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# MAN IN SOCIETY

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**PG Department of Anthropology**

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## PUBLICATION DETAILS

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## EDITORIAL NOTE

The present volume of *Man in Society* is a collection of research articles contributed by the research scholars and faculty members. The research article published reflects the effort of the scholars to explore new domain in anthropological research. Now this journal achieved a modest accomplishment by getting it published regularly and giving emphasis to peer-review process done by domain experts locally and nationally. However, as a policy matter it has been our endeavour to give importance and opportunity to both young and experienced writers and also to see how articles considered in a volume has a good combination of empirical as well as review works. We wish that increasingly *Man in Society* to become a platform for writing in any and every aspects of human experiences contributed by authors based at anywhere in the globe. As the peer review process is fast changing, we are trying to involve professionally equipped experts to examine the manuscripts, critically evaluate and facilitate writers to improve their work. Getting competent and willing reviewer has been the biggest challenge. The Students' Seminar of the Department and partial contributions by authors are critical in meeting the financial need for timely publication. Keeping in view the increasing cost of publication, making the works accessible to willing readers nationally and globally, the utilization of technology is paramount. Therefore, we are considering the publication of *Man in Society* in blended mode i.e. available both online and in printed version. A dedicated online platform or website is being developed to make the current as well as all back volumes available for reading and free download. A concerted effort, keeping all the issues in mind, by stakeholders will surely make *Man in Society* as a sought after journal in the field of human enquiry.

This volume contains twelve research articles and an obituary about Professor Lakshman Kumar Mahapatra. The first article by K. K. Basa & D. Sahoo is a review article on Neolithic Cultures of Odisha: Issues, Problems and Prospects. The second article by R. Jaiswal & A. Kumar is an empirical study on Assessment of Undernutrition using Composite Index of Anthropometric Failure (CIAF) and Conventional Anthropometric Indices among Anganwadi Children (2-5 Years) of Raipur City, Chhattisgarh, India. The third article is by J. Pattnaik is an empirical study on MGNREGA and Its Impact on Livelihood and Rural Development: A Sociological Study in Barwadag Village of Ranchi District of the State of Jharkhand. The fourth article by B. Bal is on Integral Yoga and the Spirit of Work in Auroville: A Sociological Study. The fifth article by Tripathy in on Museums as Transcultural Contact Zones. In the sixth article, A. K.Nayak discussed about the Museum and Manuscripts (With Special Reference to Odisha State Museum). The seventh article by M. Jena is on the study Livelihood and Socio-Economic Life of the Patients Affected with Tuberculosis (TB). The eighth article by Pattnaik & Dash in their article studied on the Structural and Functional Contextualization of 'Violin' and 'Kendara' in Human Society: A Cultural Analysis. The ninth article is on the Socio-Cultural Context and Aesthetic Values of 'Jhoti' by C. B. & J. Dash. The tenth article is on Hypertension- An Emerging Health Issues Among Tribal Communities of Kaliapani Mining Area, Jajpur district, Odisha is by S. K. Gouda & K. C. Satapathy. The eleventh article is by Behera et al on Adolescent Sexual Health: Knowledge, Attitude & Practice among Juang(females) of Banspal block of Keonjhar, Odisha. The twelfth article is by A. R. D. Samanta & U. Aparajita on Bandha Design and Motifs of Bhuliya Weavers of Barpali Handloom Cluster of Bargarh District, Odisha. I wish the contributions in this volume will be beneficial for researches as well as experts of anthropology and other social science at present.

**Kanhu Charan Satapathy**  
Editor in Chief

## NEOLITHIC CULTURES OF ODISHA: ISSUES, PROBLEMS AND PROSPECTS

Kishor K. Basa<sup>1</sup> and Daitari Sahoo<sup>2</sup>

Recently, while reviewing the Neolithic-Chalcolithic cultures of eastern India, Datta and Sanyal (2013) have pointed out the following: (i) the strategic transformation from hunting/gathering to that of deliberate food production in eastern India was neither smooth nor easy to articulate; (ii) pottery making was not necessarily a material marker of the Neolithic culture; (iii) on the basis of nature and character of material culture of the early agricultural communities in eastern India, Datta and Sanyal categorized them under four heads: (a) the pure Neolithic context, (b) Neolithic with Chalcolithic elements, (c) Chalcolithic with Neolithic elements and (d) pure Chalcolithic context. In a different vein, in their discussion on ground/polished stone tool industries of eastern India, Chattopadhyay et al (2013) referred to a dilemma. This dilemma, according to them, “has been created by the fact that on the one hand, the mere presence of ground/polished stone tools is not the sole indicator of the ‘Neolithic’ culture, and on the other hand, ‘Neolithic’ does not solely signify the use of ground/polished stone tools” (2013:119). With these complexities in view, the primary objective of this paper is to compile the researches on Neolithic cultures in Odisha in a comprehensive manner. The second objective is to summarise the trends of such works. Such an exercise – it is, indeed, a modest one – would hopefully set a background for undertaking future work, help define problem areas and issues within the framework of Neolithic culture and subsequently its role as a transitional phase to the emergence of metal age cultures in general and Chalcolithic in particular.

**Key Words:** *Neolithic, Chalcolithic, Ground/polished stone tools, Pottery.*

### Researches on Neolithic Cultures in Odisha: A Historical Overview

While Valentine Ball, a British geologist, laid the foundation of palaeo-cultural research in Orissa in 1875 discovering, what we now call, four lower palaeolithic tools from four different places in the then tributary states of Orissa (Ball 1876:122-123; 1880:507), there was no recovery of any neolith by him. Half a century later, it was P. Acharya (1923-

24:100-01, 1969:6) who discovered some polished stone Celts from his native village Baidipur within the Mayurbhanj state and subsequently he presented this small collection to the Indian Museum Kolkata. This was first referred to in the *Annual Report of the Archaeological Survey of India*, 1923-24:100-101 (Bose and Sen 1948:1; Ray

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1960:173). Later on, R.D. Banerji accompanied by P. Acharya of the Department of Archaeology of the said princely state, surveyed the three celt yielding sites in Mayurbhanj. Besides Baidipur, they collected various types of celts from the two other sites, one at Khiching and the other on the Mananda - Jashipur Road. They have also reported the occurrence of a shouldered adze and a very coarse kind of pottery besides celts of various types from the site of Baidipur. On these discoveries, Banerji has given a comprehensive account in his book, *History of Orissa*, Vol.1:34-35, published in 1930. In this he has opined that Baidipur contains both Neolithic as well as palaeolithic implements. In March, 1939 Eugene C. Worman (Jr.) from Harvard University and P. Acharya made a preliminary survey and discovered some more palaeolithic and Neolithic sites around Baripada and on the Baripada-Bamanghaty Road in Mayurbhanj. They also discovered a Neolithic site at Amsikra to the south-west of Baripada (Bose and Sen, 1948:2).

Further, Nabendu Dutta Majumdar, the then Collector of Sundargarh district, in the year 1951-52 reported the occurrence of six Neolithic implements and a number of Neolithic sites containing huge chipping from the two river valleys of the Ib and Brahmani (Ray 1960:174; Mittal 1962:70; Tripathy 1994-95:7). Y.D. Sharma of the Archaeological Survey of India in 1952 reported the occurrence of four celts of the chisel type in an iron ore quarry at Thakurani in Barajamda area and two chisels of Thakurani type, one broken and another complete from Sitabhanji in old Keonjhar state, now in the district of Keonjhar, Orissa (Sharma 1952:14-16). In 1958 D. Mitra collected four chisels: two of epidiorite, one of dolerite and the fourth of sandstone from Saradapur, a neighbouring village of Kaniha and S. Ghosh also discovered two Neolithic chisels, both of basalt, a fragmentary quartzite ring-

stone at Kaniha itself nearby Talcher in Angul District (IAR-1958-59:36). In 1958 D. K. Chakravarty reported neoliths from Mayurbhanj (IAR-1958-59:38).

Thapar (1961-62:36,1976) with a view to investigating the assemblage of eastern Indian Neolithic culture, undertook an exploratory dig at Kuchai, located 8 km. north of the district town Baripada along the National Highway to Keonjhar and 5 to 6 km. east of the river Burhabalang in Mayurbhanj. This excavation at the site revealed a 40-45 cm. thick occupational deposit yielding Neolithic artefacts in association with a coarse grit-tempered red ware, sometimes also slipped and showing incised and fingertip decoration. The lithic artefacts from the excavation included rounded butt-end axes, faceted hoes, chisels, mace heads, pounders, and grinding stones. Microliths of an essentially non-geometric industry were obtained from the lower deposit which was composed of gravel mixed with greyish earth and loose laterite. The tool types included blades, points, lunates, scrapers etc. No pottery was found associated with these microliths.

Around mid-1960s onwards, attempts were made to emphasise type-technology and metric analysis of palaeo-relics found from the district of Mayurbhanj. In this regard, K.C. Tripathy (1966) studied the metric characters of Neolithic implements collected by him from Kuchai, Amsikra and Baidipur in the district of Mayurbhanj during the year 1965-66. His study was based on 44 Neolithic celts out of which 10 were from Kuchai, 14 from Amsikra and 20 from Baidipur (Tripathy, 1966:13-20). Further, he also made a type-technological study on the 62 Neolithic Celts collected by him from Amsikra in December 1965. In this work he took note of several salient features,

such as : (i) length of the implement, (ii) breadth of the implement and (iii) relationship between length and breadth on one hand, and (i) nature of grinding and polishing, (ii) nature of cross-section and (iii) nature of cutting edge and butt-end of the implements on the other (Tripathy, 1967: 1-10).

In March 1971, R.P. Prusty collected a few celts made on shale, fine grained sandstone and black basalt near a small village, Tamingi located on the right bank of the Bhagi Peda Geda, a tributary of the river Vamshadhara close to Rayagada town (Prusty, 1972-73: 67-70). During 1967-68, officers of the Tribal Research Bureau (presently Scheduled Caste, Scheduled Tribe Research and Training Institute), Orissa, Bhubaneswar brought to light the occurrence of microliths, neoliths and iron objects from a place in front of the ancient fort of Kharligarh in the district of Bolangir. This site is located on the confluence of the Rahul and Tel Rivers about 3 kilometres south-west of Tusra in Tentulikhunti block (Dash, 1986-87:200, 1987:118).

In 1975-76 S.K. Mishra has undertaken surface-explorations in the Jira river basin near Bargarh yielding 2 Neolithic celts and some crude pottery. Mishra has claimed that the sequence of industries begins with the core-scrapers industries of middle palaeolithic and terminates with the polished celts and crude pottery of Neolithic (Mishra, 1982-83:31-42).

In 1982 K.C. Tripathy undertook an intensive exploration in the Ib valley around the Din Dayal Research Institute near the Sundargarh town resulting in the recovery of profuse microliths as well as a number of neoliths, ring stones and perforated stones (Tripathy, 1982-83: 60-66).

In 1983-84 a survey was undertaken by the Department of Anthropology, Utkal University around Sarang-Parjang localities near Talcher. It

yielded altogether 568 lithic artefacts which include 174 Palaeolithic, 382 Mesolithic and 12 Neolithic artefacts. These Neoliths were collected from the site of Bhaliataila which include 3 axes, 2 chisels, 2 celts and 4 ring stones (Nayak, 1984).

Carrying out an intensive exploration, P.K. Singh (1985; 2000) has reported the discovery of fifty-three Lower palaeolithic, six Mesolithic and nineteen Neolithic sites in the undivided Dhenkanal district of central Orissa. The Neolithic industry comprises axes, adzes, chisels, barcelts, scrapers, ring stones, a shouldered celt etc. and other associated materials like crude and backed handmade pottery having grain impressions, pottery, stone beads and terracotta beads. The narrow elongated flat or round pebbles or quartzite or dolerite have been used for manufacturing of axes or adzes by minimum flaking or chipping and grinding around the working edge. The recovery of crude and baked handmade pottery with grain impressions, massive and elongated barcelts, complete pottery containing ring stones, mud pallets and beads presumably suggest the evidences of an early agricultural and social life of the Neolithic people in central Orissa. The recovery of an earthen pot with a lid containing bone fragments, stone beads and small ring stone could have been associated with an early form of mortuary practice. But the detailed analysis of those ceramics and ceramic associated materials is yet to be made (Singh, 1985; 1988-89: 275-281; 2000: 103-113).

R.N. Dash (1987; 2000) has made an extensive study on the Neoliths of Orissa from the view point of distribution typology, technology and the raw materials used. According to him, he has studied 1060 Neolithic artefacts from 101 localities in Orissa. On the basis of their morphology and probable functions, these artefact assemblages are

classified into two categories, such as, edge tools and non-edge tools. The edge tools include axe, adze, chisel, shouldered tools, wedges and small celts. The non-edge category comprises hammer, fabricator, ringstone, muller, corn-crusher or freaks, indeterminate tool portions, flakes and rejects (Dash, 1990-93:127-147; 2000:201-221). Dash has suggested that there are five stages of typological development in Orissan Neolithic. (i) Oblong forms resembling the palaeolithic axe forms, appeared in the first phase, (ii) the second stage was characterised by the oval types, (iii) the trigonal and cylindrical types appeared in third stage, (iv) the fourth stage displayed quadrangular forms without having cornered edges and (v) the fifth or the last stage was developed by the purely quadrangular and faceted form having accurately straight geometric outlines. However, Dash has made these observations mainly on the basis of the cultural evidences collected from surface (Dash, 1990-93: 127-147; 2000).

