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Biswajit Parida
Research Scholar, Department
of Anthropology, Sambalpur
University, Jyoti Vihar, Burla,
768019, Odisha, India

Santal and their agricultural practices: Continuity and change

Biswajit Parida

Abstract

Agriculture in India has a significant history. Today, India ranks second worldwide in agricultural output. Agriculture is the backbone of Indian economy, is also a source of livelihood for over seventy percent of population of our country. Agriculture is the primary source of income for the majority of the tribal people of India and it is also the heart of Indian economy. With the process of agricultural change due to modernization and new agricultural technology has been introduced at the grass root level. The agricultural modernization and development introduced in 1960s brought significant changes in various aspects of life throughout the country and also affected indigenous and tribal people. Agricultural modernization has since long been introduced in the tribal areas of Odisha, primarily with a view to raise the level of income, standard of living and life style of the Santal people of Odisha. In agrarian sector, the Santals are mainly marginal, small farmers and cultivate for their own consumption without hankering after profit. This paper meant for elucidating the impact as well as adaptation of modernization on the Santal agriculture. The author studied empirically the extent and nature of adaptation of modern agricultural technology by the Santals and subsequently its impact on the life style of the people in the locality. The obstacles or social-cultural constraints of the Santals towards the adaptation of the modern agricultural technology and agricultural mechanization have also taken into considerations. The Social, cultural and economic problems of the Santals have also been studied in connection with the agricultural modernization. The paper based on intensive fieldwork and case study from Santals of Mayurbhanj district of Odisha and attempt to explore the livelihood strategies of the Santals, and to examine the changes that took place in the traditional agricultural practices of the tribes. The paper also tries to analyze the impact of changing livelihood strategies on the socio-cultural life in general as well as religious and economic aspects in particular of Santals. The paper argues how the introduction of agricultural changes and modernization have impacted on the Santal people's village occupational structure, family, marriage, Kinship, indigenous knowledge, and land distribution pattern.

Keywords: Santal, Tribe, Agricultural, Agricultural Modernization, Continuity and Change.

1. Introduction

Agriculture is the primary source of income for the majority of the people of India. Agriculture predominantly influence the process and pace of economic development. Nearly 76 percent of the total population of India lives in villages and more than 76 percent of the rural population depend on agriculture and allied activities (2001 census) [2]. Agriculture dominates the economy to such an extent that high population of working population in India is engaged in agriculture and allied activities. Therefore, in such a country, agricultural modernization and agricultural mechanization must be an essential condition for the dominant of Indian economy.

Since the advent of independence, progress made in Indian agriculture is an inspiring one. Technology refers to the knowledge used in production to improve productivity. Agricultural technology refers to the knowledge used in improving agricultural productivity. It points to input mix and changes that occur in it from time to time with a view to enhance productivity at the same unit cost or maintain current levels of productivity at a reduced cost (Kadam, 2009) [8]. With the introduction of new technology, attempts have been made or demonstrating significant new approach for modernizing nation's agriculture. As a result, improved practices such as use of improved seeds, fertilizers, manures, pesticides, improved implements etc. are being adopted for principal crops (Kalhan 1984) [4]. The farmers now a day are changing this directing from traditional methods of cultivation to modern are through using and adopting more and more improved technology knows how.

Correspondence
Biswajit Parida
Research Scholar, Department
of Anthropology, Sambalpur
University, Jyoti Vihar, Burla,
768019, Odisha, India
Email: parida.biswa85@gmail.com
Mob: 9437141659

In this paper, the researcher is intrigued to study empirically the extent and nature of adaptation of modern agricultural technology by the Santals and subsequently its impact on the lifestyles of the people in the locality. Briefly speaking, specific attention has been given here, to study the nature of agrarian inequality of Santals. Besides studying the economic and social interaction of the people attempted has also been made to grasp the nature of the Santal's outlook on life in the changing context (Agarwal 1983) ^[1]. The researcher has also studied their problems and distribution pattern. Their problems and prospects of land holdings, irrigation, fertilizer and other modern technology have also been studied. The obstacles or social cultural constraint of the Santals towards the adaptation of modern agricultural technology has also been taken into the nature of interaction of the agricultural entrepreneur with the common people and their overall role in the locality. A social cultural and economic problem of the Santal has also been given to study the crop wise agricultural system, rituals and cultural activities round the year.

