Literates	Illiterates
Literate group (Experimental group).	38	27 (67·50%)	8 (20·00%)	5 (12·50%)	40 (21·24%)	144 (78·26%)
Illiterate group (Control group).	38	10 (8·34%)	1 (8·33%)	1 (8·33%)	12 (4·89%)	140 (95·11%)

The Table No. 1 represents the level of impact of educated parents on the educational level of their children. It is observed that at least one child of a literate parent has some education where there is one educated child among four illiterate parents. Thus the children of literate parents are relatively more educated than the illiterate parents. Generally, the literate parents due to their own background, have given certain education to their children. But the observation on children's educational level relates that about 67·50 per cent of the educated children of such parents have only primary education and very few children have education beyond lower and upper primary level. This staggering picture may be due to the inherent socio-economic and infrastructural barrier which prevents the parents to further the education of their children.

On the other hand, the educational attainment of the children of illiterate parents is very insignificant. Hence, the spread effect of education on their children is very much limited.

TABLE No. 2

Inter correlation matrix of Socio-economic development Indicators and ratio of Literates to total number of individuals in Household.

	X_1	X_2	Y
X_1	1·000	0·120	0·300
X_2		1·000	0·164
Y			1·000
MEAN X	617·737	1·356	9·367
SD (6)	426·4480	1·642	0·1676
X± 16	191·289—1044.185—1.462—2.998.20—.53		

N. B—X_1 = *Per capita* Income

X_2 = *Per capita* land holding

Y = Ratio of literates to the total number of individuals in the household (education).

The inter-correlation matrix (Table No. 2) reveals the level of education bears an insignificant positive co-relation with *Per capita* income (0·3000) and land holding (0·164) of the households. Similarly the cor-relation co-efficient between land holdings and *Per capita* income is extremely low (0·12).

From these, it can be concluded that education and above socio-economic variables among the tribals are independent of each other. It indicates that the economy generating variables have limited dimensions (Agriculture, forest collection and wage earning) that need little or no formal education and as the people (Tribal) are not highly educated, their entrance to better economy generating occupation is also barred.

The dispersion in case of *Per capita* income among the tribals is observed to be high as the value of Mean ± ISD shows a high discrepancy (within which 68·26 per cent of the cases fall). With regard to *Per capita* land holding, the Mean ± ISD shows a negative value in one end as most of the individuals have no land. The Mean ± ISD. in case of literates to the total number of individuals varies from 0·20 to 0·53. This may be due to the low level of literacy in most of the households.

TABLE No. 3

Difference in awareness scoring between literates and illiterates

Groups	No. of household heads	Means of awareness score	Variance	Standard error of means	Value (t)	Degree of freedom (d)
Literates ..	38	4·74	15·06	0·97	24·55**	76
Iiliterate ..	38	0·316	20·87			

**Significant at the 0·01. level

This (Table 3) indicates that between the literate and illiterate group there is a statistically significant difference in awareness score. As the mean indicates that the mean score of literate group is 4·74 and that of illiterate group is 0·316. So it can be confirmly said that the literates as a group are significantly more aware than that of the illiterates regarding agricultural development, forest law and general socio-political aspects. Then, whether education of the literate group influences awareness or *vice versa* was tested by regression analysis.

Regression analysis

The following results are obtained by the least square method from the analysis.

X_3 = Awareness

Y = Ratio of literates to total number of individuals of the household.

$X_3 = a_1 + b_1 y$

$X_3 = 2{\cdot}0813 + 7{\cdot}255 \quad Y \ldots\ldots\ldots\ldots (1)$

$Y = a_2 + b_2 X_3$

$Y = 0{\cdot}17085 + 0{\cdot}04121 \; X_3 6 \ldots\ldots \; .. (2)$

Standard error of equation (1) is 3.7276 and that of (2) is 0·1450. The correlation coefficient between the two variables is 0·547.

From this it is indicated that with the increase of education there is a considerable increase insawareness among the tribal communities. But on the other hand the awareness has no significant contribution for the increase of education among them. Besides, the economic development operates independently and the formal education system has little bearing on them.

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Problems in Tribal Adult Education

M. N. RAVINDRANATHA

India attained independence in the year 1947. The country was utterly poor at that time and majority of the Indians were living below the poverty line, without basic necessities of life such as food, clothing and shelter. Like any other nation India thought of to modernise her nation and hence the constitution of India in 1950 guaranteed all her citizens social, economic and political justice, liberty of thought, expression, equality of status opportunity and fraternity. The Government of India wanted to achieve this through peaceful and non-coersive means. There are many agencies for the all-round development of any nation, of which education has also been accepted as one of the powerful means. Education along with other agencies has to make conglomerated and integrated efforts to bring about the needed changes. The distinction between the educated and the uneducated, rich and poor, the rural and the urban must go for the all-round development of any nation. It means that the backward sections of our society (Scheduled Castes, Scheduled Tribes and other backward sections) must be provided with opportunities to develop critical thinking and self-determination to make them worthy contributing individuals. This is way the Government of India has been making efforts through formal and non formal (part time education, adult education and extension activities) ways of aducation to educate all sections of Indian society.

Nonformal adult education is one of the most Important avenues of education, especially to educate all the adult sections of population. The programme of adult education finds its relevance in a country like India, where 64 per cent of the people are illiterate. There cannot be any progress if all the individuals of the country do not respond and participate in the developmental activities of the country. So our first duty will have to be to improve the mental level of various sections of population through a variety of educational programmes. And adult education programme which has been recently launched (October, 1977) is an attempt in that direction. Any programme before getting stabilised and to come to a stage of influencing the members of its society has to pass on number of hurdles and barriers as different communities pose different types of problems of their own. While structuring and organising different adult education programmes for different communities, the socio-economic and cultural backgrounds of different communities should be taken into consideration, without which they may not be able to make significant impact on the respective communities. and thus the programme of bringing about change for the better will only be a distant dream. The following however are some of the problems coming in the way of structuring and organising adult education programme in tribal areas, with the suggestive ways of reforming the same.

1. The Problem of Attracting and Withholding Adults in Adult Education.

The tribal people usually do not know that education is a primordial necessity for democratic way of living. They also usually do not know about the nature of the ideal our constitution has set to bring about development through peaceful ways. Although adult education has

been started to make the adult section aware of the value of education it becomes very difficult to attract tribal adults for adult education programme as tribal culture usually comes in the way. In many tribal communities the culture fixes the adult roles, type of occupation adult men and women have to do, and there will be even organised way of imparting traditional education through dormitories and dhamkurias to tribal children. As a result of this cultural constraint, it may not be possible for adult education departments to attract and influence the tribal adults through general education (literacy programmes). In other words, education in order to influence the tribal people should prepare and refine the individuals for life, which means that it should be more vocationally oriented and related to the realities of life (needs and problems) which should be determined by undertaking surveys in different tribal areas. And mere literacy programme of the current nature cannot make any impact on them. So our adult education programmes while planning adult education for a tribal area should identify to which productive vocations a tribal group is more akin to, so that they can later on train the adult tribals for such programmes. If a productive vocation is already there with a tribe, adult education programmes should refine the skills of such an vocation by introducing scientific and technological know how into it. It is also a well known fact that poverty is one of the great impediments even among the majority of the tribal population in India. So they may be looking forward the utilitarian aspect in education. So adult education should be need-based in such areas. When once the basic needs are catered adult education programmes become interesting to the tribal people who participate in it voluntarily. Gradually education on civic life, health and sanitary aspect, education of the children and such other general aspects could be introduced to make the tribal individuals responsive individuals. Efforts should be made to educate the tribal adults more informally on general aspects of life so that people respond positively to modern values.

In some tribal societies women may have lower status than men. In such cases the place of woman may be more restricted to children care, husband's care, and other household services. If intermixing of women is not there-with men and other general population, separate adult education classes suitable for their needs (home economics, home management, health education, child care, etc.) will have to be conducted, so that they may prove as better housewives. And they may also be trained in suitable vocations which they may undertake during their leisure time at their houses only (weaving, spinning, basket making, art activities, etc.).