After two and a half decades of Kuchai excavation conducted by B.K. Thapar in 1961 (Thapar, 1961-62:35-36;1963-64:76-69;1976:1-14) D. Sahoo, in the year 1986 surveyed the Kuchai area followed by a small scale excavation at Chhelinendi, located on the N.H.5 at about 1.5 kilometres to the south of the village Kuchai. The surface survey in the area resulted in the discovery of 10 prehistoric sites on the Chipat basin, a tributary of the Burhabalang. Out of these explored sites, a good number of Neolithic artefacts were collected from six sites (Sahoo, 1986:94-95). An area measuring 5x5 square metres was subjected to a survey by grid method of 1m square each for systematic recording of antiquities exposed in an implementiferous patch of land at Chhelinendi. Both lithic and ceramic artefacts were reported from this grid area. Particularly three celts (axe types) were

collected from surface of the A3, A4 and D5 grid units. Besides these three celts, 18 Neolithic flakes and chips of different shape and size were also reported (Sahoo, 1986:99-100). A trial trench measuring 2x1 sq.m was excavated up to a depth of 0.30m from the surface. Although no finished artefact was found from the excavation, 25 Neolithic chips of dolerite and diorite, tiny charcoal pieces, burnt clay nodules and 46 potsherds were unearthed from the trench associated with a deposit of brown silt which was lying over loose laterites. The excavated ceramic remains include 40 body sherds and 6 rim sherds of dull red ware (Sahoo, 1986).

P.K Behera (1989) has carried out a systematic survey in the Upper Brahmani valley and its tributaries in the district of Sundargarh and reported the discovery of numerous sites of Lower, Middle and Upper Palaeolithic, Mesolithic and Neolithic cultures in the area. Behera's survey in Bonaigarh subdivision resulted in the discovery of 18 Neolithic sites. The workshop areas are subdivided into two, viz, minor workshop site and major workshop site. From the minor workshop sites some finished and semi-finished celts of different types and some other implements such as pebble tools, bored stones, waisted flat pebbles, worked split pebbles, unifacially flaked pebble, spearhead and debris etc. have been found in association with different contexts. Techno-typologically all the finished as well as semi-finished implements from the minor-workshop sites have been grouped mainly into two categories, viz, the celt component and the pebble-tool component (Behera, 1992a:57-63; 1992b:124-132; 2000:222-263).

His investigation has also brought to light an important habitation-cum-workshop site belonging to the Neolithic culture at Sulabhdihhi in the Bonaigarh area. Evidences of mass production of

semi-finished celts in the form of four massive mounds of debris, composed of large dolerite boulder cores, numerous partially or fully flaked large celts in various stages of manufacturing process, innumerable thick broad flakes and blades, waste chips and broken implements as well as hammers have been discovered in the vicinity of the village Sulabhdihi. Investigation of the already exposed section of mound-I has revealed an occurrence of about two metres thick deposit of artifact debris, resting over a natural layer composed of yellowish-brown compact silty-clay soil mixed with weathered dolerite cobbles. This investigation brought to light evidence pertaining to the various stages of celt manufacturing process. Considering the evidence of Sulabhdihi, Behera has suggested that this site must have served as a very large Neolithic celt manufacturing centre in this part or the “Central Eastern Neolithic Zone” for a long period. He has also pleaded that there are three types of sites as part of one system with sets of activities of the Neolithic people – (i) large production site where semi-finished celts were manufactured in very large number as at Sulabhdihi, (ii) more than a hundred small and medium sized clusters of stone chips mostly located in the foot hills as well as nearby plains representing the sites of microchipping and finishing of the Neolithic celts and (iii) a few habitation sites close to the river Brahmani. On the whole the investigation at Sulabhdihi celt manufacturing site is not only significant from the settlement system perspectives but also adds a new dimension to understand the patterns of the Neolithic culture in the highland regions of Orissa (Behera, P.K., 2000).

In 1979, S.K. Mishra (1987-88) conducted a survey in and around Joshipur in Mayurbhanj district in the valleys of the river Khair-Bhandan and its tributaries like Tentua and Laiyoda. From the five

sites he had located, he recovered altogether 966 lithic artefacts belonging to Lower, Middle and Upper Palaeolithic, Mesolithic and Neolithic cultures. The Neolithic artefacts obtained from this area comprised of 9 celts (axes and adzes), 3 complete mace-heads and 3 half broken mace heads which suggest, according to Mishra, an early form of agriculture and deforestation activity in the area (Mishra, 1987-88: 81-88).

In 1988 S.K. Mishra has reported 48 Neolithic artefacts around Baripada town in the river valley of Burhabalang and its tributary Chipat (Mishra 1990:21-33). The Neolithic collection from the area includes celts of different kinds (axe and adze), hammer stone, rubbing stone, elongated pebble, scraper, core, blade and flakes. From the entire collection, Chhelinendi constitutes the major share and probably was the centre of all activities during the Neolithic period in this area (Mishra, 1990:31).

During the mid-1990's, A. Rath (1996) undertook a micro-level study around the area adjacent to the districts of Koraput and Ganjam of Orissa in the Visakhapatnam region in North-eastern Andhra Pradesh along the East-coast of India. This resulted in the discovery of numerous Palaeolithic (Lower, Middle and Upper Palaeolithic), Mesolithic, Neolithic artefacts from eight sites (Rath, 1996: 253).

The Neolithic cultural remains have been found in small scatters as well as concentrated areas all over the North-eastern Andhra. Besides this the occurrence of habitational mounds associated with Neolithic artefacts were noticed in the exposed sections of gully and nala due to intensive erosion. The ground and polished stone tool industry, the microlithic industry, the household objects, decorative objects, settlement pattern and burial

constitute the most significant features in the Neolithic culture of the area. The occurrence of ground and polished stone-tools with facet and of rectangular shape comprise axes, adzes, chisels, shouldered tools. The household objects include globular, carinated jars, small vessels, spouted vessels, bowls etc. of gritty red ware and blotchy grey ware. The ceramic remains of coarse gritty red ware are wheel made and ill fired as well as applied with red slip on both the surfaces. It has been observed from this micro-level study that the Mesolithic and Neolithic cultural remains are associated with the top red soil. The Mesolithic occurs at about 1 metre depth from the surface, where as the Neolithic cultural remain occurs about 0.50 meters below the surface.

In 1991 R.C. Sethy has undertaken an exploration in and around Sanda area of Parjang block under Kamakshyanagar subdivision in Dhenkanal district and reported one Neolithic artifact from the site of Jandapathar (Sethy, 1991; Harichandan, 2002:31-35).

The site of Golabai on the left bank of river Mallaguni in Khurda District was excavated by B. K. Sinha of Archaeological Survey of India in 1991 (Sinha 2000). According to the excavator Period I belonged to the Neolithic phase which he dated to circa 2300-2100 BC. The deposit is a little more than a metre. Traces of post holes and floor levels were noticed. Although no stone tool was found from this phase, one piercer made on bone and some bone pieces showing secondary work on them. The recovery of a good number of pieces of antlers semi-mineralised bones implied that they were used as raw material for making bone tools. The pottery includes both handmade and wheelmade types comprising dull red and grey wares. The grey ware shows evidence of a chocolate slip or wash. In some

cases, it is noticed that postfiring paintings in red ochre are there consisting of a band around the neck. Handmade pottery was decorated with chord or reed impressions. This could be compared with the Neolithic pottery of Daojali Hading in Assam. The shapes were shallow bowls and vases in dull red and grey wares. Pot stand or lamp stand was a unique shape of this period. The pot stand was in grey ware and showed evidence of a chocolate slip or wash on the exterior. The excavator also mentioned about a structure of stone rubbles set in mud which possibly served as a boundary of the settlement running north-south.

In 1994, Basa along with his team from the Department of Anthropology, Utkal University carried out an intensive survey in and around Pallahara subdivision of Angul district, Central Odisha (Basa et al, 2000) which has resulted in the discovery of 16 prehistoric sites. The area of survey comes primarily under the basin of the river Mankra, an affluent of the river Brahmani and is surrounded by the Mankarhachua Reserve Forest to the north and Tamkia Reserve Forest to the north east and the Nijigarh Reserve Forest and the Malayagiri Reserve Forest to the south. The prehistoric sites are mostly located on either banks of the river Mankara. The Neolithic cultural evidences recovered from the nine sites which include Samiapalli, Subarnapalli, Bajpur, Muktapur, Illisuan, Udayapur, opposite of S.E.D.P. office, Pallahara College area. Altogether 205 Neolithic artefacts were collected from surface exploration and trial trench excavations around Pallahara. The Neolithic artefacts of this region include axes, chisels; dimple scarred rubbers, flakes and chips. From the pond site near Pallahara college area, three axes along with numerous flakes were recovered. Out of these three, two are not finished tool, since they are chipped and pecked, but not ground and polished.

The third one is a finished product having broad bevelled working edge. Similarly, at Bajpur, four chisels both finished and unfinished along with a blank retaining marks of flaking and chipping and quadrilateral in shape were collected. The raw material for the Neolithic artefacts such as axes, chisels, blanks, flakes and chips found from Pallahara area is predominantly dolerite. This kind of rock is very much present around Pallahara which, infact, could have been exploited by the Neolithic folk for manufacturing their necessary implements for other purposes.

Besides, a number of potsherds were also discovered from the surface at the site of Bajpur. There were mainly two categories of pottery: coarse red ware and Black and Red ware. Most of these potteries were made by slow wheel, but the existence of coil method during this phase may not be ruled out. Preparation of pottery with coil method is gleaned from a few ridges and grooves found on the outer and inner surfaces of some such representative samples. However the coarse red ware consists of various bowls, dishes and a small jar (a lota type) with different forms of rims. A few pieces of black and red ware (not like the usual black and red ware) were also collected. As not a single piece of rim sherd was found, the reconstruction of their forms and shapes was not possible.

Moreover, two trial trenches each measuring 1x1 square metre were excavated at the site of Bajpur. The Trench 1 dug up to 20 centimetres depth did not yield any lithic or ceramic remains excepting charcoal. The Trench 2 dug up to 85 centimetres reveals the occurrence of 53 lithic artefacts. These include both microlithic and Neolithic relics. The former includes blade, blade lets and crescents made on chert materials. The later comprises only Neolithic flakes and chips. Limited amount of

charcoal was found from different levels of the Trench 2. Basing on the soil colour, compactness and the association of cultural relics, three layers were observed in the Trench 2. While the first two layers were associated with Neolithic artefacts like flakes and chips and body sherds of coarse red ware, the preceding layer 3 was found aceramic but associated with microliths. This sequence broadly corresponds to that of the excavation at Kuchai near Baripada in Mayurbhanj by Thapar (Basa et al, 2000: 282). On the basis of chronology of the early metal age site of Sankerjang (located in the same district) dated to early 1<sup>st</sup> millennium B.C., the chronology of the Neolithic culture of Pallahara was dated to be around 2<sup>nd</sup> millennium B.C. (Basa et al, 2000:282).

B. Tripathy, in his survey around Boudh in central Odisha located one Neolithic site at Salikata, which is about 30 kilometres south of the Boudh town. It has yielded some polished stone implements made on dolerite and a variety of crude red wares (Tripathy, 1995:1-8; 2000: 213-219, 2001).

Recently B.K Mohanta (2002, 2013) has undertaken an intensive surface exploration to study the Neolithic and post-Neolithic cultures of northern Orissa. He has referred to 39 sites with evidence of the Neolithic culture in the districts of Keonjhar and Mayurbhanj and classified all these reported sites into three broad categories such as (i) foot-hill sites, (ii) piedmont sites and (iii) river bank sites. The Neolithic artifact assemblages from the area have also been classified into four major components on the basis of their general morphological and typo-technological characteristics, as (i) celt component, (ii) pebble component (iii) flake component and (iv) microlithic component. The celt component includes the tool-types of axe, chisel and fabricators as well as unidentified broken celts. On the basis of stages of manufacture and techniques applied for

the preparation of these broken celts, other major finished and semi-finished type tools (axe, adze, chisel and fabricator) are further classified into four different categories as (i) flaked and chipped category (ii) partly chipped ground and polished category (iii) completely chipped and partly ground and (iv) fully ground and polished category. The pebble component includes the artefact assemblages made on both core and river pebbles. Artefact types in the pebble component include perform celts, choppers, unifacially flaked pebble, pick or digger, hand hoe, notch, hammer stone, blanks for celt. The flake component comprises the artefact types as side scrapers, end scrapers, spear-head, arrow-head, borer, flakes and groove marked flakes and blanks for celt. The entire artefact types in all these three components are made primarily on dolerite and diorite followed by basalt rock types. In addition to this the microlithic components from Neolithic sites includes both simple and shaped artefacts made on cryptocrystalline rocks predominantly of cherts of different shades. These are prepared either by fluting or pressure flaking techniques. Retouching is also applied on some selected specimens. Typo-technologically, the microliths in the simple category comprise blades and flakes whereas the shaped artefact category includes scrapers, borer, knife, burin-cum scraper and burin. So far the chronology of the Neolithic culture is concerned; there are no such evidences from the survey to facilitate dating. The association of the microlithic component in the Neolithic cultural assemblages in the area is also a debatable aspect as these are all from surface. However, Mohanta has made an attempt to focus the techno-typological development and characteristic features of the artefact components in the Neolithic cultural patterns of Northern Orissa.

D. Sahoo has discovered some microliths and one ground axe of Neolithic type during 1997 and

1998 from the Utkal University campus at Vani Vihar. The Neolithic implement is an axe on dolerite thinly weathered and was found embedded on the top reddish brown soil deposit of the surface.

Ranjana Ray in her survey around Pallahara in Angul district in central Odisha discovered sites which are more or less continuously located on the left banks of the river Mankra. They are situated within 21°30' N.L. on the north, 21°25' N.L. on the south, 85°20' E.L. on the West and 85°15' E.L. on the east. The prehistoric sites are mainly found near Siva temple, near village of Shegarh, Samiapali, Muktapur, Kantala and Jamara. Tools belonging to the Palaeolithic, Mesolithic and Neolithic periods have been recovered from the survey in the area. Altogether 28 Neoliths were collected from the upper most silt bed. The major Neoliths from these sites are adze, axe, chisel and ring stones. Besides these, scrapers, points and flake blades without having utilization marks are also found from these sites. Numerous potsherds are also found associated with the elements of Neolithic culture (Ray, 2001: 140-149).

S. Das Gupta of Delhi University has collected a tiny Neolithic celt (5 cm x 3 cm x 1 cm) from Gangraj and a half-finished ring stone from Kalabadia during the survey (Das Gupta, 2000).