2. Objectives of the Study

With this background this paper has been undertaken with the following broad objectives.....

- a. To find out the livelihood strategies of the Santal in the village.
- b. To evaluate the changes in taking place in traditional agricultural practices.
- c. To examine the impact of changing livelihood strategies on the socio-cultural and especially religious and economic spheres of Santal life.

3. Review of Literature

Here, an attempt is made to review the findings of the studies related to focus on the traditional agriculture practices and modern-agriculture practices, the use of advanced technology in cultivation, and the impact of modern-agriculture practices on the socio-economic conditions, etc.

According to Kalhon (1976) ^[3], modernization of agriculture started with planning in the fifties, but extensive development of agriculture have taken place in the middle sixties. The introduction of new technology, popularly known as, "*Green Revolution*", has been launched with miracle seeds, chemical fertilizer, pest control measures, water management techniques, mechanization etc. the process of modernization has brought about structural change in the phase of agricultural development in India. Commercial farming is became a common practice in the place of subsistence farming. The adaptation of new technology has led to increased production and productive in the farm. According to Bhagat (1968) ^[9] has stated that in his paper to examine the economics of tractor use in Ludhiana, Sangurur and Bhatinda district of Punjab. He found that the use of tractors did not affect the cost of cultivation of wheat per maund. More ever he observed that the cultivators have been inclined to use tractors more extensively even though the use of tractor does not necessarily result in reduced cost of cultivation. Agarwal (1983) ^[1] explained, three sources of differentiated agricultural production process from one another is the sources of energy are the main source of energy which is used for the performing agricultural operation. Use of such mechanized techniques could result in a socially undesirable displacement of human labour, i.e. human, animal, and mechanical. He defined sources and its

related set of implementable procedure that as an advanced techniques, and also alternative techniques or implementations of new techniques useful and attract fully to any cross-section of farmers. This modern technology leads to increase agricultural output. Mohanty (1996) described that the impact of modernization patterns in the agrarian economy in rural setting, brings prosperity to the region. The small and poor peasants have failed to cope with the new developmental situation, and additionally it become incompatible to larger amount of land holders due to certain obvious reasons. Paul (2005) ^[7] stated that agricultural modernization has been primarily viewed to raise the level of income, standard of living and lifestyle of the tribal people. The modern technology has also been taken into consideration. Due to adaptation of modern technology, the people use advanced technology instead of bullock plough, and till their land in less time, introduction of pump sets make easy to the irrigation of their dry land. With the introduction of pesticides people, including tribal used them, instead of organic manure, and similarly pesticides available everywhere at anytime.

4. Demographic Profile of the Study Area

The present research work was undertaken among the Santals of Bantali Rakhasahi village lying on East Longitude of 85°40' and North Latitude of 21°16' and 22°34' in Mayurbhanj district of Odisha. The village is about 80 km from the district headquarter town of Baripada and about 8 km from Rairangpur town. Santals are considered to be the largest homogeneous Scheduled Tribe in India. Santals are predominantly found in the areas of Mayurbhanj district. They call themselves *Hapan*, meaning child or children of human beings. It is only in the mouth of others they are regionally called, Santal or Santhal. But they are locally known as *Majhi*. The overall population of Mayurbhanj is 2,221,782; out of which 1,866,283 are Santal counting to 56.67%, i.e. the third largest among the 62 tribes of Odisha and they constitute 22 percent of total population of Odisha. Their literacy rate is 60.7 percent in Mayurbhanj district according to 2001 ^[2] census. Village Bantali Rakhasahi is a multi-ethnic village but it is dominated by the Santal tribe. The people of village speak Odia language (regional language) but they speak their own dialect Santali and few know Hindi also. From the Mayurbhanj district, Bantali Rakhasahi village has been selected on the basis of largest concentration of the Santal population. The entire village consists of 175 households. The village is surrounds by the paddy fields and ponds.