2. The problem of getting Men and Women Teachers from the same Tribal Groups.

In many tribal areas education has been just initiated. Many tribal boys and girls are coming for the first time to the schools. So it is hard to get teachers for adult education from the same tribe. A teacher coming from a non-tribal group may not take interest in teaching. He may do his duty for duty sake. He may also bring in value conflicts in the minds of the adults by speaking against their social and cultural norms. Further adults may not understand his language. This results in communication gap between the teachers and adult learners. Non-tribal teachers may not have any training in adult education imparting. In such a situation, even if adult learners understand his language the quality of education imparted will be low. So suitable training programmes will have to be arranged and incentives should also be given for tribal teachers. Anthropological studies will have to throw light on tribal cultures. The teacher who wants to work in a tribal community should know their culture and dialect well. Training will have to be suitably arranged for the purpose. Teachers must know about the socio-economic conditions of tribal households. The teachers must also know, what the adult learners expect from such a programme. They must also adjust the timings of adult education classes in such a way that it does not affect the works of the adult learners.

It is equally difficult to get women teachers in tribal areas. Women teachers are necessary in tribal areas where adult education will have to be carried on separately for women. It is difficult to get women teachers from city areas, as they need safety and cannot live alone. If women teachers are married the problem becomes still more serious. Even if women are of devoted nature will be problems, as women in our country are loaded with multiple responsibilities of caring husband and children in addition to normal adult educaticn classes. So as far as possible women from local areas

are to be tapped and trained. But till some teachers are got from the local side, non-tribal teachers will have to undertake these things.

There has always been, yet another problem of getting devoted teachers in all the areas. The instruction that is being imparted in adult education centres is often drab, monotonous and it is suppressing the creative abilities of adults. Teachers are not arousing interest and enthusiasm in the adult learners and there is life less instruction in our adult education centres. These are resulting in drop-outs as no other encouragement is there for the learners from any other source. This is also so because adult learners will not be knowing intrinsic and defered values of education. So it is the duty of tribal teachers to make tribal people know about the value of education. He/She should always be thinking of how to make his/her lessons interesting to the learners. He/She should make use of many attractive aids. Wide experiences are to be given to retain the adult learners in the centre. All these activities are to be carried on in a systematic way to help the education of the adults in tribal areas.

A tribal teacher should also arrange film shows, dramas, etc., for tribal communty to educate and to win the heart of the people. The teacher through helping the people on their difficulties of getting lands, loans, etc., should win the confidence of these people. When once the tribal people believe him, his work will become easy. If things are not attempted in this direction it is very difficult to win the appreciation of tribal people and probably everything may turn out to be a flap. But it is difficult for the women teachers to take up all these responsibilities as women by their very nature pose number of problems. And non-tribal women teachers do not stay in the tribal areas. Hence, there is the problem of motivating both men and women teachers to undertake the responsibilities of educating the tribal adults. Adult education training institutions will have to intensify their efforts.

3. Tne Problem of Medium of Instruction

It is one of the most pertinent problems in tribal education. It is an accepted fact that mother-tongue should be the medium of instruction for adults. But it has not become possible for many State Governments to provide teachers who have thorough background of tribal culture and language because of lack of efforts. So non-tribal teachers cannot do work efficiently though they may know the language in part. So it is necessary to find out teachers from the same local area or some non-tribal teachers should be properly trained in tribal language and culture in addition to their normal training. Training institutions may also be established in tribal area. so that these teachers during the training period become acquainted with the environment in which they have to work later. All these efforts are to be undertaken to give education through mother tongue for tribal adults at any cost.

4. The Problem of Supervision and Inspection.

Supervision and inspection of tribal adult education centres becomes difficult when they are located in interior forest/desert or hilly areas. Supervisors can inspect the way in which the facilities and the grants are being utilised, but unless a supervisor or an inspector knows the tribal language and culture he or she cannot pass on any comments as they cannot understand anything. They cannot give any guidance too. Hence, an administrative department fails to guide supervise and even to identify the methods of teaching of a teacher. The solution for this is that supervisors and inspectors should also be given proper training in tribal language and culture. Yet another alternative, to the problem of supervision and inspection is to provide highly qualified, trained and devoted teachers for tribal adult education centres, who must be of course paid good remuneration. With all this there is no guarantee that a teacher will do his duties very earnestly and sincerely. It is the basic value pattern that comes so far rather than any training, guidance or supervision. So proper values are to be developed in adult education in training institutions.

There is one more problem in supervision and inspection of tribal adult education centres. When some teachers are honest and sincere and if supervisiors or inspectors are bureaucratic in nature, a good teacher may be annoyed or misled by these people. Therefore all branches of education must work with proper co-operation and co-ordination or else it becomes very difficult to achieve the final objectives of education.

5. The Problem of Preparing Text-books

There are many tribal languages in India which have no script at all. It is difficult to give them a script and then write the books. Text-books

should be written by an expert committee. Experts should know the tribal language and culture well. Text-books should be written in simple language with suitable experiences, examples, exercises and diagrams to lesson the burden on the part of the teacher. Text-book preparation takes time and it cannot be prepared in hurry and thus careful planning is necessary.

Scholars should be invited to write text-books. Suitable remuneration should also be given to them. Text-book writing should not be given to private enterprise which may be purely commercial ones and they may not pay more attention to the quality and get up of the book. Expert review committees should also be appointed by the Government to review the books.

6. The Problem of Finding Voluntary Agencies Working with Sincere and Honest Efforts to bring about Development in an All-round Fashion through Adult Education

Besides the activities of governmental institutions, the Government should also motivate the private agencies to organise and establish adult education programmes. Of course christian missionaries have been doing their best to educate the adults through non formal and informal means. Besides these organisations Government should also motivate encourage and provide liberal grants for other organisation who want to open adult education centres in tribal areas.

7. The Problem of Denotified Tribes

Denotified tribes include tribes which prior to 1950 were known as criminal tribes, as their hereditary occupation was theiving. The Government of India passed a Criminal Tribes Act in 1950 and has empowered to settle these tribes. After 1950 efforts are being made to provide education for these groups by establishing boarding schools, but efforts to provide adult education for the adult sections are not there. So adult education should be started to educate the adults on all aspects of life in an integrated fashion.

8. The Problem of Nomadic Tribes

As the name indicates, these people do not stay in a particular area. They go on moving from one place to another. Hence, it is difficult to provide education for these adult people. The only way of providing adult education to these people is by providing mobile adult education centres. The Government of India of course is providing all possible facilities for the cause of tribal education, as very little was done in the pre-independence period by the Britishers. Efforts are also being directed towards the settlement of these tribes. But the Governments of different States have not succeeded in it. Both Governmental and voluntary efforts will have to be honestly and sincerely chanalised for the cause of the primitive sections of our Indian society.

Summary and Conclusions

Adult education in tribal areas must be related to the economic development. Education should be vocationally biased (agriculture, weaving, spinning, carpentry and other crafts) followed by general education of a short period. Mere literacy programmes will not make any sense to tribal adults education should base it's foundation on the needs and problems of the tribes. For nomadic and semi-nomadic groups, maximum facilities to stay in an area must be provided with suitable type of education. Education should not ignore their culture, nor should conflict the values present in the culture. Mother-tongue should be the medium of instruction. Broad secular outlook national solidarity should be the aim of education. In all, adult education should be a combination of a variety of programmes so as to help in social, economic, political, health and sanitary and cultural developments. Of course development is a slow process even with sincere and dedicated efforts. So it needs continuous and strenous attempts to hit at the goal. Above all to attract the adults for education and to retain them for longer periods honest and devoted efforts are needed on the part of the teachers or else everything will be proved futile. Undirected or misdirected education (more of general education) will lead them no where, besides it increases their isolation by developing value conflict between what is known (their culture) and what is taught. Examples must be derived from their cultures only. All these will help the adults to take up the adult roles. Education must be learner-centred and must arouse interest and curiocity in the adult learners. Qualities like dignity of labour co-operation should be developed. Text-books should derive their nourishment from the local tradition and must be written in mother-tongue. Thus, the type of education, the medium of instruction, and the text-book preparation will differ from group to group depending upon the environmental and cultural determinants. Careful planning is needed for the effective working of the adult education system in tribal areas. With all this, wide publicity and propaganda will help to develop positive attitude towards education in tribal people.

Problem Identification by Teacher's for the Development of Tribal Students Elementary Education (A study in Phulbani District of Orissa)

DAMODAR SUAR

Abstract

The present study was conducted over 56 teachers taken from the Phulbani district. Five open-ended questions were asked to each subject pertaining to increase in enrolment, modification of curricula, incentive to students, incentive to teachers and other physical facilities to the school for elementary educational development of tribal children. It was found by content analysis (taking 20 per cent cut in the account) that most of needs and problems expressed by the teachers for educational development of tribal children were economical in nature rather than social, cultural and psychological. There was also substantial degree of agreement in the problems and needs expressed by the teachers of different sub-area (found by inter-correlation matrix). To over come these problems and needs, some strategies are also suggested.