In Kalahandi district, P. Mohanty and B. Mishra have discovered a number of prehistoric sites in different geomorphic contexts yielding Mesolithic and post-Mesolithic artefacts, on the basis of intensive explorations conducted in 1996-97, 1997-98, and 1998-99 in and around Dharmagarh, Rampur-Madanpur, Kesinga and Bhawanipatna subdivisions. Besides the microlithic artefacts of the Mesolithic period, the post-mesolithic evidences of the area include a good number of celts and ring stones. A majority of celts

are ground and polished whereas a few are chipped and pecked and partially ground at distal end. A few broken specimens of celt with the proximal ends and distal ends have also been yielded from these sites. The most notable feature of the celts is their wide variation in lengths since they range from 3 cm to as large as 47cm. The largest stone axe measuring 47 cm in length and weighing 2.5 kilogram was discovered from Chandalpadar in Midinipur site. This particular axe is a double ended, chipped, pecked and partially ground and shows sophisticated workmanship. The other category is ring stone. The ring stones of Kalahandi are mostly made on sand stones and dolerite rocks. They are either round or oblong in shape. These ring stones are locally known as "Panaka Pathara" and believed to having some supernatural power or medicinal value (Mohanty and Mishra, 2000:68-72).

J.P. Singh Deo (2000:230-231) has conducted an extensive archaeological exploration in the Kalahandi and Nuapada district of South-Western Orissa. With regard to the Neolithic cultural evidences he has reported a few celts from Nehena and Churigarh. On the rocky small hill top at Nehena in Maraguda valley (Brandtner 1995) and the rocky surface on the top of Gaidas fall a number of celt grinding grooving marks were noticed. Besides these Stone Age artefacts he has also discovered the early rock-art site at Yogimath dangar in the early 70s and associated them with the Neolithic period as these rock-arts indicate occupation of early men in terms of food producing or agriculture and domestication of animals (Singh Deo, 2000).

A survey by M. K. Harichandan of the Anthropology Department, Utkal University around Sarang area yielded 14 Neolithic artefacts. Although the sample size of Neoliths is small, it includes variety of artefacts such as 5 axes, one each of chisel,

ringstone, muller, borer, 2 blanks and 3 flakes. A Neolithic manufacturing centre has been located at Chandamunda. It is full of industrial wastes like chips, flakes and blanks of different shapes and sizes. The site has also the evidence of grinding grooves on the country rock exposed at the spot (Harichandan, 2002:52-62). The other important Neolithic assemblages include a fragment of ring stone made on sandstone and a broken piece of muller having roundish cross-section from the site of Sarang Puruna Gaon. All these artefacts found from different sites suggest an early form of agriculture around the area during the Neolithic period.

B.K. Khillar (2007) has explored the river basin of the Ghoradia or Ghodadia, an affluent of the river Brahmani. His intensive investigation in the Parjang region in Dehkanal district has brought to light altogether 1567 lithic artefacts from 38 Stone Age sites. He has classified all these collection as of Lower Palaeolithic, Mesolithic and Neolithic cultures. So far the Neolithic cultural evidence is concerned the region has revealed the occurrence of small well ground and polished axes and bar celts of different types. Partially chipped ground and polished celts of various types are also discovered. Perforated stone (ring stones) in fragmented and complete form are also found in the Neolithic collection. Profuse distribution of dolerite flakes and chips at many sites suggest the evidence of Neolithic manufacturing centres around Parjang.

Similarly, an intensive survey in the district of Dhenkanal was also carried out by late Sandhyarani Biswal which resulted in the discovery of 25 lower Palaeolithic, 11 Mesolithic and 5 Neolithic sites around Kamakhyanagar area in central Odisha. Most of the sites are primary in nature and have relatively undisturbed occupation

deposits. The Neolithic sites in the area have revealed the occurrence of coarse black and red ware, small chipped and ground axes and polished ring stones. These Neolithic artefacts from the area are primarily made on dolerite rocks (Mohanty and Tripathy, 1997-98: 76-77).

L. S. Rao - assisted by J. K. Patnaik, A. K. Tiwari and Z. Ali - of the Bhubaneswar Circle, Archaeological Survey of India surveyed the middle Brahmani valley in Angul and Dhenkanal districts (IAR, 1999-2000) and reported a number of sites belonging to Lower Palaeolithic, Middle Palaeolithic, Mesolithic and Neolithic cultures. The Neolithic implements consisted of axes, chisels, adzes, ring stones and shouldered celts, mostly made on dolerite and diorite.

During 2006-07, D. N. Dimri – assisted by S. K. Kar, D. N. Bhoi and H. K. Swain of the Bhubaneswar Circle, Archaeological Survey of India surveyed the lower middle Brahmani valley (Kar, 2008:15). The tool assemblages of the Neolithic period included axes, chisels, ring stones and shouldered celts mostly made on dolerite and diorite.

P. K. Behera (2006, 2013) has shed important light on the Neolithic cultures in the middle Mahanadi Valley. He referred to two sites – Lahanda and Hirakud- which, according to him, were ‘sites with quarry based celt production activities’ (2013:188). Because, the eroded surface of both the sites is strewn with debitage, core blocks, hammers and semi-finished axes, chisels and adzes. Besides, distinct evidence for quarrying of huge blocks and subsequent reduction stages were noticed at these sites. The knappers of Lahanda and Hirakud, Behera suggested, “were either carrying the semi-finished celts to their settlement areas, which were not yet detected, or they were supplying these items to their distantly located consumers of the middle Mahanadi

valley and beyond through regional exchange network systems” (2013:89).

Behera also excavated the Neolithic site at Hikudi which was a habitation site (2013:190-5). The site is located on the left bank of the Mahanadi and is about three km north-east of the district headquarters of Subarnapur and about seventy km south of Lahanda. Trial excavations at Hikudi revealed two habitation phases- Period I Neolithic and Period II Early Historic with an occupational gap between them. The thickness of the habitation deposit of the Neolithic period varied between 35cm and 55cm. The occurrence of a large number of burnt clay lumps with reed impressions implied, according to Behera, that the earliest settlers at Hikudi lived in wattle-and-daub huts. With regard to Neolithic ceramic industry from Hikudi, the excavator stated that it is mainly represented by cord-impressed red ware, besides a few specimens of plain red ware and those with thick reddish slip. The pots were generally handmade. They exhibited uneven outer surface and finger impressions on the inner surface of the body. Behera also pointed out that in some cases; however, the rim part was separately made, probably on a slow-wheel, and then joined to the body of the vessel. The colours of the Neolithic pots varied from orange-red, dull-red to brownish, reddish-grey and grey. In some of the cases, the upper half of the vases was chocolate slipped and burnished while the lower half bore distinct cord-impressions. The general fabric varies from medium to coarse. The cording strokes are generally vertical, oblique or slanting. The decorative patterns on potteries included those by incision, appliqué, puncture, and impressed methods. Behera stated further that the shapes included, medium to large-sized vases/jars with flaring/splayed out featureless rim, carinated/concave neck and expanding/bulbous body; vases/

jars with vertical featureless rim, carinated/ short concave neck and expanding body; wide-mouthed handi with flaring/splayed out featureless rim and almost elliptical body; bowls with featureless rim; basins with flared internally thickened rim; and lastly, lids with vertical rounded/flat ended handles. The other material relics from the excavation included two small terracotta animal figurines (ox/ goat?), one terracotta sling ball, one broken bone point, two chert blades, one broken part of a saddle quern, two circular stone discs, eight small sized ground stone axes and a few skeletal remains of animals. According to Behera, "the terracotta animal figurines, representing perhaps objects of worship, are reported for the first time in Orissa from Neolithic context" (2013:194). The raw materials for stone artefacts included dolerite, basalt, granite and millionite. Farming, hunting, stock raising and fishing constituted the subsistence practices of the Hikudi Neolithic folks. Hikudi is the first Neolithic site in Odisha which has yielded two radiocarbon dates which read  $2,241 \pm 109$  BCE (PRL-2139) and  $1,745 \pm 215$  BCE (IP-617). Hence, Behera inferred that the beginning of sedentary village communities in the middle Mahanadi valley in Odisha could be traced back to a time bracket of late 3<sup>rd</sup> millennium to early 2<sup>nd</sup> millennium BCE.

In his survey of the Singida valley, central Odisha, Kar (2008) discussed Neolithic-Chalcolithic together by reporting 26 Neolithic-Chalcolithic sites which yielded 101 ground and polished stone artefacts as well as potteries. Out of 101 such lithic artefacts, 43 were axes, 15 adzes, 23 chisels, 3 shouldered celts and 17 ring stones. Dolerite, diorite basalt, quartz and sandstone were the raw materials. According to him, the axes, adzes and shouldered celts retain smooth polished surface whereas the surface of the chisels have chipped and less polished surface.

With regard to ceramics, Kar collected potsherds from two sites, such as Kurumidiha and Kuskila. While potteries from Kurumidiha are found from the surface, they are found from a section at Kuskila. Almost all the potsherds found from Kuskila are handmade, medium in fabric, ill fired and coarse gritty red ware. No red slipped ware was found from Kuskila. The ceramics from Kurumidiha are characterized by handmade and wheel made and classified into two major categories as red ware and grey ware. According to Kar (2008:174) the red ware might have been used for storage purpose and the grey ware for cooking purpose. Besides, some sherds might have been used as lids and used for ritual purposes.

On the basis of manufacturing technology and surface treatment, the red ware may be classified into red ware and red slipped ware. The red ware sherds are coarse to medium in fabric and prepared on levigated clay. These potteries are either handmade or manufactured by turntable method and well fired. The sections of almost all the sherds are medium to thick and dark grey in colour. Sometimes small *kankar* particles are found mixed which are seen in the sections of the thick sherds. While the main rim types of red ware from Kurumidiha include thick beaded rim, square cut decorative rim, externally ridged rim their main shapes are identified as storage jar and large size pots. A few sherds are also found with appliqué and fingertip press decorations on the exterior surface confining only between neck and shoulder parts of the pots. Besides, incised grooves and ridges are also observed on the exterior surface of the neck and shoulder parts of the pots. A few bases of dish, hollow knobbed lid and solid knobbed lid are also reported from Kurumidiha. Kar has pointed out that similar type of sherds but without decoration are also found from Sankerjang, Gopalpur, Golbai Pd-II and with

decoration were noticed in the early level of Sisupalgarh Pd-I (Kar, 2008:175). Moreover a few red slipped ware sherds made of levigated clay, medium to thick in fabric are also collected from this site. Almost all the potsherds of this category are wheel made and well fired which sections characterized by brunt brick colour. The shapes of these sherds mainly include those of small pot, bowl, spouted vessel, basin, etc. No painting has been noticed so far in the potteries collected from Kurumidiha. Sometime their exterior surface is found polished. These types of potteries have also been reported from the other Neo-Chalcolithic sites of Odisha as well as Deccan region. According to Kar (2008:176), at this stage it is very difficult to give the precise chronology of this cultural period. However, a comparative chronology could be inferred on the basis of available material. As mentioned earlier, a few ground and polished lithic implements and red ware sherds have been collected from this locality; interestingly they have significant relation with the implements found from nearby Neolithic-Chalcolithic site, i.e. Sankerjang. The evidence of wattle and daub structure also added for the inference for Neo-Chalcolithic culture. Hence, this area might have been occupied by the Neolithic-Chalcolithic people during 1500B.C.to500 B.C.

Recently archaeological excavations were conducted during January-February 2013 at the Neolithic-Chalcolithic site of Harirajpur, (at Banga 85°43'40" E. Long. and 20°08'45" N. Lat.), District Puri, Odisha by the Centre for Heritage Studies, Bhubaneswar in collaboration with Department of Anthropology, Utkal University, Bhubaneswar and Deccan College Post-Graduate and Research Institute, Pune. The excavation was jointly directed by Professor Kishor K. Basa and Professor R. K. Mohanty (Deccan College, Pune). They were assisted by Shri D. Sahoo, Senior Lecturer, Department of

Anthropology, Utkal University and Shri Santanu Vaidya of Deccan College. Dr. Anam Behera, Department of Ancient Indian History, Culture and Archaeology had discovered this site. Students of the Department of Anthropology, Utkal University participated in the excavation. It was decided to undertake vertical excavations of five trenches (each trench measuring 1.50 m x 2.00 m each) in a stepped manner. This revealed continuous occupation from Neolithic to the Chalcolithic periods. Apart from cultural artefacts ascribable to Neolithic-Chalcolithic period, a nearly complete human skeleton of an adult individual of the Chalcolithic period was recovered from the site. The skeleton was buried in an extended supine position with East-West orientation.

The mound was excavated up to a depth of 6.50m. The excavations revealed two fold deposits of cultural phases: (a) Period I- Neolithic Phase and (b) Period II- Chalcolithic Phase. Evidences of Neolithic period have been retrieved from only one trench i.e trench- C. The material remains of Neolithic Phase (Period I) include a ground and polished axe on basalt, a good number of both handmade and wheel made ceramic remains, a few microliths like a borer and a fragment of backed blade on brown chert, remains of animal and plant remains. The ceramic assemblage includes rim, body and base sherds of dull red ware, red ware (with grey core, red ware with black core), red ware with red slip, red polished/slipped ware, black and red ware, perforated red ware, cord and reed impressed red ware. The shapes are deep or shallow bowls with featureless convex or straight rims, storage jars, high necked and constricted necked vessels (*handi*) - big and small pots, bowls, dishes, lids and pot stand or pedestals. A few pieces of body sherds of cord impressed ware comparable to the Neolithic pottery types reported from some other sites of eastern and

north eastern India have been found in this period. Only two pieces of body sherds of the perforated red ware belonging to this period have also been retrieved from the trench- C. (Basa et al, 2014:1-4).

Carrying out an extensive archaeological exploration around the Kakharua valley in the Northern Central regions of Odisha, Rajendra Dehuri (2013-14) has reported 19 Neolithic sites yielding 269 artefacts. These Neolithic sites are divided into four categories, such as the sites on foot hill, piedmont area, river bank and foothill-cum-river bank area. From the sites of Baisnavadar, Bisriguda, and Bijagotha Hatapada a large amount of Neolithic flakes along with axe, adze and chisel have been collected. These artefacts are basically of flaked and chipped variety. So far the raw materials were concerned; dolerite was the most used raw material. The other raw materials are diorite, sandstone and quartzite. Dehuri has also reported the presence of dolerite knobs possessing quarrying marks on them in the study area which could have been exploited for production of various Neolithic tool types.