The total population of the study area 904 individuals consists of 475 (52.54%) males and 429 (47.45%) females. The village consists of four caste and three tribes. The most dominating tribe among them is Santal. There are 131 Santal households which consist of 75.99% of the total village population. Among them 54.29% are male, 45.70% are female. This village is Santal dominated groups. The second place is occupied by Kamila caste (Goldsmith) are 24 households which constitute 13% of the total population. There are 9 households of komar (Blacksmith) consist of 41 individuals (4.53%). Munda tribe consist with 5 households consist 25 individuals which of 11 males and 14 females. The fifth is Kolho tribes represented by 3 households with 3 families in this village which consists of 15 (1.65%) individuals. There are two Ghasi scheduled caste households consists of 13 (1.43%) individuals with 8 males and 5

females. There is only 1 Gouda caste household with 5 persons of 2 males and 3 females.

5. Methodology

Anthropological studies characterized by their holistic approach of study based on first-hand information collected through fieldwork which is the soul of anthropology and also integral part of the discipline. Fieldwork means data collection which provides an anthropologist first hand and intimate contact with the people under study. To understand the life of a people or to study a particular human society’s knowledge, their environment, their history and the extent to which contact with other people has taken place is also necessary. To collect first-hand information on all these aspects anthropologists engage themselves in the fieldwork.

Types of land

Santal call land as “*hassa*” in their dialect. The land for cultivation in Bantali Rakhasahi, the study area is broadly categorized into three main types, *ghutu hasa* (dry land), *sakada hasa* (wet land) and *ballia hasa* (mixed land). In the village Santal have more percentage of dry land (*ghuttu hasa*) as it is relatively hilly.

6. Major Findings of the Study and Conclusion

Agricultural changes may be either partial or complete. It is partial when only a part of the farm work is done by

machine. When animal or human labour is completely dispensed with by power supplying machines, it is termed as complete. Broadly speaking, changes of agriculture have two forms, connected with the farm jobs, viz. jobs requiring traction work. It attempts to replace animal’s power on which agriculture has been based for very many centuries; mobile mechanization needs the use of machines for such job as pulling and drawing efforts, i.e. ploughing and tillage operation like leveling, tilling, seeding, harvesting and hauling of produce. The other type is static type of changes or mechanization which aims at reducing the drudgery of certain operations which have to be performed either by human labour or combined efforts of human being or animals such as lifting water for irrigation, threshing, winnowing, grinding and mixing livestock food, hauling rice and selling maize cobs, these can be done by or performed by machine (Paul 2005) [7].

a. Impact of Agricultural changes on Village Occupational Structure

In the village Santals are engaged in different occupation to sustain life. During the field work researcher collected data on economic activities of Santal. They are engaged in different work like agriculture, agricultural labour, Govt. servant, carpentry, house construction work, doctor, business and other private services.

Table i: Showing the types of occupation among the Santal

Sl no	Types of occupation	Number of persons				Total
		Male	Percentage	Female	Percentage	
1	Unemployed (kids, house wives, old aged)	145	38.87	167	53.18	312
2	Agriculture	102	27.34	65	20.70	167
3	Agricultural labour	76	20.37	67	21.33	143
4	Govt. servants	11	2.94	1	0.31	12
5	Carpentry	2	0.53	00	00	2
6	Construction work	23	6.16	04	11.76	27
7	Doctor	2	0.53	00	00	2
8	Business	5	1.34	7	20.58	12
9	Other private service	7	1.87	3	0.80	10
	Total	373	100	314	100	687

Sources: Primary data

Table no. i shows that in the village, 312 are unemployed which include non-schooling students, house wives and old aged men and women out of them 145 are male and 167 are female. Of the remaining 167 are employed in their own agricultural land, 143 persons are working as agricultural labour or daily wage labour. In the village most of the persons engaged themselves in agricultural work because of the agricultural modernization impact. They knew the benefit of agricultural modernization, though the main livelihood of the Santal is agriculture, they are also well placed in some government jobs like Rourkela steel plant and Bokaro steel plant. In the study area 12 persons are working as Government servants, some are engaged in bank, engineering, ITI sector in different places of Odisha and outside Odisha. Out of them 11 are male and 1 is female. The remaining Santals are engaged in several unorganized sectors such as carpentry and business. There are 2 male persons working as carpenters and 12 are selling *handia*, in which 5 are male and 7 are female. And 10 members are engaged in various private jobs like working as auto mobile drivers and some are working as labour in the Mayur Metal Plant.

b. Impact of agricultural changes on Family

The head of the Santal family is called *majhi halam* who is the father and his decision is final. In Santal family, senior most male member is the supreme authority in taking important decisions regarding the economic, social and ritual matters and women has little to do with the sphere of decision making. In the Santal society inheritance also passes through the male line. The pattern of residence and inheritance are patriarchal.