Introduction

According to 1971 census, the Scheduled tribes in Orissa comprised 23·11 per cent of the population and in India they were 13·35 per cent of the population. It need not be emphasised that, for tribal development, no investment is likely to yield greater return than investment in human resources of the tribal, of which the most important component is education. The problem is better understood when we look at the literacy figures of the tribals of Orissa. The tribal literacy is 9·5 per cent, women literacy being 2·6 per cent, while the state average are 26·18 per cent and 13·9 per cent respectively. It is observed in the Third All-India Educational Survey that enrollment is higher among the Scheduled Tribe (18·13 per cent) than among the Scheduled Caste (14·26 per cent) in Elemenrary Schools. But drop-out, westage and stagnation is higher among the Scheduled Tribe children in comparison to Non-Scheduled Caste and Scheduled Caste children. Then the question arises, what are the problems that account for the occurance of this phenomenon and the plausible solution for these. While some emphasized the importance of Curricula, Methods and Text books in Tribal education (L. K. Mohapatra, 1955), others emphasized the role of Tribal School in enhancing tribal education (Aiyappan, 1948, J. S. Apte, 1960). M. N. Basu (1958) emphasized the role of mother tounge as a medium of instruction in imparting education to tribals. Sachhidananda (1967) opined that education and economic growth go side by side and education with vocational bias is the need of tribal people. Anthropologists and Sociologists have emphasized the need for qualified and,

Result

right type of teachers (R. N. Brahama, 1953) content of education, medium of instruction, school holidays (Sachchidananda, 1967), equipments, environment and compulsory primary education for the educational development of tribals (Elwin, 1962). Keeping the above findings in view, to identify the important problems and suggesting solution for it, a study was conducted in the Phulbani district of Orissa. The main tribes of the district are Kondha and Gond (Scheduled tribe).

Objective

The objective of the study was to (i) find out the teacher's opinion on the priority of educational problems and needs related to enrollment, curricula, incentive to students, incentive to teachers and other physical facilities for the school, (ii) To test the relationship or degree of agreement in the problems and needs identified by the teachers from different area of the same district and (iii) Suggest measures for the development of tribal students elementary level of education.

Methodology

On the basis of infrastructure facilities, tribal concentration and accessibility, three blocks were identified, viz. Daringibadi, G. Udayagiri and Boudha as under developed, developing and developed respectively. Taking the elementary and Primary Schools in to account, 18 Schools from Daringibadi, 19 Schools from G. Udayagiri and Boudha each were selected randomly for the purpose of the study.

One teacher from each school having maximum experience was interrogated. In his absence, the teacher having maximum experience among the teachers present on the day of visit was interrogated following Web's technique. This way, 56 teachers in total, were interviewed.

Each teacher was asked five open-ended questions pertaining to increase in enrollment, modification of curricula, incentive to students, incentive to teachers and other physical facilities to the schools for the elementary or primary educational development of tribal children.

Analysis

As the questions were open-ended, all the answers to each question was subjected to content analysis, on the basis of which different categories of responses were identified. The frequencies of the responses of the teachers of the different areas were converted to percentage. For the total area, the frequencies with which each category appeared were added and converted to percentage also. Then the percentage were ranked for the sub-area as well as for the total area, To find out the importance of problems and needs, the categories supported by 20 per cent or more number of teachers (20 per cent cut) of the total area were taken in to consideration along with the ranking serial (priority fixation). To find out the degree of agreement in problems and needs expressed by teachers from different area, the inter-correlation (by Spearman's formula) of the response categories for different area was computed.

TABLE E_1

To increase enrollment at Elementary level for Educational development of tribals

Sl. No.	Area Categories	Under developed		Developing		Developed		Total	
		Per cent	Rank	Per cent	Rank	Per cent	Rank	Per cent	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Compulsory education	38·89	4·5	47·37	3·0	36·84	6·5	41·07	4·0
2	Supply of reading and writing materials by Government.	44·44	3·0	52·63	2·0	94·79	1·0	64·29	2·0
3	Free clothing, fooding and hostel facilities.	77·78	1·0	73·68	1·0	82·21	2·0	78·57	1·0

Sl. No.	Area Categories	Under developed		Developing		Developed		Total	
		Per cent	Rank	Per cent	Rank	Per cent	Rank	Per cent	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
4	Supply of study materials in time.	22·22	8·0	15·79	7·0	26·32	8·0	21·43	8·0
5	Awarness of parents . .	38·49	4·5	15·79	7·0	47·36	4·0	33·93	5·0
6	Establis h m e n t o f residental A s h r a m Schools.	50·00	2·0	10·53	10·5	31·58	5·0	30·36	6·0
7	Supply of science aids, creative and stimulating materials.	22·22	8·0	52·10	4·0	68·42	3·0	44·64	3·0
8	Supply of sports and games materials.	22·22	8·0	15·79	7·0	21·06	9·5	19·64	9·5
9	Stipend to students . .	16·67	10·0	15·79	7·0	15·79	11·0	19·64	9·5
10	More number o f teachers.	5·55	12·0	10·53	10·5	21·06	9·5	12·50	11·0
11	Qualified teachers for teaching.	11·11	11·0	5·26	12·0	5·6	12·0	7·14	12·0
12	Facilities for higher education.	27·78	6·0	15·79	7·0	36·84	6·5	26·79	7·0

TABLE E_2

Modification of Curricula at Elementary level for Educational development of tribals

Sl. No.	Area Categories	Under developed		Developing		Developed		Total	
		Per cent	Rank	Per cent	Rank	Per cent	Rank	Per cent	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Liberal standard of books.	16·67	7·0	32·63	2·0	10·53	7·0	26·79	4·0
2	Library for children and teacher.	5·55	10·5	5·26	10·0	5·26	10·0	5·36	11·0
3	Teaching with demonstration materials.	22·22	4·5	68·42	1·0	89·47	1·0	60·71	1·0
4	Animal husbandry ..	27·78	3·0	21·05	5·5	15·79	5·0	21·43	6·0
5	Study of creative, stimulating materials in the course content.	16·67	7·0	26·32	3·5	63·16	12·0	35·71	2·0
6	Horticulture ..	11·11	9·0	5·26	10·0	5·26	10·0	7·14	1·00
7	Craft teaching ..	5·55	10·5	15·59	7·0	5·26	10·0	8·93	9·0
8	Agriculture ..	16·67	7·0	5·26	10·0	10·53	7·0	10·71	8·0
9	Tailoring for girls	22·22	4·5	10·53	8·0	10·53	7·0	14·29	8·0
10	Teaching in local dialect.	33·33	2·0	21·05	5·5	21·05	4·0	25·0	5·0
11	Part time coaching in morning and evening.	38·88	1·0	26·32	3·5	31·58	3·0	32·14	3·0

TABLE E_3

Incentive to Children Elementary level for Educational development of tribals

Sl. No.	Area Categories	Under developed		Developing		Developed		Total	
		Per cent	Rank	Per cent	Rank	Per cent	Rank	Per cent	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Free hostel ..	16·67	5·5	36·84	3·0	16·79	5·5	23·21	4·5
2	Playing materials to the school.	22·22	3·5	31·57	4·5	15·79	5·5	23·21	4·5
3	Free fooding ..	44·44	1·0	57·89	2·0	52·63	3·0	51·79	2·0
4	Free clothing ..	38·89	2·0	89·47	1·0	63·46	2·0	64·29	1·0
5	Reading/Writting materials.	22·22	3·5	31·58	4·5	68·42	1·0	41·07	3·0
6	Science equipment	5·55	10·0	15·79	6·0	5·26	9·0	8·93	8·5
7	Stipend and sholarship.	11·11	8·0	10·53	8·0	10·53	7·0	10·71	7·0
8	Reward and Reinforcement for better performance.	11·11	8·0	5·26	10·0	5·26	9·0	8·93	8·5
9	Distribution of sweet on the day of National importance.	11·11	8·0	5·26	10·0	5·26	9·0	7·14	10·0
10	Supervision of higher authoitty to encourage the children.	16·67	5·5	10·53	8·0	21·05	4·0	16·07	6·0