On the basis of general characteristics of morphological and typo-technological features, the Neolithic collection has been classified into two broad categories, such as celt component and pebble component. The celt component includes the celt variants classified and characterized by (i) flaked and chipped, (ii) flaked chipped and partly ground, and (iii) fully ground and polished like axe, adze, chisels etc. and preferably made on dolerite, diorite and basalt. The pebble component comprises the artefact assemblages made both on nodules and river pebbles characterized by the type ring stone, dimple marked hammer stone and blank etc. The shouldered axe is more widely reported from the coastal Orissa, whereas shouldered axe in the present study, probably in north Orissa and north-

central Orissa is very rare. A large number of semi-finished tools including innumerable flakes and chips have been recovered from the survey (Baisnavadar, Bisriguda and Kakharua Protected Forest site) which implies manufacturing or factory site etc. in the region. Being a part of the same locality, the Bonaigarh, Pallahara and Telkoi Neolithic culture could broadly be compared with the Kakharua Neolithic remains. The outcrop in the Kakharua Protected Forest site, according to Dehuri, implies that there are two phases of workmanship such as (i) the big blank extracted from the outcrop without any evidence of finished or semi-finished artefacts and (ii) small flakes and chips along with semi-finished and finished tool. Axe and adze are the two dominant types of artefact of the celt component. They are generally fashioned adopting the bilateral to quadrilateral flaking and chipping as well as grinding and polishing. With regard to the study of ceramics, the present survey did not yield a single potsherd. Further work is necessary in this regard for intensive exploration and collection of Neolithic ceramic remains from North-Central Orissa. With regard to functional aspect and in comparison to Southeast Asia and China, some of the central Odishan stone bar celts specifically from Sankerjang have been considered as lithophone (Yule et al 2000). In this regard, Dehuri stated that the stone celt recovered from the site of Sorbeda kudur is comparable with the Type II variety of Sankerjang lithophone.

In January 2005 D. Sahoo under the auspices of the Department of Anthropology, Utkal University, conducted an intensive survey in and around the area of Ghantikhal area in the district of Cuttack in coastal Odisha (Sahoo et al 2013). The survey in the area has resulted in the discovery of 11 sites of the Lower Palaeolithic, Mesolithic and Neolithic periods. Altogether 196 specimens of stone artefacts

including 23 Lower Palaeolithics, 162 Mesolithic and 11 Neolithic have been collected. However, from the eleven sites only six sites like Rampei, Cherua, Belasahi-Saharasahi, Bhagidehuri Khol, Haripuli and Nuasahi Khali Padia have yielded 11 Neolithic artefacts. The site Belasahi-Shararasahi has yielded 06 artefacts whereas the rest other five sites have yielded 01 each. On the basis of typo-technological and morphological analysis the Neolithic assemblages in the collection have been classified into two categories such as (i) shaped artefacts 05 (45.45%) and (ii) simple artefacts. 06 (54.54%). The shaped artefacts in the collection are further classified into different types of ground and polished type of tools such as axe, adze, ring-stone and indeterminate. The only indeterminate specimen from Bhagi Dehuri Khola is apparently a broken piece of some form of Celt (axe type?) having oval cross-section and well ground and polished marks all over its surfaces. The existing part of the indeterminate seems to be from the body portion which was damaged during its use. Similarly the simple artefacts are classified into two types such as flakes and polisher. The shaped artefacts include 3 axes (1 complete axe from Haripuli, 1 broken and existing part of convexed and sharp working end from Rampei and 01 broken and existing part of butt including body part from Nuasahi Khali Padia), 1 complete adze from Belasahi-Saharasahi, 1 half broken ring stone from Cherua, and the simple artefact comprises of only 4 flakes and 1 polisher from Belasahi-Saharasahi. The evidences of different shapes and sizes of dolerite flakes from Belasahi-Saharasahi are the testimony of the manufacturing activities of the Neolithic artefacts in the area.

Ground and polished marks with feeble scars of previous flakes or chips at places in all over the body of either complete or broken specimens in the collection indicate the modus operandi of the

manufacturing of axe and adze by means of flaking, chipping, pecking and finally grinding and polishing processes. The specimen of a half broken ring-stone is comparatively thick and evenly semicircular in shape having a cylinder-shaped central hole, broad (2.6 cm in diameter) at the upper surface and relatively narrow (1.6 cm in diameter) at the lower surface. The perforated section of the central hole reveals that it is probably bored by unidirectional drilling from one of the surface that is the upper surface. The unidirectional drilling of such a cylinder-shaped central hole in the specimen indicates that the similar kind of complete ring-stones were most likely used for various functions such as small wheels fitted with a tough wooden axle to make a tow-cart for short distance transportation and as mace head inserted with a handle either made of wood, bone or antler, which was most likely used to throw at the game animals or sometimes used as hammer and as a weight to suffice more force to the digging stick. As far as the raw material is concerned, except the representative samples of a ring-stone and a polisher, all other shaped and simple artefacts are made on dolerite – a fine to medium grain igneous rock. Each one of the specimen of a half broken ring stone and a polisher is made on fine grained sandstone (Sahoo and Naik, 2013:73-74).

Besides that a trial trench excavation at Belasahi-Saharasahi has yielded a few potsherds of slow wheel made red ware. These are rim sherds of the broad mouthed pots (*handi*) or jars. These potsherds are found embedded in the dark brown silty clay soil deposits on the surface level at the area of Trench-P1. Similarly, during the survey, a scientific section scraping at the site of Nuasahi Khalipadia has also yielded a number of handmade and wheel-turned potsherds of red ware with grey core and grey ware from the Layer-3 which was

composed of a compact dark brown soil deposit at a depth of 45cm to 52cm below the surface level. The significant find from the step at the bottom level of the Layer-3 are a fragment of a ground and polished tool and a portable grinding stone (Sahoo et al, 2013:76 -77).

### Issues, Problems and Prospects

1. As regards distribution, while Palaeolithic and Mesolithic artefacts are found primarily in the hilly terrain of Odisha, Neolithic artefacts are found both in the plateaus of hilly areas as well as on the plain land of coastal Odisha. Since plateau and plain land were congenial for agriculture, it could not have escaped the notice of prehistoric man.
2. Most of the work on Neolithic cultures in Odisha is based on survey or surface exploration. This has resulted in the discovery of ground and polished stone artefacts and, sometime in association with pottery remains. Thus studies on Neolithic Odisha have been characterized by the availability of ground and polished stone artefacts, emphasis on typology, technology, probable functions and raw materials.
3. With regard to typology, Dash (1987, 2000) has divided the Neolithic artefacts into two categories, such as edge tools and non-edge tools. Then he argued for a five-fold typological development on Odishan Neolithic which has been discussed earlier. With regard to general morphological and typo-technological characteristics, Behera (1992a, 1992b) has classified the artefacts into two components – celt component and pebble-tool component, whereas Mohanta (2013) has classified them into four major components– (a) celt component, (b) pebble component, (c) flake component, and (d) microlithic component. On the basis of stages of manufacture and techniques applied, Mohanta further classified the ground and polished stone artefacts into four categories: (a) flaked and chipped category, (ii) partly chipped, ground and polished category, (iii) completely chipped and partly ground, and (iv) fully ground and polished category.
4. With regard to types of sites, Behera (1992a, 1992b) has suggested three types – (i) large production site, (ii) sites of micro-chipping and finishing, and (iii) habitation sites. On the basis of location, Mohanta (2013) has classified the Neolithic sites into three broad categories – (i) foot-hill sites, (ii) piedmont and (iii) river bank sites. Dehuri (2014) has divided his sites into four categories - (i) foot-hill sites, (ii) piedmont, (iii) river bank sites, (iv) foothill-cum-river bank sites.
5. Survey in small river valleys have resulted in the discovery of a number of Neolithic sites, as has been shown in case of Singida valley by Kar (2008) and Kakharua valley by Dehuri (2013-14).
6. Only a few sites have been excavated which include Kuchai, Chhelinendi, Golabai, Bajpur, Hikudi and Banga-Harirajpur. The Neolithic remains from these sites have yielded ground and polished stone artefacts, potteries, plant and animal remains. There is evidence of settlement with wattle-and-daub structures at Hikudi. The detailed study

of plant and animal remains of Harirajpur is in process.

7. The pottery evidence from various surveys include red ware not only at Kuchai, but also at Bajpur near Palalhara (Basa et al 2000), and middle Mahanadi sites (Behera, 2006). Red ware with chord impressions and a broken head of a terracotta bull have been reported from Hikudi (Behera, 2006). Chord impressed pottery has been found from a number of excavated sites including Golabai and Banga-Harirajpur which are found from a number of sites in eastern India (Hazarika, 2013). Reference to mat-impressed handmade pottery of red, red-slipped and black-slipped ware has been made from the rock art site of Lekhamoda VI (Pradhan, 2001:48).
8. With regard to absolute chronology only a few radiocarbon dates are available. For example, the first Neolithic site in Odisha to have yielded two radiocarbon dates is Hikudi. The dates are  $2,241 \pm 109$  BCE (PRL-2139) and  $1,745 \pm 215$  BCE (IP-617). More such dates are needed in this regard to argue for a precise chronology for Odishan Neolithic.
9. The transition from Mesolithic to Neolithic in Odisha is hardly known. Limited excavation of two sites – Kuchai and Bajpur – shows that the microliths are found from the earlier layer which is followed by artefacts of Neolithic types. Talking about the antiquity and chronology of rock art in Odisha, Pradhan (2001) has tentatively divided them into three phases. He assigned Phase I to the late Mesolithic or the Early Neolithic period in view of

discovery of faceted haematites in association with microliths and Neolithic celts as recovered from the excavation at Lekhamoda VI (2001:53-4). The excavation yielded geometric microlithic implements, such as triangles, crescents and trapezes along with a large assemblage of blades and fluted cores. According to Pradhan, two specimens of ground and polished neolithic celts and three specimens of hammers/ring stones along with a pounder in the assemblage of microliths atop the bedrock also point to a transitional phase from the late Mesolithic to the early Neolithic or even to an aceramic Neolithic phase. However, more studies are needed to understand clearly the transition from Mesolithic to Neolithic culture in Odisha.

10. An important problem in Neolithic research is the issue of domestication of plants and animals. Despite the long tradition of the argument for the origin of rice in Odisha by agronomists and geographers (Watabe, 1984), there are only limited archaeological investigations to that effect. Wild rice is reported from the Neolithic sites of Baidyapur (Visnu-Mittre, 1974) and Kuchai (Visnu-Mittre, 1976) in Mayurbhanj (for a review on domestication of rice, see Ahn 1993). Singh (1985, 1988) had reported the recovery of crude and baked hand-made pottery with grain impressions as associated materials of the Neolithic industry in central Odisha. Singh's example along with the recovery of massive and elongated barcelts and ring stones from Neolithic culture show indirect evidence of emergence of agriculture. The availability of rice from the Neolithic site of Baidyapur

implies the subsistence base of Neolithic population, and shows an expansion of activities of prehistoric man during the Neolithic period.

On the basis of archaeo-botanical remains, Harvey *et al* (2006) talked of two Neolithic traditions in Odisha as a working hypothesis. The first is the Neolithic of coastal Orissa or what they called Eastern Wetland tradition, represented by impressive mound sites with well stratified and substantial sequences like Golabai, Gopalpur etc. The harpoon points as well as the environmental context of these sites suggested the likelihood that fishing was a significant part of the economy, in addition to animal husbandry and cultivation. The main crop plants recovered from coastal Odishan Neolithic sites are rice and a number of pulses including horse gram, pigeon pea, mung and urd. The second is the upland sites such as Bajpur near Pallahara in central Odisha and Banabasa in north Odisha which appear to be more ephemeral and do not have the depth of deposits found in the coastal sites. This pattern suggests site occupation of shorter longevity and/or longer lapses between occupation episodes. This implies either seasonally occupied sites, perhaps for special activities such as lithic/celt manufacture, or the loci of settlements of shifting cultivators, or both.

11. Taking a clue from Behera's study of Neolithic culture around Bonaigarh, one could infer that there was an exchange network not only between neighbouring places but also among far off places in the

Neolithic period. It is generally believed that the population affiliated with the Austro-Asiatic linguistic groups moved from mainland South-East Asia to Odisha via northeast India and Chhota Nagpur plateau during the Neolithic period (Basa, 1997). The shouldered adze is regarded as the archaeological evidence of cultural contact between Odisha and mainland South-East Asia through mainland routes. The persistence of haemoglobin E in northeast Indian population is said to be because of the Austro-Asiatic connections. Haemoglobin E is recently reported from some populations of coastal Odisha by the scientists of Indian Council of Medical Research.

12. The evidence of terracotta bull from Hikudi has implication for Neolithic religion. The representation of bovine in the rock art of Odisha might have some religious/ritualistic implication also, apart from their role in agricultural practices. However, not much is known about the religious aspect of Neolithic Odisha.
13. Some scholars have also highlighted the rock art tradition of Neolithic Odisha (for a good account of Odishan rock art, see Pradhan, 2001). For example, according to R. N. Dash (2000:218), the earliest evidence is the Manikmunda painting depicting trapping of bulls probably for domestication which is a characteristic of the Neolithic culture. The next is the Yogimath which exhibits a pastoral scene, again a trait of the Neolithic. The depiction of bovine tails in bifurcated lines in both the painting indicates relationship of the traditional

painting traits. Yogimath further provides depiction of a ring stone, an artifact of the Neolithic period. According to Singh Deo (2000), the Yogimath dangar is associated with the Neolithic period as these rock-arts indicate occupation of early men in terms of food production or agriculture and domestication of animals (Singh Deo, 2000). Pradhan 2000:638) has pointed out that painting in monochrome of red and bichrome of red and white have been executed in the back wall and the roof of the rock shelter. The paintings include a variety of astronomic and geometric form like circles one upon the other, simple squares, bowl-like shapes one upon the other, *damaru*-like shapes etc. Stick like human figures and bulls with or without humps in linear treatment are, according to Pradhan, the special features of the paintings in the rock-shelter of J(Y)ogimath. If one would accept these as examples of the Neolithic period, this would add to the aesthetic dimension of Neolithic Odisha. Pradhan, further points out that all monochrome paintings of intricate patterns, human and animal forms in dark red covered by a film of white patina belong to Phase-I which he placed in the time bracket between late Mesolithic and early Neolithic phase. Besides, engravings featured by bold outlines with deep and broad grooves along with patinated pigment in the grooves were also assigned to Phase-I by Pradhan (2001:53).