Table ii: Distribution of Santal family type

Sl. No	Family type	Total no. of households	Percentage
1	Single member family	6	4.58
2	Nuclear family	103	78.62
3	Joint/extended family	22	16.79
	Total	131	100 percent

Source: Primary Source

The table no ii presents in the study area out of 131 families identified the nuclear families dominate accounting for 103 (72.68%), followed by 22 (16.79%) joint/extended families, as it is evidenced that most of the agriculture societies have joint family. A joint family forms when “two or more lineally related kinsfolk of the same sex, their spouses and off-spring occupy a single household and are jointly subject to the same authority of single head”.

Among the Santal joint family is the general family type as they have resorted to agriculture economy way back. The agriculture acts need much labour force for carrying out various agriculture activities joint family structure can conveniently serve this labour demand. So in traditional Santal society joint family is there. But in this village nuclear families are pre-dominant (78.62%) compare to joint families (16.79%). The plausible answer for this puzzle is mechanization of agricultural operations and rise of the importance of money and market. Because of agricultural mechanization demand of labour is reduced to some extent and on the other hand post-independence developmental programme resulted in rise of population among the Santal. Introduction of money as a unit for exchange resulted land and labour in market and parallel population rise make heavy competition among labour groups which ultimately threatening social organization solidarity of the tribe. In this situation joint family structure facing several challenges and the adaptive response to this new situation is nuclear family which is best fitted for this time. Family members help in different agricultural works. So they like to live in joint family. Now the family system is changing due to the impact of agricultural modernization and Santal people adopted mechanization that and they get benefitted from it. They can do their agricultural work in a very short span of time. They can sell their crop in the market and even within village itself. Joint family changing towards nuclear family. There are also 6 (4.59%) families with single member previously when they were doing traditional cultivation which was for their own consumption. But when agricultural modernization came they can sell their surplus commodities in the market, then some money comes to their hand, they can send their children to school for good education.

c. Impact of Agricultural changes on Marriage

It is found that Santal have eight types of marriage but in the present context elopement marriages and negotiation marriage have been mostly prevailing. In Santal society particularly negotiation marriage has been the most prevailing one.

It was found that because of agricultural changes towards modernization the income and status of Santal have increased. Their social positions have improved. After proper education and mingling with people of higher caste and society their mind set up has changed now. Being more society concern they prefer negotiation marriage now. Earlier Santal used to take beef, pork and country liquor etc. when they came in contact with other people now they do not prefer these activities. Now they invite people from outside their society to attend their functions and festivals. Now they even employ people from higher caste to prepare food in the festivals and functions. So that people from other caste can share the food and other items comfortably.

d. Impact of Agricultural changes on Kinship

Kinship ties plays significant role in the agricultural activities of Santal. In agricultural works they depend on

their kin members previously, they cultivate their land only for their domestic consumption. It is not possible to do agricultural works hiring labour from others. So they search labour from their own kin network from the village. If they take kin member from their own village, they have to give less money as compared to outside village kin members. They take primary and secondary kin member for their agriculture purposes. So they give first preference to their village kin member. If they have to take outside village kin member they have to give more money, because they come from much distance and have to meet their travel expenses and have to feed them three times a day. In this case always their first preference will be the consanguineal kin members. Only in case of labour shortage they take the help of the tertiary kin members. Thus we see mutual exchanges of labour among the kin members to accomplish different agricultural activities in the order of preference extending from primary to tertiary. They give daily lunch to their relatives that help in agricultural works; they do not give wages to their kin members those who work as labour in agriculture, rather they offer *handia* (country liquor) as a mark of regard and gratitude. Most of the female kin members are doing agriculture works. In this way agricultural works ultimately leads to strengthen the solidarity of the kin relations.