TABLE E_4

Incentive to Teachers for Educational Development of tribals

Sl. No.	Area Categories	Under developed		Developing		Developed		Total	
		Per cent	Rank	Per cent	Rank	Per cent	Rank	Per cent	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Government employee to primary teachers.	11·11	6·0	21·05	3·5	10·53	5·0	14·29	4·5
2	Teachers quarter ..	50·00	1·0	52·63	1·0	36·84	1·0	46·43	1·0
3	Salary in proper time ..	11·11	6·0	21·05	3·5	31·58	2·0	21·43	2·0
4	Increment in salary ..	22·22	2·0	15·79	5·0	5·26	8·0	14·29	4·5
5	Excursion (Opportunity for teachers to visit places of Historical and Geographical importance).	16·67	3·5	26·32	2·0	15·79	3·0	19·64	3·0
6	Special allowance (for interior teachers).	11·11	6·0	10·53	7·0	10·53	5·0	10·71	7·0
7	Land to the School for gardening.	16·67	3·5	10·53	7·0	10·53	5·0	12·50	6·0
8	Medical facility ..	5·55	8·5	10·53	7·0	5·20	8·0	7·14	8·0
9	Pay by M. O. ..	5·5	8·5	5·26	9·0	5·26	8·0	5·36	9·0

TABLE E_5

Physical facilities to the School for Elementary Educational Development of tribals

Sl. No.	Area Categories	Under developed		Developing		Developed		Total	
		Per cent	Rank	Per cent	Rank	Per cent	Rank	Per cent	Rank
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1	Building of the School	66·11	1·0	26·31	2·0	47·37	1·0	46·64	1·0
2	More number of rooms	44·44	2·0	47·37	1·0	36·84	2·0	42·85	2·0
3	Well or Tube well in the school.	38·89	3·0	21·05	3·0	13·78	5·5	25·0	3·0
4	Repair of school building.	16·67	4·5	15·78	4·0	21·05	3·5	17·86	4·0
5	Repair of teacher's quarter.	11·11	7·0	10·53	6·5	21·05	3·5	14·28	5·0
6	Supply of furniture (black board, tables, chairs, desks) to the school.	11·11	7·0	10·53	6·5	15·78	5·5	12·50	6·0
7	Hostel for students . .	16·67	4·5	5·26	9·5	10·53	7·5	10·71	7·0
8	Communication facilities to the school.	11·11	7·0	5·26	9·5	5·26	9·5	7·14	9·5
9	Supply of science equipments, charts, maps to the school.	5·55	9·5	10·53	6·5	10·53	7·5	8·93	8·0
10	Supply of games, sports material to the school.	5·55	9·5	10·53	6·5	5·26	9·5	7·14	9·5

TABLE E 1·1

Inter-correlation Matrix between sub-area to increase enrollment

Area	Under developed	Developing	Developed
Under developed ..	1·000	6·605	0·811
Developing ..	..	1·000	0·724
Developed ..	..	..	1·000

TABLE E 1·2

Inter-correlation Matrix between sub-area for modification of curricula

Area	Under developed	Developing	Developed
Under developed ..	1·000	0·505	6·741
Developing ..	..	1·000	0·777
Developed ..	..	..	1·000

TABLE E 1·3

Inter-correlation Matrix between sub-area on incentive to children

Area	Under developed	Developing	Developed
Under developed ..	1·000	0·799	0·876
Developing ..	..	1·000	0·700
Developed ..	..	..	1·000

TABLE E 1·4

Inter-correlation Matrix between sub-area on incentive teachers

Area	Under developed	Developing	Developed
Under developed ..	1·000	0·671	0·525
Developing ..	..	1·000	0·796
Developed ..	..	..	1·000

TABLE E 1·5

Inter-correlation Matrix between sub-area on physical facilities to the School

Area	Under developed	Developing	Developed
Under developed ..	1·000	0·685	0·752
Developing ..	..	1·000	0·803
Developed ..	..	..	1·000

Discussion and Conclusion

The results are self explanatory. The rank serial of different content area of different answer indicates the degree of importance of the needs and problems. Since all the needs and problems can not be considered, in all cases 20 per cent cut was taken to detect the important needs and problems.

An increased enrolment at elementary level of the tribal children calls for free clothing, feeding, hostel facilities. supply of reading, writing materials, supply of science aids, creative, stimularing materials, compulsory education and parental awareness (in the same order of importance) followed by establishment of residental Ashram schools, facilities for higher education and supply study materials in proper time. For a tribal family, to send the children to school entails economic loss and dislocation in economic activities. Observations. made in the tribal belt also revealed that most of the parents are unable to afford for their children food, clothing and shelter. If these facilities would be made available freely in the school, it may act as a centripetal force to attract the tribal children to the fold of education. Though Government have special provision for these, the response priority indicates that either these are inadequate to the children population or misused in the process of filtering to the tribal children. Along with the inadequate supply of creative, stimulating materials, the inadequate supply of reading, writing materials (slates, pencils, books, etc.) in improper time (i. g. not just after the admission) adds to their difficulty. Though these are supplied in some cases, these are either turned up or exhausted within a period of 6 to 7 months. Supply at least twice a year, at 6 months interval may solve the problem to some extent. Ashram schools with residental facilities and basic amenities, should be expanded for the children, so that the school will not free the child for a longer period in harvesting season and on festive occasions. Secondly, the child will develop a disciplined life and rarely get a chance to identify himself with his poor illiterate (wrong peer) group. The parental awareness can be ensured, if the enlightened community members, leaders and teachers motivate the parents through frequent interaction and participation regarding the value attached to education. Another suggestion made was modification of curricular to cater to the needs of community and massive spread of illiteracy that would influence the parents to send children to schools. In most of the tribal areas, the educational institution above elementary level are almost absent or far away. So complecting elementary level is accelerating insecurity because it would not help the child to enter any occupation or job that demand higher education nor to earn living with specialised knowledge. Expansion of higher educational facilities at appropriate places will save the child lot of insecurity.

To enrich the quality of curriculum for tribals, teaching with demonstration materials. creative, stimulating study materials in the course content, part-time coaching in morning and evening. liberal standard of books comes in order of importance followed by teaching in local dialect and vocational education with standard curricula (taking the 20 per cent cut). The tribal children's socio-cultural environment is not rich enough to suppliment ideas and knowledge about the sophisticated materials and designs used in the books. So the child's cognitive field fails to process information imported in class-room teaching. So the teaching with demonstration materials and models may be able to eliminate the educational hindrances faced by the child. Along with this, emphasis on creative, stimulating study materials in the course content will arouse interest in the plastic psyche of the child. If there would be provision for morning and evening coaching, they will be more interested in studying and able to grasp the course content more perfectly what they were unable to learn in the class-room teaching. Again all the educational books prepared are generally standardised against the sample of urban children. The tribal child will be encouraged to perceive the teaching perfectly, if the standard will be liberal to fit to the mental make-up of the child. The mother tongue or the local dialect should be used as a medium of instruction to avoid lot of frustration arising out of the foreign language. Lastly, there should be provision for job oriented education (i. g. duckery, piggery, goat rearing) taking the need and resources of the area into account, along with the standard curricula to facilitate earning and living in future.

In providing incentive to children for their educational development free clothing, fooding, supply of reading, writting moterials, sufficient playing materials to the school comes in order of importance followed by free hostel (taking 20 per cent cut). These incentives are also reported to increase enrolment which needs no further elaboration. An incentive to teachers, quarter for

them and salary in proper time comes in order of importance. So careful attention should be provided with better incentive in terms of pay at proper time and housing to teachers to enthuse them to put their best for the spread of education in tribal areas. In their opinion, if the residental facilities will be attached to the school, they will be able to look to the school as well as able to keep guidance and supervision over children. In providing physical facilities to the school, school building, more number of rooms, well or tube well in the school also deserve attention care.