To conclude, this essay is a summary of the works on Neolithic cultures of Odisha based on survey and excavation. Of course, only a few sites

have been excavated and that too, on a very small scale. Such studies are mostly based on typotechnological perspectives and rarely on exchange system and religious practices. Therefore, it is imperative that more sites should be excavated for highlighting the subsistence, settlement, arts and crafts, exchange, religious practices etc. since excavation may result in recovery of artefacts in good contexts. Moreover, the variation of Neolithic sites in coastal Odisha and highland Odisha need to be emphasised along with a comparison with other parts of India. This essay is also a modest attempt in discussing different issues and in identifying various problems and prospects for carrying out researches on Neolithic Odisha.

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## ASSESSMENT OF UNDERNUTRITION USING COMPOSITE INDEX OF ANTHROPOMETRIC FAILURE (CIAF) AND CONVENTIONAL ANTHROPOMETRIC INDICES AMONG ANGANWADI CHILDREN (2-5 YEARS) OF RAIPUR CITY, CHHATTISGARH, INDIA

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### Abstract:

About one-third (30.00%) of the population in the developing world is suffering from one or other form of malnutrition, despite marked advancements in medical sciences, improved economic status and higher hygienic awareness. Health and nutritional status of under-privileged children in these countries present even worst scenario. The present study is undertaken to assess nutritional status of Anganwadi children of Raipur (Chhattisgarh) using both conventional anthropometric indices and CIAF, considered better indicator of malnutrition besides enabling the identification of children with multiple anthropometric failures. For the purpose, 240 Anganwadi children (120 boys; 120 girls), selected cross-sectionally, were subjected to height and weight measurements, as per standard Anthropometric procedures. Z-score values of Weight-for-Height, Weight-for-age and Height-for-age were determined by use of Ms-Excel 2010. Values falling in <-2SD range reflect undernutrition, according to WHO guidelines. SPSS version 16.0 was employed for analysing the data through ANOVA and Chi-square tests. Incidence of underweight, stunting & wasting was found to be 48.75%, 42.10% & 23.75%, respectively. CIAF value of 54.16% not only indicates malnutrition but also points out its greater prevalence. Sex-specific prevalence of underweight (55.83% boys; 41.67% girls), stunting (45.00% boys; 39.17% girls), wasting (25.84% boys; 21.67% girls) and CIAF (72.5% boys; 62.5% girls) was found to be higher among boys than those of girls. The study observed considerably high incidence of malnutrition among the Anganwadi children. WHO recommended interventional food policies & programs need to be implemented more vigorously to improve health and nutritional status of children.

**Key words:** *Preschool children, CIAF, Undernutrition, Conventional Anthropometric indices, Anganwadi, India*

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## Introduction

Inclusion of three health goals, namely, reduction in child mortality, improved maternal health and combating HIV/AIDS, malaria and other diseases, among eight Millennium Development Goals (MDGs) reflects the gravity of problem (Chhabra and Rokx, 2004). Balanced nutrition is positively associated with urbanization, female literacy, access to health care, safe water and sanitation (Osmani and Bhargava, 1998). It is also critical, as well, for achieving the goal of universal primary education as well as gender equity in education (World Bank, 2006).

Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients" (WHO). WHO (2016) reports incidence of Obesity (41 million), Stunting (159million) and Wasting (50million) among the 2-5 years old children in the World. The situation is alarming in developing countries, as 30% of the population is found suffering from one or more of the multiple forms of malnutrition which at-times, result into diarrhoea and respiratory disorders. Various factors, such as, inadequate medical facilities, low economic status, illiteracy, polluted environment etc. are directly or indirectly responsible for such health scenario of children in these countries. NFHS-3 reported incidence of stunting (48.00%) and Anaemia (70.00%), among Indian children in the same age group. Prime cause of under nutrition in India is attributed to dietary inadequacy (UNICEF, 1990).

Hereditary nature of chronic malnutrition not only causes high proportion of children death but also affects adversely the mental health, productivity and earning potentialities of citizens (UNICEF, 1990; RETA, 1997). Children malnutrition often continues till adulthood, exposing them to greater

risks of disease and death (Haq, 1984; Karim et al,1985; Das Gupta, 1990).

Malnutrition is generally assessed by use of conventional anthropometric indices, namely, Height-for-Age, Weight-for-Age and Height-for-Weight. Though these indices reflect the different facets of undernutrition, they are not useful in finding overall prevalence of undernutrition in any particular group. Composite Index of Anthropometric Failure (CIAF), consisting of 7 different anthropometric indicators fills the gap (Svedberg, 2000). These categories provide alternative measures to assess the overall magnitude of undernutrition and estimate the prevalence of Stunting, Wasting and Overweight as the separate measures (Nandy et. al, 2005; Nandy & Miranda, 2008; Nandy & Svedberg, 2012; Sen & Mondal, 2012; Savanur & Ghugre, 2015; Bharali et. al, 2019).

## Materials and Methods

Anganwadis of Raipur, the capital of the Chhattisgarh state, constitute the universe of the present communication. A cross-sectional study was undertaken in 10 representative Anganwadis between July 2017 to January, 2018 after obtaining necessary permission from District Child Protection Officer (DCPO). Minimum sample size of the study is found to be 192, as per the equation (Lwanga and Lemeshow, 1991). Following purposive sampling technique, the study is conducted on 240 Anganwadi children (Boys; 120; Girls; 120) falling between 2 to 5 years. Age as recorded in Anganwadi registers is used in the study. For each age group, under consideration, 30 boys and 30 girls were included. The necessary approval was obtained for the study from Institutional Ethics Committee (IEC), Pt. Ravishankar Shukla University, Raipur (C.G).

**(i) Physical Parameters (Singh and Bhasin, 1968; Weiner and Lourie, 1981):**

- a) Height (cm): It was determined by using Anthropometer rod. Subject was made to stand on horizontal plane floor in FH plane with heels together, straight back and relaxed shoulders. The horizontal arm of the anthropometer rod, kept in vertical position, was brought to the subject's head. Reading was recorded to the nearest 0.1 cm.
- b) Weight (Kg): It was determined by using digital calibrated weighting machine. Subject, with minimum clothing, was made to stand on it in FH plane. Reading was recorded to nearest 0.1 kg.

**(ii) Socio-Economic and Demographic Data:**

Socio-economic and demographic features of the households were collected from the parents by using standard research tools, namely, pre-tested structured interview cum schedule, non-participant observations and focussed group discussion, after obtaining their written consent. Subsequently, the socio-economic status of the studied families was derived by applying Modified Kuppuswamy scale (Singh et.al, 2017).

**(iii) Nutritional Status:**

- a) **Z-Score based Indices** (WHO, 2006); Three indices, Stunting, Underweight and Wasting are used for assessing nutritional status of the Anganwadi children.
- a (i) **Z- Score Equation:** Observed value - median value of the reference population / Standard deviation value of reference population

**a (ii) Z- Score categories** (WHO,2006: NCHS,2006)

- i) Normal: (-2 Z<+2)
- ii) Below Normal: (Z< -2)
- iii) Above average (Z>+2)

**b) Composite Index of Anthropometric Failures (CIAF)** (Svedberg, 2000; Nandi etal,2000):

It enables to assess whether child is suffering from one specific malnutrition form, namely, Underweight, Wasting or Stunting or in their various combinations. Various combinations of malnutrition are as follows:

- i) Category- A: No Failure
- ii) Category-B: Wasting only
- iii) Category-C: Wasting & Underweight
- iv) Category-D: Wasting, Underweight &Stunting
- v) Category-E: Stunting &Underweight
- vi) Category-F: Stunting only
- vii) Category-G: Underweight only

**(iv) Statistical Analysis:**

- i) **SPSS 16.0 (Statistical Software Statistical Package for Social Sciences, version 16)**
- ii) **One -Way ANOVA:** It was used to analyze the mean Z-scores differences for WAZ, HAZ, WHZ between boys and girls.
- iii) **Chi-Square Test:** It was applied to find out the age-wise and gender-wise differences in the prevalence of under-nutrition.

## Results

### Anthropometric Variables (Table-I):

**Table I: Descriptive Statistics of Anthropometric Variables among Anganwadi Children**

Variables	Boys (N=120)	Girls (N=120)	F-value	p
Height (cm)	88.31±6.48	87.52±6.44	0.885	0.450
Weight (kg)	11.36±1.57	11.21±1.57	1.152	0.329
HAZ	-1.76±1.24	-1.39±1.14	0.776	0.425
WAZ	-1.55±1.19	-1.64±1.43	2.134	0.339
WHZ	-1.12±1.14	-1.11±1.12	0.986	0.425

The boys are found taller (Boys: 88.31 cm; Girls: 87.52 cm), heavier (Boys:11.36 kg; Girls:11.21 kg) as well as in underweight(WAZ)(Boys: -1.55; Girls: -1.64) as compared to girls. The reverse trend is observed in stunting (HAZ) (Boys: -1.76; Girls: -1.39) and wasting (WHZ) (Boys: -1.12; Girls: -1.11). However, gender variations in the mean values of anthropometric variables and nutritional indices are statistically not significant, as per ANOVA ( $p<.05$ ).

### Gender Variations in Prevalence of Undernutrition and CIAF (Table 2):

**Table 2: Gender Variations in Stunting, Underweight, Wasting and CIAF among Anganwadi Children**

Indicator	Boys(N=120) %(N)	Girls(N=120) %(N)	Total(N=240) %(N)	$\chi^2$	p
Stunting(HAZ)	45.00(54)	39.17(47)	42.08(101)	11.803**	.003
Underweight (WAZ)	55.83(67)	41.67(50)	48.75(117)	.399	.572
Wasting (WHZ)	25.84(31)	21.67(26)	23.75(57)	.124	.998
CIAF	56.67(68)	51.67(62)	54.16(130)	4.445*	.034

CIAF (54.16%) shows relatively higher prevalence among the studied Anganwadi children, followed by underweight (48.75%), stunting (42.08%) and wasting(23.75%). The undernutrition in terms of stunting (Boys: 45%; Girls: 39.17%), underweight (Boys: 55.83%; Girls: 41.67%), wasting (Boys: 25.84%; Girls: 21.67%) and CIAF (Boys: 56.67%; Girls: 51.67%), boys are found to be

relatively more affected. Magnitude of gender variation is higher in underweight as compared to stunting, wasting and CIAF. However, gender variation is found statistically significant in stunting and CIAF only, as per Chi-square test ( $p<.05$ ).

### Prevalence of CIAF (Table 3)

**Table 3: Prevalence of CIAF among Anganwadi Children**

Groups	Category	Boys (N=120) %(N)	Girls (N=120) %(N)	Total (N=240) %(N)	÷2
A	No failure	43.34(52)	48.34(58)	45.84(110)	6.186*
B	Wasting only	16.67(20)	11.67(14)	14.17(34)	
C	Wasting and Underweight	03.34(04)	05.00 (06)	04.17(10)	
D	Wasting, Stunting and Underweight	03.34(04)	01.67(02)	02.50(06)	
E	Stunting and Underweight	16.67(20)	15.00(18)	15.84(38)	
F	Stunting only	16.67(20)	08.34(10)	12.50(30)	
Y	Underweight only	06.67(08)	03.34(04)	12.00 (05)	

\*p<.05

Prevalence of undernutrition is 54.16% among the studied Anganwadi children with boys (56.66%) suffering in higher proportion than girls (51.66%). Highest incidence (15.84%) of Children is found suffering with both stunting and underweight (Group-E), closely followed by those suffering by wasting only (Group-B) (14.17%). Similar magnitude of undernutrition is represented by Group-F (stunting only) (12.50%) and Group Y (underweight only) (12.00%) among the studied children. The children suffering with both wasting and underweight (Group-C) and ones depicting all three categories of undernutrition, namely, wasting, underweight and stunting(Group-D) are observed in 04.17% and 02.50%, respectively. Undernutrition categories, B, D, E, F& Y are expressed in relatively higher intensity among boys to that of girls. The category C undernutrition (wasting and underweight), however, is relatively, more among girls than that of boys. Gender variation observed in various CIAF categories is statistically significant, as per Chi-square test(p<.05)

#### Related socio-economic factors:

In the Kuppaswamy's scale of SES, more than three-fifth of the studied families of Anganwadi (64.58%) belong to upper lower class. In terms of employment status, majority of the fathers (35.74%) were found involved in self-employment. Mothers, on the other hand, were found involved in unskilled work (12.66%). The total earning member was found to be one in majority of the studied families (77.08%). About 71.25 percent of the families have their own houses out of which 51.67 percent are of pucca type. The monthly income is less than Rs.10000 in most of the cases (64.58%). Around 98.75 percent of the families are found settled in slum area. In terms of parent's educational level, majority of the fathers (30.84%) and mothers (56.24%) of the studied group were found illiterate. Although, about three-fifth of the studied families have more than three children, there are some families (40.00%) which follows the government norms of small family size (d"4). Majority of the Anganwadi families (88.34%) were dependent upon municipality water supply for drinking water. In

regard to supplementary nutrition introduced to the infants at the age of six months, traditional foods in the form of *khichdi*, *dalpani*, *dal*, *daliya*, eggs, fruits etc. are given.