e. Impact of Indigenous Knowledge in Modern Agriculture

Agriculture is the main source of income for the majority of the Santals of the area. Earlier, they used to practice traditional agricultural practices and their technology was indigenous. But now, they are adopting modern technologies like shallow tube-wells, pump sets, power tillers, sprayers, and so on. They are also using HYV seeds, chemical fertilizers, pesticides etc. to achieve better production. Unavailability of adequate irrigation facilities is a major problem in the area. Canal irrigation is available for a few agricultural lands only. Shallow pump irrigation proves to be useful in providing the irrigation for paddy which has a significant impact on the productivity. For irrigating their lands, earlier they were entirely dependent on monsoon rainfall and thus monocrop was cultivated. But the introduction of pump-sets has brought changes in their modes of production. Now, they are also cultivating double crops sometimes triple crops. Land tilling and threshing is also being done in the mechanized (tractor and power tiller) by most of the Santals now. Earlier those were done by bullock power. Some of the Santal households have threshers and sprayers. On the other hand, some of the Santal households are now using high yielding variety of seeds (HYVs), chemical fertilizers, pesticides etc. to increase their yield. There have occurred many changes in the aspects of their social organizations and cultural activities or life. Commercial nature of farming has been gradually taking place among the mechanized Santal farmers. The market orientation is also increasing among the Santals.

Case Study: 1 Banu's family consists of five members along with his wife and two sons and a daughter. He relies on agriculture for his livelihood. He brought one diesel shallow pump at a cost of Rs. 19,000 in the year 2000 through the help of Bank of India loan from Bijatala branch and he got subsidy of Rs.10, 000. With the help of that pump set he irrigates his land of *rabi* crops only. His land of one and half

acre is mostly dry land and due to the shortage of rain fall he never finds water regularly. Government provides canal facility to irrigate the land in the village. At the time of kharif season he mostly depends on rain fall. He does not get canal water, because his land is found in the upper layer of the slope and no pond is available there, it is not easy to irrigate his paddy field unless he use the pump set. He has been raising rabi crops since 10 years.

After 10-15 days of sowing seeds they have to irrigate the land one time and after the 15-20 days he irrigates the land again otherwise crop will be destroyed. They grow vegetables like tomatoes, potatoes, cauliflower, cabbage, chilli, little finger, raddish, cucumber etc. for which water supply is more needed. When the vegetable plants are flowering more water is needed for that they take the help of the pump sets. They have to give water every day or twice a day. They sell these vegetables to nearby market daily and earn money up to Rs.200-300 per day up to 2-3 months.

f. Change and Continuity in Land Distribution Pattern

Case study: 2 Jaipal's family consists of seven members stay with his wife and two daughters and two sons. He has only 1 acre of cultivable dry land. His grandfather had 5 acres of land, he had five sons and he divided the land among the sons who got 1 acre each. Jaipal's father had two sons; they divided this land into two parts among the two sons. Among the half acre dry land he gets 6 *pudda* of paddy. He grows different vegetables in this cultivable land. However the incomes from this land are not sufficient for the family maintenance. So he is working as an agent for Basil insurance company and getting up to Rs.1, 800 per month which depends upon his collection.

7. Conclusion

Santals are considered to the third largest homogenous scheduled tribe in India. They are regarded as agriculturalist or daily wage labourer tribe and their primary subsistence activity is agriculture. In the village Santal people mainly practice agriculturalist tribe having an essential articulation with market economy of the larger society. In the course of their contact with the larger society and due to the adaptation of modern agricultural technology, there have been occurred many changes in the aspects of their day to day life. There are adopting and following new and innovative methods in agriculture. Instead of traditional plough now they use tractors, power tiller and other machines to till the land. The use of chemical fertilizer, pesticides and insecticides has been widespread among them. Now most of the agriculture works are done through the help of machine, which takes less labour. In the ploughing time, winnowing time and cutting the paddy time, they borrow labour. Because most of the Santal people do not have any agricultural implements like plough and tractor they hire it for payment. At the winnowing time more labour force is needed which borrow from kinsmen. Adoption of agriculture in itself has a tremendous impact on Santal which is evident in their marriage structure, occupational structure, irrigation and land distribution pattern etc. But the in adequate technology in use either due to cultural barriers or due to its cost effects has not given the complete confidence for the Santal to depend on agriculture and therefore many of them have to look for other avenues. As such the livelihood practices are many for them, with agriculture being the major source which is basically traditional type supplemented by modern means to a certain extent.

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