In all the answers relating to educational development of tribals, there was substantial agreement (always $r+\cdot 50$) in the expressed problems and needs among teacher's from under developed, developing and developed areas. It was noticed that, the agreement in expression of problems and needs for increasing enrolment were higher between under developed and developed ($r=\cdot 811$), developing and developed ($r=\cdot 605$) area.To enhance quality of curriculum the similar trend was observed. In providing incentive to children, there was significantly high agreement among the teachers as if there are some common needs and problems for tribal children irrespective of areal discrepancy. In providing incentive to teachers, there was comparatively low agreement ($r=\cdot 526$) among the teachers from under developed and developing area. A good deal of observation and experience confirms the above fact that, in Inferior pockets or under developed areas, the teachers are unsatisfied or deprived of physical facilities, cultural and social environment which is permanently rich in developed areas. In providing physical facilities to the school there was also high degree of similarity in expressed problems and needs which lead us to conclude that, inspite of the varied effort expansion by the Government and Educational Department, the school have not attained the standard perfection in terms of physical facilities in tribal belt.

The categories of response expressed by the teachers were characterised by paucity of content and the range of problems and needs expressed therein were highly restricted, being largely confined to the immediate necessities and subsistence living. In otherwords, most of the needs and problems were economical in nature rather than social, cultural and psychological. The basic needs were so overpowering that it came in response to most of the questions, irrespective of context. Immediate economic needs seemed to predominate throughout. This pointed out that their mental horizon which did not very much extended beyond their own necessity and the necessity of the cummunity children concerned. The intercorrelation matrix also indicates that there was high degree of agreement in needs and problems of different areas. So the strategies suggested after detecting the needs and problems will help to remove most of the hindrances at the student, teacher and school level for the elementary or primary educational development of tribals.

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Role of Some Plants in Human Welfare

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Since the very inception of the human civilisation the plants are playing a vital role in the human society. No human existence can be imagined keeping the plants away. The plants are neglected and still now neglected. So, we should not neglect the plants even if it be a weed and moreover we should study their total characters both externally and internally. Various attempts are being made in modern days to study the plants and for that reason primarily the study of the systematics of the plants is essential to assess their taxonomic position with their proper identity. The taxonomy of the plants will not only solve the problem of our main aim. The main aim and objectives should be the utilisation of plants as useful resources in respect of medicines and other economic importance to the human society and culture. To make the full utilisation, plants in accurate and timely need of the human society after the authenticity of plants, one should make a complete chemical analysis of the plants through different processes and techniques.

India is a vast country with a considerable huge human Population. Now-a-days, the advanced medical-aid is not covering all the areas especially in the remote villages which are lagging in respect of literacy, financial solvency, communication, transport. etc. But those areas at least comprise a huge plant vegetation consisting of dense forest having different varieties of edible, non-edible, poisonous and other plants of economic importance.

The categories of plants referred to above may play more vital role in the upliftment of human society, particularly in the backward rural areas where the vegetation is not at all affected or less affected. The plants of every meagre or trifle value should be allowed to grow in an undisturbed way so that the plant can show their luxuriant growths and diversity in various habitats of India.

As such they are left undisturbed they can play vital role and influence the human population in the fulfilment of various needs. One should not give up the scope to utilise the plants as a resources to the modern culture and livelyhood of the human society.

In this article a list of useful and commonly interested plants stating their habits, common names, parts used together with their utility have been described.

In describing the plant, parts used, various standard books of medicinal and economic importantances were consulted.

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1. *Aconitum falconeri*—Stapf (Ranunculaceae)

Habit—erect; Fls. blue

Common Names—Bis, Bikh and meethatellia.

Distribution—Mostly in Tehri Garhwal, alt. about 4,000 m.

Parts used—Root

Utility—Neuralgia, rheumatism etc.

2. *A. heterophyllum*—Wall. (Ranunculaceae)

Habit—erect, raceme many-flowered, fls. bright blue.

Common names—Alvisha, Atis or Alaicha

Distribution—Garhwal, Kumaon, Kashmir, Himalayas at an. altitude of 1,800 m.—4,000 m.

Parts used—root

Utility—Diarrhoea, cough, tonic

3. *Acorus calamus*—Linn. (Araceae)

Habit—Semi-aquatic perennial herb with creeping much branched aromatic rhizome.

Common names—Bach, Vaj, Bhadra, Vadaja

Distribution—Mysore, Manipur, Nagaland, Kashmir and Sikkim. Himalayas upto an altitude of 1,800 m. widely cultivated throughout India.

Parts used—rhizomes

Utility—dyspepsia and chronic diarrhoea

4. *Adhatoda vasica*—Nees (Acanthaceae)

Habit—evergreen shrub; lvs; lanceolate, fls. white.

Common names—Vasaka, Adulasa, Bakas and Adasaramu.

Distribution—Throughout India, commonly found in Northern India.

Parts used—Leaves and root

Utility—Cough; it is mostly used in Kabiraji medicine.

5. *Alstonia scholaris*—R. Br. (Apocynaceae)

Habit—Evergreen tree with milky juice, frts. with 2-slender follicles.

Common names—Saptaparna, Chattim etc.

Distribution—Throughout the moister regions of India.

Parts used—Stem bark

Utility—Malaria, diarrhoea and dysentery

6. *Atropa belladona*—Linn. (Solanaceae)

Habit—Tall branched perennial plant; fls. yellow purple.

Common name—Belladona

Distribution—Cultivated to some extent in Kashmir, widely growing in Central, Southern Europe and also in England.

Parts used—roots, leaves and fruits

Utility—Stimulant to respiration and circulation.

7. *Berberis aristata*—DC. (Berberidaceae)

Habit—Erect, spinosus herb or shrub, forming sometimes gregarious patches; fls. golden yellow.

Common names—Dar-hald, Rasant.

Distribution—North-Western Himalayas, Nilgiris, Kulu, Kumaon, at an altitude of 1,800m.—2,500m.

Parts used—root barks, wood

Utility—Menorhagia, diarrhoea, jaundice and affection of eyes.

8. *B. asiatica*—Roxb. (Berberidaceae)

Habit—Evergreen, erect, thorny shrub; racemes short, corymbose.

Common names—Sumlu, Kilmora, Chitra and Kingora.

Distribution—Dry outer Himalayas and also in Assam Himalayas.

Parts used—root

Utility—Urethral discharges, leucorrhoea, jaundice, fever etc.

9. *Boerhavia diffusa*—Linn. (Nyctaginaceae)

Habit—Procumbent, erect or sub-erect straggling herb with long branches & reddish or purplish flowers.

Common names—Saut, Punarnava, Rakta-Punarnava, Chetuli etc.

Distribution—Throughout India

Parts used—root

Utility—Laxative and diuretic, oedema, anemia, jaundice, etc.

10. *Calotropis gigantea*—(Linn,) R. Br. ex Ait. (Aclepiadaceae).

Habit—Shrub; lvs. thick; corollalobes spreading.

Common names—Arka, Akanda, Arkkam, Jilledu and Enikku.

Distribution—Common throughout India, especially in North India,

Parts used—Root barks; leaves; latex of plants.

Utility—dysentery, substitute for Ipecaceuana, diaphoretic expectorant, emetic and pastle to elephantiasis; tincture of leaves used in fevers; latex of plants used in colds, cough, asthma and indigestion.

11. *Canabis sativa*—Linn. (Cannabinaceae)

Habit—tall, annual herb; lvs. palmately divided; fls. greenish, male flowers in long drooping panicles and female on short axillary spikes.

Common names—Bhang, Chanas and Ganja

Distribution—Native of Western and Central Asia, now naturalised in the Sub-Himalayan tract of India, such as U. P., Bengal, Maharashtra, M. P. etc.

Parts used—Entire plant

Utility—Tonic, stomache etc.

12. *Coptis teeta*—Wall. (Rarunculaceae)

Habit—Herb, root stock perennial, yellowish brown to golden yellow colour; fls. slender on leafless scapes.

Common names—Tita, Mamira.

Distribution—Assam, Arunachal & Mishmi Hills.

Parts used—Rhizome.

Utility—Dyspepsia, mild forms of intermittent fevers.

13. *Datura metel*—Linn. (Solanaceae)

Habit—Shrub; lvs. triangular-ovate, unequal at base, violaceous or reddish purple on the outside; Frts. globose, tuberculate or muricate capsule.

Common names—Dhutune, Kaladhutuna

Distribution—Common in the plains, waste lands and in cultivated fields.

Parts used—root, leaves & seeds

Utility—Diarrhoea, skin diseases, antiseptic

14. *Datura stramonium*—Linn. (Solanaceae)

Habit—Common weed; fls. long, white or violate; capsule erect.

Common names—Dhatura, Kanaka, ummata

Distribution—Throughout India, common in north-wastern Himalayas.