### 5. Functioning of Anganwadi Centres:

Majority of the Anganwadi centres had one room where they carried out all the activities related to preschool education and others. The children did not have much space to play indoor games as the

room was also used to store supplementary materials. None of the Anganwadis had provision for wash area and toilet facilities. At Anganwadis, regular water is used for drinking purpose. There is a provision of mid-day meal, which involves day-wise distribution of nutritional food, for every child enrolled in the Anganwadi centre to ensure the improvement in their nutritional status.

### Discussion (Table 4)

**Table 4: Comparison of CIAF Value with Other Studies on Pre-School Children**

Study group & Area	Sample Size	Age group	CIAF (%)	References
Slum Children of Coimbatore, Tamil Nadu	405	0-5 yrs	68.6	Seetharaman et al,2007
Bauri Caste of Purulia District, West Bengal	347	2-6 yrs	66.3	Das and Bose,2009
Rural-Urban Children of Allahabad, Uttar Pradesh	371	0-5 years	62.8	Kumar et al,2010
Santal Ethnic Group of West Bengal	251	2-6 years	43.4	Das and Bose,2011
Urban Slum Children of Mumbai city	634	2-4 years	47.8	Savanur and Ghugre, 2015
Urban slum children of Jammu	250	0-5 years	73.2	Dewan et al,2015
Urban slums of Raipur, Chhattisgarh	602	0-3 years	62.1	Boregowda et al,2015
Urban slum children of Nagpur City	256	0-5 years	58.6	Dhok and Thakre,2016
Preschool children of Balasore, Odisha	136	1-6 years	54.4	Goswami,2016
Rural children of West Bengal	142	Under 5 years	36.1	Roy et al,2018
Govt. preschool children of Pune, Maharashtra	360	Under 2 years	75.0	Rasheed and Jeyakumar,2018
Preschool children of West Bengal	656	3-5 years	61.3	Biswas et al,2018
Anganwadi children of Raipur city, Chhattisgarh	240	2-5 years	54.16	Present Study

The prevalence of Underweight (WAZ), Stunting (WHZ) & Wasting (WHZ) among Anganwadi children of Raipur is found in magnitude of 48.75%, 42.08% & 23.75%, respectively. Incidence of undernutrition is even higher (54.16%) in term of CIAF. Degree of malnutrition is higher among boys as compared to girls in all considered nutritional indices, namely, Underweight (Boys: 55.83%; Girls: 41.67%), Stunting (Boys: 45.00%; Girls: 39.17 %), Wasting (Boys: 25.84%; Girls: 21.67%) and CIAF (Boys: 72.5%; Girls: 62.5%).

Prevalence of 54.16% undernutrition among Anganwadi children of Raipur closely similar to that of 54.40% reported among the preschool children from Balasore, Odisha (Goswami, 2016). At the same time, magnitude of undernutrition among the studied children (54.16%) is relatively higher in comparison to the rural children of West Bengal (36.1%), urban slum children of Mumbai (47.8%) and Santal ethnic group of West Bengal (43.4%), while it is lower to that reported for children from Tamil Nadu (68.60%), West Bengal (66.30%), Uttar

Pradesh (62.80%), Jammu (73.20%), Raipur (62.10%), Nagpur (58.60%) and Maharashtra (75.00%).

### Conclusion

Undernutrition in terms of single or multiple anthropometric failures is observed in more than half (54.16%) of studied Anganwadi children of Raipur, as per CIAF values. Various socio-economic factors, namely, low income, small houses, large family, parent's illiteracy, unhygienic environment and so on, coupled with poor functioning of Anganwadis are some of the underlying factors. Children specific interventional food policies & programs need to be implemented more vigorously, as per WHO guidelines. Frequent interactions between Anganwadi workers and parents should be arranged to counsel them about the additional requirements of nutrition in this fast-growing age, balanced food, avoidance of junk food and hygienic environment and so on to improve the nutritional status of children (2-5yrs).

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## **MGNREGA AND ITS IMPACT ON LIVELIHOOD AND RURAL DEVELOPMENT: A SOCIOLOGICAL STUDY IN BARWADAG VILLAGE OF RANCHI DISTRICT OF THE STATE OF JHARKHAND.**

**Jisu Pattnaik<sup>5</sup>**

### **Abstract:**

*The purpose of this article is to explore socio-economic conditions of the people living in rural areas of Jharkhand, examine the status of implementation of MGNREGA in the State and study the benefits of MGNREGA and its impact on rural livelihood. The empirical study was conducted in remote rural-tribal village of Barwadag in Ranchi district of Jharkhand and rural people constitute the universe of the study. The study adopted stratified random sampling method and based on exploratory cum descriptive research design. The Interview Schedule was used for obtaining information from rural people on various aspects of MGNREGA. The researcher observed that introduction of the MGNREGA has not made any significant difference and change in the living conditions of people in the study village. The respondents opined that due to poor implementation of the programme people migrate to urban areas in search of employment and delay in payment is one of the main causes for discouraging villagers to work under the scheme.*

**Key Words:** MGNREGA, Rural Development, Local Governance, Panchayat

### **Introduction:**

The two-fold classification of human settlements into 'rural' and 'urban' has been fundamental to the ways in which we have made sense of social, cultural and economic life in modern times, the world over. A rural settlement, or a village, is not simply smaller in size; it presumably also had a simpler mode of social and economic organisation (Jodhka, 2012). The National Rural Employment Guarantee Act (NREGA), enacted on 25 August 2005 and renamed the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on 2 October 2009, includes activities under nine different heads to provide employment to village

communities and improve their livelihoods. MGNREGA is an anti-poverty, demand driven programme and rural development scheme. The basic objectives of the scheme are to enhance livelihood security in rural areas, rural infrastructure development and improvement of economic condition of the people. India's National Rural Employment Guarantee Act (NREGA) of 2005, the world's largest public works programme ever, provides basic social security for rural workers a universal and legally enforceable right to 100 days of employment per rural household on local public works at minimum wage. Labourers who are not

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given work within 15 days of asking for it are entitled to unemployment benefits (HDR, 2010).

Livelihood comprises people, their capabilities and their means of living, including food, income and assets. Chakraborty (2005) has made an observation that vulnerability to food insecurity increases with fall in the poverty ratio, increase in unemployment, and threat by a lack of access to a means of livelihood. The NREGA activities were found to reduce the vulnerability of agricultural production, water resources and livelihoods to uncertain and low rainfall, water scarcity and poor soil fertility (Rapid Appraisal Study, 2011).

### **Review of Literature:**

According to the Ministry of Rural Development's report on MGNREGA (2012-2013) the status of Jharkhand is quite low as compared to the southern states, especially Andhra Pradesh. Out of 1412272 households that demanded work, only 1394426 were provided employment.

Deogharia (2014) observed that in the state of Jharkhand the benefits of the programme have been secondary and indirect rather than direct. It has raised agricultural wages, acted as insurance for rural workers against unemployment and stabilise income of rural households. According to Bhatia and Dreze (2006) the level of awareness among the rural people of Jharkhand is very low; they have very little understanding about the basic features of the act. The institutional gap is a major stumbling block in the implementation of NREGA in the state of Jharkhand.

In another study in Orissa Dreze, Khera and Siddharth (2007) observed that NREGA has a tremendous potential in Orissa (especially in deprived districts of Balangir, Boudh and Kalahandi) but corruption threatens to derail the entire programme. Pankaj and Tankha (2010) analysed

the empowerment effects of the National Rural Employment Guarantee Scheme on rural women in Bihar, Jharkhand, Rajasthan and Himachal Pradesh. In Bihar and Jharkhand the nature and capacity of local institutions and socio cultural factors are the main reasons for low women's participation.

### **Theoretical Framework:**

Sen (1999) defines development as freedom. He argues that development "consists of the removal of various types of un-freedoms that leave people with little choice and little opportunity of exercising their reasoned agency". Peet (1999) argues that development basically means "improving the conditions of life". MGNREGA is helpful in creation of job opportunities in off season, building of rural infrastructure and improving livelihood conditions of the people in rural areas. The right to work and the right to social security are complementary to each other (Subramanya, 1994). MGNREGA is a social security scheme designed for the rural people and rural development.

### **Statement of the Problem:**

Jharkhand is considered as a very rich state in terms of its natural resources, land, forest, hillocks, natural streams and minerals, but the incidence of poverty is very high. People in rural and tribal areas of the state live in poverty, backwardness and the rate of illiteracy, infant mortality and unemployment is very high. Poonia (2012) has said that overall preliminary findings confirm that the NREGA has the potential to stimulate local development, if the management and delivery are good. Therefore, it is important to study and understand the status of MGNREGS in the state of Jharkhand, its benefits for the rural people and implementation gaps.

### **Objectives of the Study:**

The important objectives of the research study are (1) to explore socio-economic conditions of the

people living in rural areas of Jharkhand, (2) examine the causes of poor implementation of MGNREGA in the State, (3) study the benefits of MGNREGA and its impact on rural livelihood and (4) to provide suggestions to improve rural livelihood for the socio-economic development of the area.

**Methodology adopted for the empirical Study:**

The empirical study was conducted in remote rural-tribal village of Barwadag in Ranchi district of Jharkhand and rural people constitute the universe of the study. The study adopted stratified random sampling method and based on exploratory cum descriptive research design. The researcher used Interview Schedule for obtaining information from rural people on various dimensions of food security, livelihood and MGNREGA.

**Socio-Economic description of the Study Area:**

The Barwadag village is located in Angara Tehsil of Ranchi district of Jharkhand. The village is situated 20 kms away from sub-district Angara and 40 kms away from district headquarter Ranchi. Blessed with nature’s beauty and dense forest it is situated at the Ranchi-Purulia Highway. The study village comprised of 250 households and has a total population of 1,129 people. It is an underdeveloped village with most of the people having mud-houses. The population of the village consisted of Hindus, Scheduled Castes and Scheduled Tribes. The tribal population is more in the village. Agriculture was the primary source of livelihood in the village but due to lack of irrigation facility in the village people mostly depend on rain water for agricultural production. The village is inadequate in terms of drinking water and health care facility. The rate of unemployment was high in the village and rural

migration was quite evident, mostly people migrate to Ranchi city for livelihood opportunity.

**Data analysis and Discussion:**

**Table No-1: Distribution of the Respondents on the basis of Age group**

Sl.No.	Age Group	Number	%
1	18-25	20	40
2	26-40	20	40
3	40-50	10	20

Table No 1 analysed the age group of the respondents who work under MGNREGA. Total 50 respondents were interviewed during data collection in the field. Most of the respondents belong to the young and middle age group. The rate of unemployment is evident in the village.

**Table No-2: Distribution of the Respondents on the basis of Occupation/Work**

Sl.No.	Nature of Work	Number	%
1	Agriculture	35	70
2	Unskilled	10	20
3	Skilled	05	10
4	Total	50	100

Table No-2 reveals that majority of the people in the village depends on agriculture for livelihood and 20% of the people in the village are engaged in unskilled work and 10% involves in skilled work. Though majority of the villagers were dependent upon agriculture, the problem of unemployment was quite large. A large number of the population migrated out of the village due to poverty and unemployment.

**Table No-3 : Basic Facilities of the households**

SLNo.	Items	Number of Households	
		Yes	No
1	Ration Card	08	42
2	BPL card	15	35
3	PDS Facility	15	35
4	NPOAS	05	45

Table No-3 analyses basic facilities availed by the villagers. The data indicates that majority of the people in the village are not getting the facilities provided by the government. However, only few households have ration cards, BPL Cards and benefitting from the National Pension for Old Age Scheme.

**Table No-4 : Status of MGNREGA**

SL No.	Items	Response	
		Yes	No
1	Households dependent on MGNREGA	30	20
2	Satisfied with the Wages	22	28
3	Delay in Payment	40	10
4	Delay in Payment of wages leads to discouragement to do the work	38	12

Table No-4 reveals that status of MGNREGA is poor in the village. The most important thing noticeable in the village of Barwadag was that the panchayat is not functional and effective in implementation of MGNREGS. The panchayat is not receiving adequate funds regularly from the government; therefore due to inadequate funds Government welfare programs were not properly

implemented. MGNREGS and PDS were not properly executed at the village level. Most people are not even aware of these schemes. Majority of the people who have worked under MGNREGA have worked only for a few days, or at length a month. They were not provided job for 100 days. There was much delay in payment of wages. Moreover, they were not even provided interest for the delay. Most of the villagers were dependent on MGNREGA for employment after the cultivation period was over and felt that the daily wage given under it was not sufficient.

**Table-5: Types of work performed under MGNREGA**

SLNo.	Types of Work	Number	%
1	Soil Erosion	15	30
2	Deforestation	10	20
3	Road repairing	20	40
4	Village Pond	05	10

It is observed from the table No-5 that in MGNREGA people are engaged in different rural infrastructure and development related works. 40% of the people are engaged in road repairing works followed by soil erosion activities and deforestation works.

It is also found in the field that even after the implementation of the MGNREGA, most of the people in the study village are unemployed and the wage rate is very low as compared with the wage fixed by the government under this scheme. Introduction of MGNREGA has not made any striking difference in living condition of people in the village and people continue to migrate to urban areas in search of work. It is also found that local institutions are not successful in creating and spreading awareness about MGNREGA. Child care facility is not available

in the place of work for the women workers. Though the employers are friendly but due to lack of regular funds provided by the State Government, they cannot function properly.

**Table No-6: District wise Distribution of Schemes under MGNREGS**

SL. NO.	District	Rural Connectivity	Flood Control & Protection	Water Conservation and Water harvesting	Drought Proofing	Irrigation related work	Land Development	Any other activity approved	Total No
1	Bokaro	21.5	0.0	32.8	12.4	32.7	0.6	0.0	3625
2	Chatra	10.9	1.4	22.5	0.8	64.4	0.0	0.0	3272
3	Dhanbad	14.0	2.1	45.2	9.2	27.5	2.0	0.0	3214
4	Dumka	24.1	0.0	16.7	1.0	43.1	15.0	0.0	5695
5	Garhwa	49.1	0.0	25.4	1.9	23.7	0.0	0.0	2166
6	Giridih	16.3	0.0	80.2	1.2	0.0	0.1	2.3	4252
7	Godda	19.3	0.0	40.7	2.3	13.7	16.4	7.5	6679
8	Gumla	13.4	0.9	40.6	0.8	33.2	11.2	0.0	24313
9	Hazaribagh	6.6	0.3	49.2	4.3	35.8	2.9	0.8	4740
10	Jamtara	32.2	0.0	49.8	0.8	11.2	5.7	0.3	2175
11	Koderama	5.7	0.0	28.7	0.0	48.3	17.3	0.0	2073
12	Latehar	25.5	0.0	74.6	0.0	0.0	0.0	0.0	3713
13	Lohardaga	14.7	0.0	64.3	1.6	7.5	4.6	7.3	4888
14	Pakur	7.1	0.0	86.7	1.6	4.6	0.0	0.0	9915
15	Palamu	23.2	0.0	24.3	0.0	52.5	0.1	0.0	10282
16	Ranchi	6.6	0.0	27.2	3.9	53.3	8.1	0.9	8987
17	Sahebganj	47.2	2.2	21.7	1.1	25.3	0.9	1.6	4114
18	SarKharsawan	25.6	0.5	58.0	5.9	7.6	0.9	1.5	3863
19	Simdega	37.8	0.0	55.7	0.6	1.4	1.0	3.5	4223
20	W.Singhbhum	45.8	0.0	35.9	0.3	13.6	4.5	0.0	8431
21	Deoghar	12.8	0.5	7.5	5.6	38.0	11.0	24.7	19153
22	E.Singhbhum	24.9	4.5	34.4	3.6	24.7	6.0	2.1	4258
23	Total		0.5	38.7	2.6	28.5	6.4	4.3	144996

(Source-Dept. of Rural Development, Govt of Jharkhand)

Table No-6 indicates the distribution of schemes under MGNREGS. It is observed from the table that the government of Jharkhand is spending more funds under MGNREGA in water conservation and water harvesting followed by irrigation related works and rural connectivity. In MGNREGS scope is there for building of rural infrastructures, conservation of water bodies and rural development. But, the major problem is implementation of the scheme, coordination with line department and proper monitoring from the state to the panchayat level for better results.

**Table No-7: Employment under MGNREGS during 2016-2017**

Sl No.	Categories	House issued holds Job cards	No. of HH provided Employment	No. of Person days generated
1	Scheduled Castes	4.838	2.021	82.44
2	Scheduled Tribe's	14.39	5.853	221.456
3	Others	20.506	9.172	378.07
4	Total	39.733	17.045	681.966

*(Ministry of Rural Development, Govt of India)*

Table No-7 reveals that employment generated under MGNREGS during 2016-2017. The data shows that Scheduled Tribe people are more benefited under the scheme followed by Scheduled Caste people and others. The prime objective of the scheme is to provide livelihood opportunity to rural people for their sustenance and development. But, it is found that rural people are not getting employment as per the mandate of the scheme. It may be because of lack of awareness among people regarding MGNREGS work. Village panchayat need to undertake initiatives to create community mobilisation and awareness building programme in the village.

**Table No-8: Expenditure under MGNREGA in Jharkhand (2012-2016)**

Sl No	Financial Year	Central Release (in lakh)	Expenditure (in lakh)
1	2012-2013	80916.8	115236
2	2013-2014	62143.3	91279.8
3	2014-2015	72433.4	102908
4	2015-2016	97879.9	133251

*(Ministry of Rural Development, Govt of India)*

Table No-8 reveals that central funds release and expenditure incurred under MGNREGA during 2012-13 and 2015-16. It is found from the data that central share has increased from 2013-14 to 2015-16 and simultaneously expenditure incurred under MGNREGA has also steadily increased. To maintain transparency in the system, regular social audit is required at the panchayat level as per the provision of MGNREGS act.

**Table No-9: Social Indicators of the State of Jharkhand**

Sl No.	Indicators	Jhar khand	India
1	Population growth rate	22.34	17.7
2	SC Population to Total Population	12.08	16.6
3	ST Population to Total Population	26.21	8.6
4	Sex Ratio	948	943
5	Child Sex Ratio	948	919
6	Literacy rate	66.41	73.0
7	Male Literacy rate	76.84	80.9
8	Female Literacy Rate	55.42	64.6

Table no 9 provides information on basic social indicators of the state and from the table it is evident that ST constitutes 26.12% of the total population of the State and overall sex ratio is healthy and good in comparison to national sex ratio. The data reveals that the state is lagging behind in terms of literacy rate particularly female literacy rate as compare to the national literacy rate. Demographically the state of Jharkhand is advanced but educationally it is backward. Being a tribal dominated state, much development is required in the education, health and livelihood sector.

### **Suggestions and Recommendations:**

1. There are ample opportunities to create work under MGNREGA and there is an urgent need to make people aware about the scheme and their rights under the scheme. Though equality in payment of wages is somewhat achieved under MGNREGA but the wages must be paid in time to the people.
2. The concept of contractors should be eliminated and transparency in implementation should be maintained. There are many loopholes in the scheme like erratic maintenance of job cards and incomplete distribution of job cards, so therefore proper mechanism is necessary at panchayat level.
3. Participation of people is necessary in developmental programme like MGNREGS; therefore, initiative to involve more and more people in the fold of the scheme should be initiated by the Government agencies.
4. A synergy should be established between different line department and local committees to achieve the target and desired goal of the anti-poverty programme MGNREGS. Convergence is necessary between various

line departments and Non-Governmental organizations to utilise resources, to provide capacity building training, preparation of micro and decentralised plan, resource support for better implementation of the scheme.

### **Conclusion:**

There is an urgent need in the state to make gram panchayat more functional and effective in implementation of the schemes, monitoring and supervision purpose. The participation of people and strengthening of local governance is necessary for success of rural development programme like MGNREGS. The strengthening of local governance is particularly important as a balancing force in representative democracy (Jun, Jong S, 1999). It is argued that the process of governance is unlikely to be effective or sustainable unless the community builds a true communal spirit that is compassionate, knowledgeable, has a concern for justice and fairness, draws on shared experience and has a shared conception of the common good (Habermas, 1984; Rawls, 1996; Sandel, 1996). The weak local governance system in the state has created an institutional vacuum at the panchayat level. The government in the state should follow bottom to top approach and participatory planning method. Effective and efficient local governance system is necessary for planning, implementation and monitoring of MGNREGS work in the state.

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## INTEGRAL YOGA AND THE SPIRIT OF WORK IN AUROVILLE: A SOCIOLOGICAL STUDY

Bibhabari Bal

### Abstract:

Spirituality is not necessarily confined to the institutionalized patterns of traditional religion but cut across all socio-cultural boundaries beyond structured frame of religion. In the current time, when the entire world is crippled under narrow fundamentalism and religious fanaticism, a spiritual way of life based on humanitarian values promises to construct a sustainable healthy society towards a holistic growth of man and society. With such spiritual ideas, Auroville, an international township, located in south India, recognized by the UNESCO has emerged as an experimental field to realise human unity through asynthesis of life, yoga and work. Integral yoga as the main driving force to Aurovilianlife perceive each individual as a potential “Karma Yogi”, a divine worker and strives for the material and spiritual advancement at individual as well as collective level simultaneously. Present study aims to explore the ideals and inspiration behind Aurovilian life, their work culture and to evaluate the level of awareness, attitude and the degree of participationamong Aurovilians in their community living.

**Key Words:** *Yoga, work, collective individualism*

### Introduction

The term ‘work’ has much more social implication than economic. For an organised collective living, a right attitude to work not only fasten the developmental process of the society but also expand the individual potential to be an effective and active participant of the society. While defining the significance of the spirit of work in the capitalist mode of production, Max Weber has advocated in favour of protestant ethics that boostcapitalist spirit and results in economic growth in European countries. Protestantism emphasized on the autonomy and independence of the individual worker to receive spiritualrealization through a dedicated work rather than merely depending on institutionalized practices to reach at the religious goal. Religious values may influence the society and

its economy, but it is not always free from its orthodox ideas and dogmatic tendencies. In a multi-cultural society like India, spiritualism<sup>2</sup> has been the core basis of its existence and continuity instead of any particular religion; without which the country wouldn’t have been accommodative and tolerant to diverse thoughts and ideologies since many generations.

While necessitating the values of spiritualism in our modern life, Prof. Srinivas says, most of the modern spiritual teachings of the east are moving towards a healthy life-embracing spirituality which does not reject life and world but aims at a spiritual fulfilment of the life and world and brings harmony between body and mind (261-277). The great

scientist Einstein in his book *Ideas and opinion* has also explained the true purpose of religion and the spiritual necessity of the human society. According to him, along with the satisfaction of the physical needs, men must strive for the possibility of developing their intellectual and artistic powers and to achieve this, “the possibility of the spiritual development of all individual is to be secured” (31-32).

With such spiritual aim, Auroville, an international township known as ‘City of Dawn’ emerged as an experimental community in the tiny corner of South India by the effort of The Mother<sup>3</sup> of Sri Aurobindo Ashram, Pondicherry to realize human unity in practical living. The Mother on 8<sup>th</sup> September, 1965 declared, “Auroville wants to be a universal town where men and women of all countries are able to live in peace and progressive harmony, above all creeds, all politics and all nationalities. The purpose of Auroville is to realize human unity” (13:194). The ideals and objectives of Auroville are inspired and guided by the teachings of Sri Aurobindo, the great seer of India; with the aim to integrate material, social and spiritual activities of the individual and the community to grow in consciousness<sup>4</sup> by an unconditional unselfish attitude of man through the practice of yoga in life and work (The Mother, 13:203). In the words of The Mother, “Auroville is created to realize the ideal of Sri Aurobindo who taught us the *karmayoga*. Auroville is for those who want to do the yoga of work. So, all Aurovilians must take up a work and do it as yoga” (13:228).

### MEANING OF INTEGRAL YOGA: METHOD AND AIM

In ancient India, the science of yoga was preserved mainly in the *Ashram* and monasteries and taught mostly to full-time spiritual seekers

striving for spiritual liberation. But in modern India, the main trend is to propagate the science of yoga that is not by the training of body postures and breath-control but through the teaching of self-discipline for a better management of life<sup>5</sup>. In the view of Sri Aurobindo, ‘yoga’ refers to ‘join’ – join the divine consciousness with one’s own consciousness to see ‘One in All’ and ‘All in One’ (Letters on Yoga, 1622). There are many types of yoga for the spiritual seekers under Hindu tradition; ‘*Hatha-yoga*’, ‘*Kundalini-yoga*’, ‘*Raja-yoga*’, ‘*Jnana-yoga*’, ‘*Bhakti-yoga*’, and ‘*Karma-yoga*’. These are paths or disciplines towards spiritual realization and liberation from the sufferings of so called mortal life. Each way has its separate aim, peculiar approach and method of practice. Sri Aurobindo in his book *Essays Divine and Human* opines that the Integral yoga takes up all of them in their essence and tries to arrive at the unification of all of these aims, methods, approaches; it stands for an all-embracing philosophy and practice to bring integral transformation of the whole human nature (373-374).

Regarding Integral yoga and its method of practice, Sri Aurobindo opines that “.....the whole method of yoga is psychological” (20: 496). Unlike most other spiritual paths and disciplines, Integral yoga neither prescribes any set of concrete practice such as ‘*asana*’, ‘*pranayam*’, ‘*japa*’, nor does it formulate a set of ethical norms and principles. One practice which most people associate with spiritual pursuit is that of meditation. Warrior is of the view that there is no rigidity or inflexibility in the process of the Integral yoga; it is sufficiently elastic to accommodate the divergences in the temperament of the individual in whom it takes place. As a matter of fact, each man follows his own method of practice. It also includes all kind of experience, whether outer or inner, sweet or bitter, for attaining perfection (37-40).

The aim of Integral yoga is not simply to be a great 'yogi' or superman or strive for 'moksha' or spiritual liberation from the cycle of birth and rebirth, but to enter into or be possessed by the Divine consciousness; that is to love Divine<sup>6</sup> for the sake of Divine without any condition, to be the perfect instrument of the Divine will. Therefore, the central purpose of Integral yoga is the transformation of superficial, narrow and fragmented human way of thinking, seeing, feeling into a deep and wide spiritual consciousness for the Integral development of the whole being through inculcating the right attitude towards work (Sri Aurobindo, The Integral yoga).

### ***Integral yoga defining the Spirit of work***

Spirit of work depends on the attitude of the person, particularly the inner attitude of the self. It is the will to perfect oneself, to be calm in all circumstances, keeping trust in the Divine grace and also willing to remain in physical equilibrium and good health. In the words of the Mother, "The yogic life does not depend on what one does but on how one does it.....it is not so much the action which counts but the attitude, the spirit in which one acts" (16: 181-182). Teachings of The Mother and Sri Aurobindo have viewed work as the means for Divine realisation. The right spirit of work is formed under some basic guidelines;

- All kinds of work, however smallest and most ordinary it may be, has equal significance.
- The first necessary condition is the consecration at work through a continuous self-giving to the Divine in every moment and every movement.
- Renunciation of all attachments, personal preferences, the results of the work, and to view work simply as an opportunity to receive various experiences good or bad.

- Perfection in every detail of the work must be the aim of every worker with the emphasis on cleanliness, beauty, harmony and order.
- An attitude of equanimity at work that is to remain calm in all circumstances and accepts adversities as opportunities to progress.

[see Seidlitz, 11-19; Mukherjee, 139-152; The Aims and Ideals of the Sri Aurobindo Ashram, 33-42; Right Spirit in Work, 16-25]

### **EARLY AUROVILLE AND ITS GROWTH: A FIELD FOR YOGA OF WORK**

Around 200 years ago, the Auroville plateau and its surrounding areas were covered with scrub jungle. Then gradually, it was turned into an expanse of dry earth scarred with gullies and ravines which had been carved out by the monsoon floods (The Auroville Adventure; Turning Point: 5).