Parts used—Leaves & seeds

Utility—Leaf antiseptic .

It is utilised in medicine in the treatment of asthma; also utilised in the Ayurvedic preparations.

15. *Digitalis purpurea*—L. (Scrophulariaceae)

Habit—Biennial or perennial herb; lvs. long winged petiholes; flowering on a one side raceme of 2-3m. long flowers, with purple of yellow to white colour.

Common names—Foxglove (Eng.); Digitalin.

Distribution—Mostly cultivated in the hilly regions. common in Kashmir, Mungpoo and Nilgiri hills.

Parts used—Leaves

Utility—Cardiac stimulant; tonic in heart diseases.

16. *Dioscorea deltoidea*—Wall. (Disohcoreaceae)

Habit—Extensive climber; stem unarmed and twining to the left, rhizome horizontal, borne close to the soil surface, chestnut brown.

Common names—Kniss, Kirta,

Distribution—Cultivated in the Punjab and Kashmir.

Parts used—root

Utility—rheumatism and ophthalmic disorder

17. *Eclipta prostrata*—Linn. (Compositae)

Habit—erect or prostrate herb; fls. white.

Common names—Bhringaraja, Kesaraja, Keshut, Bhangra, etc.

Distribution—Throughout India in moist situations.

Parts used—Entire plant

Utility—Hepatic enlargement, jaundice, leaf juice, along with honey used as a remedy for cataract; the root is emetic and purgative.

18. *Emblica officinalis*—Gaertn. (Euphorbiaceae)

Habit—Medium sized deciduous tree with smooth greenish greybark; lvs. feathery; frts depressed, globose.

Common names—Amlaki, Nelli, Amla, etc.

Distribution—Scattered in the mixed deciduous forest of India; often cultivated.

Parts used—root, bark, fruits and seeds

Utility—The fruits is used in diarrhoea and dysentry; richest natural source of vitamin C; roots and barks used in astringent; seeds are used for asthma, bronchitis, etc.

19. *Ephedra gerardiana*—Wall. (Ephedraceae)

Habit—erect shrubs of variable in size, bearing dark green, cylindrical, striated, often covered branches arising in whorls.

Common names—Asmania, Badagum, Rachi, Tse, Teapat, Khanda Phok, etc.

Distribution—Temperate and alpine Himalyas of Kashmir, Sikkim, Lahul, Spiti, etc., at an altitude 1900 m.—4000 m.

Parts used—Stems and roots

Utility—Decoction of stems and roots are used as remedy for rheumatism and syphillis.

20. *Gentiana Kuroo*—Royle (Gentianaceae)

Habit—Small perennial herb with stout rhizome; flowering branches with 2—5 fls. with purple blue in colour.

Common names—Karu, Phashanveda, Nilkant, Kutki, etc.

Distribution—Kashmir and N. W. Himalayas

Parts used—root

Utility—Stomache and urinary affections, etc.

21. *Holarhena antidysentrica*—Wall. (Apocynaceae).

Habit—Deciduous small tree of 10 m; bark rough, pale brownish or greyish; follicles cylindric.

Common names—Kutaja, Pandhara, Kurchi, Kuri, etc.

Distribution—Sub-Himalayan tract ascending to 1000 m. in the Himalayas and more or less throughout India.

Parts used—Leaves, barks and seeds

Utility—Dysentry, diarrhoea, fever and intestinal worms.

22. *Nardostachys grandiflora*—DC. (Valerianaceae)

Habit—erect, perennial herb; root stock woody, long, stout, covering with fibres from the petioles of withered leaves.

Common names—Jatamansi, Mansi. Bhutijatt, Balchhar.

Distribution—Alpine Zone throughout the Himalayas from Kumaon to Sikkim at an altitude of 11 to 3800 m. in Sikkim upto 4200 m.

Parts used—Rhizome.

Utility—epilepsy, hysteria and convulsive disorders; the essential oil obtained from the root is used in Pharmaceutical preparations.

23. *Ocimum sanctum*—Linn. (Labiatae)

Habit—Herbaceous, erect plants; racemes very slender 15—45m. long.

Common names—Tulsi, Tulasa

Distribution—Mostly cultivated, but distributed throughout India, sometimes seen in the wild condition.

Parts used—Root, leaves, and flowers and seeds.

Utility—Cataract, bronchities, malaria fevers and ear-ache; seeds are used in genetic urinary system; essential oil is also extracted.

24. *Papaver somniferum*—L. (Papaveraceae)

Habit—Annual herb; capsule 2·54cm. in diameter.

Common names—ahiphena, afism, afium; pastaka, kosakora post etc.

Distribution—Cultivated throughout India mostly in U. P. Jullundar, Hoshiarpur, E. Panjab and Rajputana.

Parts used—Latex

Utility—The latex obtined from the immature fruits is the source of opium used to induce sleep, relieve pains and relax spasms etc.

25. *Pergularia daemia*—(Forsk.) Choiv. (Asclepiadaceae).

Habit—Slender climber with milky latex; corolla cliatic; follicles with long soft spines.

Common names—Chagulbanti, utarani, Yugaphaia, Tortu, Uttamani and Guruti etc.

Distribution—Common through out the hotter parts of India.

Parts used—Leaf and root barks

Utility—Remedy for carbuncle, leaf juice used as an expectorant in catarrhal affections, diarrhoea, rhema rheumatism etc.

26. *Piper longum*—Linn. (Piperaceae)

Habit—Creeping, glabrous shrubs; spike solitary, 2·54—7·5cm. "long; fruit about 2·54cm" diameter.

Common names—Pipli' Piplanul and pippallu

Distribution—Hotter provinces of India such as Assam, Bengal; Bombay, Travancore etc.

Parts used—Roots and fruits

Utility—Decoction of roots and immature fruits are used in chronic bronchities, cough and cold.

27. *Pitosporum floribundum*—Wt. and Arn (Pittosporaceae).

Habit—Small tree, having umbelled branches; fls. small, pulescent in much branched terminal compound corymbs.

Common names—Vekhali, Yekdi, Tammata, Rakarunki, etc.

Distribution—Subtropical Himalayas from Punjab to Sikkim up to 1500 m. also in Concan and Nilgiris.

Parts usad—Bark

Utility—Bronchities, antidote to snake, skin disease local application to rheumatism, chest affection etc.

28. *Plantago asiatica*—Linn. (Plantaginaceae)

Habit—Plant with perennial root stock, stout; seeds very minute, black.

Common names—Pangla, Pangli

Distribution—Sub tropical Himalayas, from Kumaon to Bhutan and Assam, Concan, Nilgiris and Madras.

Parts used—Roots and Fresh leaves

Utility—Fresh leaves in styptic; bruised and applied as a cataplasm to clear wounds and promote healthy grannulation; roots used for remedy of haemorrhage, useful in uterine haemorrhage antidote to scorpin sting and snake bite.

29. *Rauvolfia Serpentina*—Benth ex Kurz. (Apocynaceae).

Habit—Small shrub; lvs. elliptic or obovate, lanceolate; cymes 2·5-5 cm. in diameter, many flowered, corolla tubes often curved.

Common names—Sarpagandha, Chamdra, Patra, agandhi, covannamipori, chhotachand, etc.

Distribution—Tropical Himalayas and to the plains near the foot hills, Dehradun, Moradabad, Sikkim, Khasia, Decan Penninsula, Travancore, Nilgiris. etc.

Parts used—Roots, leaves

Utility—Reduces blood pressure, remedy in painful affections of the bowel; employed in labrours to increase uterine contractions; juice of the leaves are often used for removal of opacities of the cornea of the eyes.

30. *Rauvolfia canascens*—Linn. (Apocynaceae)

Habit—Small shrub; much branched, 65°-9m. high; cymes with long slender peduncles.

Common names—

Distribution—Occurs in the moist and hot regions of India, abundant in Bengal particularly to 24-Parganas and Howrah District.

Parts used—Root bark, stem & leaves

Utility—Parasympathetic stimulation and depresses the tone of voluntary muscles and disorders.

31. *Saussurea lappa*—(Decane.) Sch.-Bip. (Asteraceae).

Habit—Stout herb; 1·8-2m. long stem; root perennial, long to fusiform; inflorescence heads sub-globose.

Common names—Kustha, Kutch, Pacock, Kustam, etc.

Distribution—Kashmir

Parts used—Root

Utility—Tonic, stomache, carmine; stilmulant, used as spasmodic in asthma, couch and cholera and as an aiternative in chronic skin disease and rheumatism.

32. *Semicarpus anacardium*—Linn. f. (Anacardiaceae).

Habit—Moderate sized deciduous tree, producing a dark juice; frt. drupe of 2·54 cm. long, obliquely ovoid or oblong, smooth, shinning and black.

Common names—Bhallika, Bhela, Biba, Bhilawa.

Distribution—Sub-Himalayan tract and outer hills up to 1000 m. of Assam, Khasia, Concan, Maharashtra, Kanara and Madras.

Parts used—Bark and nuts

Utility—Bark and nuts possess essential quality for medicinal use, such as nuts bruised and applied to procure abortion; oil from nuts are used for rheumatism etc; gum from bark used in nervous debility.

33. *Solanum myriacanthum*—Dunal (solanceae)

Habit—Erect; somewhat prostrate, branched undershrub or shrub up to 1—5 to 1·8m. high; inflorescence latural cymose, sessile or subsessile, up to 3, rarely more flowered; fruit, berry, nearly spherical, pubescent when young, glabrous on maturity, pale yellow with green spreaks, single or two, rarely 3; calyx persistent; seed : compressed, sub-orbicular.

Distribution—Widely naturalized in different parts of Indla particularly growing in large population in Khasia, Jayantia hills, N. E. F. A. in the plains in West Bengal, Bihar, Orissa, in higher altitude of Darjeeling, Kurseng in Eastern Himalayas, Dehra Dun and adjacent localities reaching up to the elevation of 1,600m. in Garhwal hills in North Western Himalayas, in Nilgi hills and plains of Andhra Pradesh, Karnataka and Andaman Islands.

Utility—Yield a sterodial alkaloid solasodine in appreciable and produces cortico—steroids and sex hornones for human.

34. *Strychnos nux-vomica*—Linn. (Loganiaceae)

Habit—A tree attaining 12m. high; fruit-berry, globose, many seeded.

Common names—Kuchla, Kajra, Kannram, Mushti.

Distribution—Throughout tropical India up to altitude of 130 m. such as Orissa, Bihar, Konkan, Dacan, North Kanara and Madras.

Parts used—Root barks, wood: seeds

Utility—Root barks ground with lime juice and made in to pills which is effective in cholera woods for stomache diseases; leaves are used for wounds and ulcers, seeds are poisonous.

35. *Swertia chirayita*—Roxb. ex Fleming (Gentianaceae).

Habit—Herb of ·6—1·8m. high; stem lineolate or sub-tereete; lvs. about 5—6·5 cm. long, lanceolate; panicle large leafy.

Common names—Chirta, Kairata, Kiryatcharayath, Nalaveppa.

Distribution—Temperate Himalayas from 1,000—2,500m. from Kashmi to Bhutan, Khasia mountains up to the altitude of 1,000—1,200m. frequent.

Parts used—Entire Plant

Utility—Used as a bitter tonic for stomache, laxative.

36. *Tylophora indica*—(Burm. f.) Merr. (Asclepiadaceae).

Habit—Slender, pubescent or tomentose twining, herb; leaves ovate, rounded or oblong.

Common names—Antamul, vil l a p p a l a, Nayappalai.

Distribution—Hotter parts in India, such as Madras, Kanara, Assam, N. & E. Bengal up to 900m.

Parts used—Roots and dried leaves

Utility—Roots and dried leaves are used in rheumatism, cures bowel complaints, etc.

37. *Viola serpene* wall. (Viclaceae)

Habit—Long flowering herb; lvs. ovate-cordate obtuse or acute-crenete serrate; flowers with spun saccate.

Common names—Banafsha, Thungtu, etc.

Distribution—Throughout the temperate Himalayas, such as Khasia, Nilgiries, etc. also planted in districts throughout India.

Parts used—Plants: petals ; root etc.

Utility—Plants antipyretic; petals in infantile disorders and roots yield alkaline violine.

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Some Additional Notes on Economic uses of a few plants of Rubiaceae

B. SAFUI
A. BHATTACHARYA

Plants and animals are living side by side since their evolution and there is a symbiotic relationship between the two. By sheer of empirical experiences and usages, animals use the plants in their environments.

Men's dependence on plants for his very existence has been of greatest importance since time immemorial. From the very dawn of life as well as civilisation, there were of paramount necessity for three basic requirement of life—food, clothing and shelter. Apart from these, there are other economic uses like (1) medicinal, (2) fodder, (3) firewood, (4) furniture, (5) detergent, etc.

With the advancement of civilisation, complexities of life are increasing day by day. In the struggling for existence, man has to devise ways and means to combat with the situation. Naturally, as the dictum goes, necessity is the mother of invention, man has to look for the subsistence in different spheres to supplement his requisites in life.

With this end in view, the present endeavour has been made to know the unknown usages of plants. As a matter of fact, it is the bounden duty of every worker of Plant Taxonomy and or Economic Botany to unearth such fruitful hidden informations. The authors of this treatise, in course of their quest in different herbaria of Calcutta and neighbourhood came across such some interesting herbarium specimens which on careful examination and scrutiny have all found to be of some economic importance.

A cursory of literature available reveal that some of the information are partly published and some are yet to be published. Besides the information of the herbarium sheets, distribution of each plant has been given in accordance with recent literature and herb., for convenience of further study and investigation, local names, if any, (used at the place of collection) are given under inverted coma. The present paper deals with such 22 plants.

Notations used in this paper :

CAL—Central National Herbarium.

ISIM—Herbarium, Industrial Section, Indian Museum, Calcutta.

Distr.—Distribution of the plant in India and surroundings.

Adina sessilifolia—Benth & Hk. f. Gen. Pl. II:30. 1873, 'Tsinthe'

Burma—Peinchil Kantarawadi State 3000', 5th May 1908, Karenni 509(ISIM).

Used as firewood by natives.

Distr. : Tripura, Bangladesh, Burma.

Anotis montholoni—Hk. f. Fi. Brit. India 3: 73. 1880. 'Fooliya'.

Deccan—Bhaisa Narsingpur, 13-8-1903, Kalka Prasad 20292(ISIM). Used as vegetable.

Distr. : Khandwa, Poona,

Canthium dicoccum—(Gaert.) Teys. & Binn. Cat. Mort. Bog, 113. 1866. var.

Umballatum—(Wight) Sant. & Merch. Bull. bot, Surv. India 3:107. 1962.

—*C. didynum*—Roxb.
'Niralli'

Madras—Rajamandri, 13-3-1902, F, Royger S. n. (ISIM).

Timber used for house building purposes by the poor classes.

Distr. : Tamilnadu, Karnataka, Burma.

Coptosapelta flavescens—Korth. Ned. Kruidk. Arch. II. 11:113. 1851.

'Prual'

Malay Peninsula—Perak 1000', L. Wray 4276 (CAL.).

Root bark used as arrow poison by Salcuis.

Distr. : Malay peninsula.

Dentella repens—(L.) Forst. Charact. 26, to 13 1776.

'Kanthasag', 'Kantha arqk'.

Bengal—April 1914, H.G. Carter S.N. (ISIM).

Used as vegetable—famine food.

Gaillonia aucheri—Jaub. et. spach in Ann. Sc. Nat. Ser II. XX—87 1843.

'Tusse'

Beluchistan—Kharan quetta, 27th September 1904, R. H. Butter 23152 (CAL).

Sheep and Camel fodder. For throat sore and scurty, people smoke its leaves.

Distr.—Pakistan & Afghanistan

G. olivieri—A. Rich in Mem. Soc. Hist. Nat. Par. V. 152. 1834.

Afghanistan—Harirud valley, the 18th June 1885, Aitchison 691 (CAL.).

The annual shoots and woody root. stock make excellent fuel.

Distr.—Afghanistan.

Galium molluga—L. Sp. Pl. 107. 1753. 'Taw hinga'.

Burma, 26th November 1917, H.G. Carter 337 (CAL.).

Medicine for diarrhoea

District—Almost throughout India.

G. rotundifolium—L. Sp. Pl. 108. 1753
'Batasabon'

Assam—Khasia hills, April 1920, H.G. Carter 1056 (CAL).

M.P.—Saharanpur. 13th November 1894. Gollam 5240 (ISIM).

Used as soap Mixed with lime applied in wounds.

Distr—Jammu & Kashmir, Himachal Pradesh, Punjab, Sikkim, Bengal, Arunachal & Assam.

Gynochthodes marcrophylla—Kurz, Jour. As. Soc. Bengal XLI, ii, 314 1872.

Perak—Lower camp Gunong Batu, L. Wary Jr. 1156 (CAL.).

Fruits and leaves contain indigo.

Distr.—Andaman & Malay Peninsula

Gardenia erythtoclada—Kurz. Journ. As. Soc. Beng. XLI. ii. 311. 1872.

'Hmamni'.

Burma—Toungoo, 4. 12. 1926., Clime 4285 (CAL.).

Wood is locally used from house posts and said to last well.

Wood yellowish, bark red.

Distr—Burma, Assam.

Meyna laxiflora—Robyns. Bull. Jard. Bot. Etat. II: 288. 1928.

Vangueria spinosa—Roxb.

'Usohmon'.

Assam—Khasi hills &Lakshhimpur, Oct. 1915 & May 1918, H.G. Carter 351 & 834 (CAL.).

Thorns are used for boring the ears. The juice is used for the treatment of fissures in skin. The powdered seeds are said to be good in diphtheria. Fruits are dried in sun and eaten.

Distr.—Assam, Maharastra, Karnataka.

Morinda citrifolia—L. Sp. Pl. 176. 1753.

'Bungbo or Bumbo'.

Africa—On the way to sulimania, March 1924, G. F. S. Elliot 5278 (CAL.).

Leaf forms a avery good purge.

Distr.—Karnataka, Kerala, Andaman & Nicober, Orissa & Assam.

Pavetta indica—L. Sp. Bl. 110. 1753.

'Purturo'.

Andhra Pradesh—Amboli, 16-11-1922, I. H. Burkill 17004 (ISIM). Root used for wounds.

Distr.—Scattered scrub on plains of India.

Paederia foetida—L. Mant. Pl. 1:52. 1767.

'Biri'.

Nepal—Khatmundu valley, 7-12-1907, I. H. Burkill 29824 (ISIM). Sold in the market in piece bundle for blackening the teeth.

Distr.—Nepal, Burma, Malay Peninsula.

Randia fasciculata—(Roxb.) Dc. Prodr. 4 : 386. 1830.

'Kusi Maina'.

W. Bengal—Jalpaiguri, the 26th August 1908, I. H. Burkill, 30799 (ISIM).

Burma—Tenasserium, the 22nd January 1877, Gallatly 142 (CAL.).

Used for making hedge and a very good ornamental Lawn shrub.

Distr.—Himalaya. Assam and Burma

R. tetrasperma—(Roxb.) Benth and Hk.f. ex Brandis, For. Fl. 272 1874.

N. W. Himalaya—Tika chandpur near Palampur, the 13th March 1902, R.E.P. 15428 (CAL.).

Fruits are eaten

Distr.—Himachal Pradesh. Sikkim, Arunachal Pradesh and Burma.

R. tomentosa—Hk. f. Fl. Brit. India. 3 : 110. 1880.

'Pakika'

Burma—Korokpi, the 11th March 1908, I. H. Burkill 30469 (ISIM).

Fruits used for washing clothes

Distr.—Burma

Rubia sikkimensis—Kurz. Journ. As. Soc. Beng. 43. 11 : 188. 1874,

'Waik'—Miri nagas, 'Chenyii'—Angami nages Naga hills—The 6th April 1913, J. E. Webster S. n. (ISIm).

The mature plant is dried end powered. The decoction of the powder effords an excellent fast red dye used in dyeing goats hair, for ornamentation of spears, daos and helmets.

Distr.—Bengal, Sikkim, Assam, Arunachal, Manipur and Mizoram.

Sarcocephalus cordatus—Mig. Fl. Ind. Bat, II : 133. 1856.

'Thingkha', 'Kuki'

Assam—Cachar, the 2nd December 1914, U. Kanjilal 4810 (CAL.)

Believed to be anthelmintic

Distr.—Assam, Burma

Stephegyne speciosa—Korth. Verh. Net. Gash. Bot. 160. 1842.

'Baingsa'

Burma—Lenya forests, the 12th December 1901, Bot. Sur. (For) 314 (CAL.).

Leaves used by the shaus as the substitute for opium.

Distr.—Punjab, U. P., Maharastra, Rajasthan, Assam, W. Bengal, Tamil Nadu.

Vanqueria madagascariensis—J. F. Gmel. Syst. 367. 1791.

=*V. edulis*—Vahl

'Sarlia'

Bihar—Manharpur, 6-11-1903, Herb, R. E. P. 19764 (ISIM).

Fruits edible and leaves used as vegetable

Distr—Bengal, Bihar, S. India, Assam and Burma.

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Less known Nine Medicinal Plants are used by the Tribals for Curing Gonorrhoea in Ranchi and Hazaribagh Districts, Bihar

C. R. TARAFDAR

Abstracts

The paper deals with 9 species belonging to general and 6 families are practically less known and unknown for curing Gonorrhoea. The information have been collected from tribal areas of Ranchi and Hazaribagh districts, Bihar.

Introductions

The author has undertaken several ethnobotanical tours in the districts of Ranchi and Hazaribagh in Bihar. During field studies among the Santals, Mundas, Oraons, Birhors, Bedia-Mohatos, etc. The author has collected some indigenous plants traditionally used by the tribals for Gonorrhoea which is mentioned in this paper and the mode of uses are discussed in detail. The field collection numbers are also stated after the prescription of each species.

The plants are arranged alphabetically according to the scientific names of botany, which follows the families, local names, localities, from where these informations were collected and noted.

The use of all plants dealt in this paper for remedy gonorrhoea are not yet known and less known in published literature and journals viz, Wealth of India 1948—76, Breseers 1951, Chopra *et al* 1956, 1969, Dastur 1951, 1952, Jain 1963, 1965, 1968, 1971, 1973, 1975, Kirtikar *et al* 1935, Tarafder 1979, 1981, 1983. So, it may be used for medicinal plant for research workers for further detailed studies of these plants for dererming the value of therapeutic uses.

The abbreviation used in this paper are as follows:—

H. —Hindi

Haz.— Hazaribagh district

L/N.—Local name

LOC.—Locality

Ra. —Ranchi District

S.—Santals

Asparagus racemosus—Willd—(Liliaceae)

L/N—Sataur (S)

Loc—Salim (Ra.)

The root is chewed with sugar in empty stomach, morning and evening for 10—15 days for remedy (23709).

Borassus flabellifer—Linn.—(Palmae)

L/N—Tar (H)

Loc—Chatra

"Tari"—juice of inflorescens (half cup) is given once daily in empty stomach for 7 days for remedy (24295).

Ipomoea reptans—(Linn.) Poir—(Convolvaceae)

Juice of twigs (about half cup) is boiled with one tea-spoonful ghee for 2—3 minutes and is given twice a day for 5—7 days for remedy (24296).

Phoenix sylvestris—Roxb—(Palmae)

L/N—Khajur (S)

Loc—Kanahari hill (Haz.)

The soft inner stem of a young tree is boiled for an hour. The decoction is mixed with sugar candy and is given thrice daily for 3-4 days for remedy (24119).

Psidium guajava—Linn—(Myrtaceae)

L/N—Amrudi (S)

Loc—Kanahari hill (Haz.)

Paste of leaves with cold water is given once daily in empty stomach for 7—10 days for remedy (24111).

Semecarpus anacardium—Linn. f. (Anacardiaceae)

L/N—Char (s)

Loc—Usri-falls (Haz.)

Paste of stem bark with sugar is given once daily in empty stomach for 7 days for remedy (23726).

Sida acuta—Burm. (Malvaceae)

L/N—Jhatni (s)

Loc—Netarhat

Paste of roots with that of the root of *Grewia hirsuta* and mixed with sugar. The preparation is given once daily in empty stomach for 7 days for remedy (24176).

Side cordifolia—Linn (Malvaceae)

L/N—Sarakbuti (s)

Loc—Huntergunje (Haz.)

Crushed plants is to be kept in a glass of a water for over night. The decoction is given in empty stomach with sugar candy for 10—12 days for remedy (15107).

Sida rhombifolia—Linn. (Malvaceae)

L/N—Barbaria (Mahato)

Loc—Tilaiya Dam (Haz.)

The whole plant is made into a paste and is given once daily in empty stomach for 10—12 days for remedy (18569).

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