Amidst the unfavourable topographic condition, Auroville as a place for human experimentation for human unity was selected and the place was inaugurated on 28<sup>th</sup> February, 1968 to build a global community. But the conditions were harsh as there was virtually no existing infrastructure. There was acute shortage of water and the soil was severely eroded and dry due to deforestation. There were twenty-five Tamil villages around the Auroville area; most of the population were living below the poverty line. The physical beginning of the community was far away from utopia, but the pioneers were enthusiastic, enjoyed their ascetic lifestyle and slowly started to develop the infrastructure of the community. So, the first priority of work in Auroville after its foundation was to restore life in the barren and dying land. A tremendous amount of work was done by the early pioneering Aurovilians through a massive

afforestation programme, soil conservation and water preservation through scores of miles of contour bounding, check dams and other measures. Today there is greenery all around with lush green forests, virtually bringing an ecological revolution. More than two million trees, shrubs and bushes are a silent testimony to that work (Tewari 188).

Auroville has been making a steady progress in various fields since its inception. Besides the fact that a quasi-desert has been turned into a green land, a number of other socio-cultural, economic and environmental activities also began with the focus on sustainable growth. Now, around 170 commercial units operate in Auroville (Auroville 20). Their activities include handicraft, graphic designing and printing, food processing, electronics and engineering, windmill production, clothing and fashion, computer services, building construction and architecture. These units are expected to contribute a third of their profit to the ongoing development of the township, and have an important role to play in achieving eventual self-sufficiency for Auroville. It is already proved that it was the pioneering spirit of the Aurovilians who could transform the most eroded desert like land to the most suitable semi-forested landscape with all modern tools and techniques within few years since its inception.

Today, the present community consists of more than 100 settlements spread across 20 square kms with 2,170 residents drawn from about 48 nations (Census-AV population, 2010). Its global importance is emphasized by the fact that it has been endorsed by UNESCO and other international bodies; enjoys the full support and encouragement of the Govt. of India, the host nation under the Auroville Foundation Act, 1988 (Hadnagy 1-13).

## **INSPIRATION, PERCEPTION, AND ATTITUDE OF THE AUROVILIANS TO THEIR LIFE AND WORK<sup>7</sup>**

Auroville is not a homogeneous society. Different nationalities with different educational and cultural backgrounds have made it the most heterogeneous and culturally diversified society. The four-point charter of Auroville (The Mother, 13:199-200) and the fundamental principles of Integral yoga is the constant guiding force to Aurovilians. As per the study of the author, 88% of the total respondents are followers of Integral yoga. Teachings of Integral Yoga and their love for Mother and Sri Aurobindo are the main source of inspiration to them. Further, the study reveals, the majority of Aurovilians look at work not just as the means of livelihood but as a potential means of their spiritual progress. To them, human unity and sustainability of the Auroville though is a major challenge but a committed conscious effort of its inhabitants can transform this challenge into opportunity to achieve the goal. Almost all Aurovilians understand the value of work in the light of Integral yoga and view work as essential for their personal growth and for the growth of Auroville.

Manoj Pabitrán, an ardent follower of integral yoga working in the department of Auroville communication opines, "Work creates circumstances and situations that exposes you to the outer situation and bring out the hidden layer of the capacity within one's being".

Manoj Pabitrán, an Aurovilian, Personal interview. 22<sup>nd</sup> March 2010.

### ***Aurovilian Perception to yoga and work:***

Regarding the significance of work, The Mother says, "To live in Auroville means to do the yoga of work. So, all Aurovilians must take up a work and do it as yoga" (13: 228). Aurovilians have following believes towards their life and work;

- “All life is yoga”<sup>8</sup>
- Work as an offering to the Divine
- Equal view to all types of work with a sense of perfection
- Yoga of work develops individual potential and leads to the growth of consciousness
- Problems at work are viewed as a means to progress

The work environment of Auroville is characterized by flexible non-hierarchical working structure. The study finds, there is enough freedom in the choice of work, scope for innovation, encouragement to new ideas and inclusive decision-making process; these are some of the factors which bring work-satisfaction among Aurovilians at their work place. But to some Aurovillian respondents, the meaning of work-satisfaction is not simply confined to the material success alone but to be in a steady process of growing in consciousness through work. Non-possessive attitude towards personal property and profit; detachment to one's personal choices or preferences and importance to the larger interest of the community have brought a sense of joy and contentment to those Aurovilians who have fully internalized the value of integral yoga in their life and work and truly dedicated themselves for the cause of Auroville. Opinion of some Aurovillian respondents regarding their personal realisation on Auroville work culture is given below.

Ramnarayan working in the educational research wing of Auroville says, “Every work is an opportunity to grow certain faculties, certain values, certain perfections and some transformation within the individual”.

*Ramnarayan. Personal interview. 1<sup>st</sup> April 2010.*

Bindu Mohanty, an educationist and a community volunteer speaks on the scope for individual

freedom in Auroville, “Aurovilians are largely free to define their lifestyles and standard of living in the way they choose. The freedom that Auroville accords to individuals is actually greater than that of capitalist or other mainstream societies”

*Bindu Mohanty. Personal interview. 24<sup>th</sup> March 2010.*

Joy, an artist appreciates the creative environment of the Auroville work-place, “Auroville is such a place which promotes creativity and where people discover their hidden talents only after coming into it; here every one gets the scope to taste something different, which was not their usual hobby or profession earlier”.

*Joy, Personal interview. 22<sup>nd</sup> March 2010.*

Abha Tiwari, an entrepreneur does her small-scale business to provide employment and empowerment especially to rural women of neighbouring villages. According to her, “Self-perfection is the hall mark of Integral yoga; for which Auroville products are beautiful and creative which carry the vibration of Auroville work spirit”.

*Abha Tiwari. Personal interview. 9<sup>th</sup> April 2010.*

Otto working for Auroville Financial Service justifies the rich cultural diversity of Auroville, “It is very unique and beautiful because it reflects and synthesizes the good elements of various cultures by fertilizing each other's ideas in a creative way”.

*Otto. Personal interview. 23<sup>rd</sup> March 2010.*

### ***Practice of collective individualism***

Entire process of work in Auroville is based on the values of *collective individualism*; where the practice is individual but the goal is collective. Every Aurovillian admits of enjoying enough freedom at his workplace to perform the task according to his own interest and ability without any compulsion or intervention. Aurovilians are involved with number

of activities in a creative way with the scope for individual freedom at work without compromising with the ideals of Auroville. The spirit of work is well reflected in major activities of the community such as; sustainable agricultural farming, integral method of education, eco-friendly town-planning, experimental cashless economy, technology for the use of renewable and non-conventional source of energy, massive rural developmental work in surrounding villages, quality production of various commercial units and in many artistic and cultural activities. This has encouraged a healthy work environment to explore creativity and apply it in their respective fields of work.

***Problems of Aurovilians encountering at work place:***

Though Auroville has a spiritual basis but it has all those problems as found in other societies. The type of problem and the way of solving it is not same to all. But every Aurovilian is conscious of his own problems and limitations, particularly whether work being done with reference to the ideals of Auroville or not. In this study, it was found that there are three major factors to understand the problems of Aurovilians to their life and work;

1. External challenges to the effective implementation of various programme;
2. Internal constraints of the work environment and
3. The socio-cultural problems affecting their inter-personal relationship at the work place.

The external challenges such as, the unnecessary interference of the Govt. and other external agencies, opposition from the local people, land encroachment by the private builders are some of the major issues that adversely affect the process of work in Auroville. Shortage of manpower, wrong

intention of some local village people and Aurovilians and the difficulty for the new-comers to adjust in the culturally diversified complex society of Auroville are some of the internal constraints to its spirit of work. The invisible hierarchy in the non-hierarchical working structure of Auroville is mostly based on education, English speaking ability and the working efficiency. For which, it has drawn some discontent among some local Aurovilians and the newcomers; but the factors of discontentment on the basis of nationality, religion or race have no such major impact at the Auroville workplace. Sometimes, differences are visible among various cultural groups basically due to the differential cultural perception and misunderstanding.

One of the significant parts of the Aurovilian work culture is to look at the problems not as an obstacle but as a means for progress. The concept of problem or challenge have different connotation from yogic point of view. It is not simply viewed as the problem just to avoid or escape; but as an indispensable part of social living to take experiences and knowledge together in the growth of personality by surpassing all those obstacles on the way. This kind of perception helps Aurovilians to be more capable in facing challenges and find alternative ways through more innovations and discoveries. Sometimes, cultural contradictions increase the level of acceptance to other cultural groups and create scope for better synthesisation. This has been documented in the words of Aurovilian respondents.

“Yoga teaches to confront what we running from and not to avoid, it becomes a challenge and that way one grows”.

*Manoj Pabitrán. Personal interview. 22<sup>nd</sup> March 2010.*

Gerard, a manager of an organic farm states, “Things should not be instrumental and easy-going. One

should always strive for the inner-growth, otherwise it would be difficult to live or work in Auroville”.

*Gerard. Personal interview. 17<sup>th</sup> April 2010.*

Helmut, architect and an active participant of many developmental projects of Auroville defines real happiness in terms of accepting challenges, “It was a challenge to build a city completely out of a barren land when I arrived in Auroville at its early period. However, I have realized that the complexities of Auroville have helped me to grow within through a constant urge for the individual expansion. That has provided the real happiness not as perceived by the Americans in terms of the material richness”.

*Helmut Schmid. Personal interview. 12<sup>th</sup> April 2010.*

Uma Prajapati, an entrepreneur with strong positive values does not see any problem at her work. She looks at the problem as very normal phenomena and does not like to make issue out of it. She repeatedly says in firm voice, “I don’t see the problem”.

*Uma Prajapati. Personal interview. 19<sup>th</sup> March 2010.*

Mahalingam, an experienced senior Aurovilian at his ninety years of age says, “All difficulties at work are the grace of the Divine. Because, one can attain perfection only by going through the difficulties and problems. ...heavier is the weight, stronger is the muscle”.

*S. Mahalingam. Personal interview. 12<sup>th</sup> April 2010.*

## CONCLUSION

A unique long-term field experiment with participants from all over the world, Auroville is set up to explore the possibility of unity in diversity with emphasis on sustainable development under the conditions of the global age. Since its inception, a special emphasis is on the growth of individual potentialities by cultivating the right spirit of work as defined in the context of Integral yoga. The

main objective of the yoga of work is to strive for both material and spiritual development by the inclusion of positive values like courage, confidence, commitment, creativity etc. Auroville is still in the process of becoming despite of many practical challenges. The complexities and contradictions of the multi-cultural set up of Auroville has been perceived as the opportunity to cultivate the true spirit of work.

Ideas and opinions of spiritual masters and the basic principles of Integral yoga are main guiding forces to Auroville work culture in order to be in the process of fulfilling collective goals. However, means to practice ideals of integral yoga at the individual level are given more emphasis along with the collective goals of Auroville. Focus on the qualitative transformation of human nature to realize human unity through work consider all activities of Auroville as a matter of process than a matter of achievement.

## NOTE

1. See Weber, M. *The Protestant Ethic and the Spirit of Capitalism*
2. Spiritualism is not confined to any particular religion. It is a lifestyle reflecting core human values and related to a divine, supernatural, or transcendent order of reality. See Modi, 45-46; Wuthnow, 307.
3. The Mother, the founder of Auroville, is the spiritual collaborator of great Indian seer Sri Aurobindo. To know more about The Mother, see Vrekham, *The Mother*.
4. Consciousness is the power of awareness of self and things and it has also a dynamic and creative energy. See Sri Aurobindo, 22: 234.
5. See Eliade, M. *Yoga, immortality and freedom*.
6. ‘The Divine’ is the God or the Supreme Truth because it is the Supreme Being from whom

all have come and in whom all are. See Sri Aurobindo, 23:1081.

7. The data on 'Inspiration, perception, and attitude of the Aurovilians to their life and work' is based on the field-study report of the author on Auroville during her PhD. work.
8. See Sri Aurobindo, *The Synthesis of Yoga*, 3-4.

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## MUSEUMS AS TRANSCULTURAL CONTACT ZONES

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### Abstract:

Museum symbolizes an institutionalized system of representing a cultural model in a local or global context. The characterization of artefacts constitutes towards a holistic meaning of social norms, pattern, tradition, ritual or custom. Many times, the museum display also reveal pages from historical events, folk narratives or political interpretation on communal stage (Pearce, 1999). Such displays and discourses on a public ground not only highlight the museum as a structure of culture representation but also a reflection of past and present in a limited boundary. It not only allures the individuals from a single or similar cultural space but from other spaces as well. In this paper, I will elaborate on my idea of how museums are seen as transcultural contact zone and will extend the idea of Clifford's Museums as Contact Zones (1997). I will focus on developing a politico

– ethnographic viewpoint of museum functioning. In the end, I will conclude with my idea as how can the museum be seen as a transcultural zone as well.

**Keywords:** *Museum, Culture, Transcultural, Contact Zone, Historical Events in their community living.*

### Introduction

Museums are institutionalized bodies which are established in order to represent a cultural symbol. The bodily representation of a museum – state may vary. Some museums represent the historical symbolism as Carol Duncan presents (see in MacDonald, 2003) about post-nationalist displays in Louvre museum. Similarly, different annotations of museum representation were critically analysed by Beatrice Harris (2018), where she presented a comparative ideology of what contemporary museums mean and how they have evolved as an institution with time. The museums, as established in different location in different time period, reflect the history, polity, people's intervention on social ground, cultural patterns, traditions, customs, war

stories and as a recent addition in academic studies, memorial museums (Lonetree, 2012; MacDonald, 2003; Pearce, 1999, 1995; Adamek and Gann, 2018, Kavanagh, 1988). Conceptualizing transculturality within such an institution with such attributes, it is important to first understand the mechanics of transculturality. Wolfgang Welsch (2001) provided the basic structure of transcultural entities within a social system. He segmented this concept into different parts where he analysed integral values of tradition and culture of a society. He progressed his theoretical perspective that the transcultural value is about the perception and ideology of a third person when he is displaced from his actual culture and is translocated to another one for a time period

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(see his example of Herder, 1967, in Welsch, 2001; 63). He asserts his idea that the transcultural zone is a closed sphere but included several classificatory concepts such as the dissolution of culture, hybridization, sociological pragmatics etc. (ibid; 72). His main argument to my understanding of the context of museum transculturality is of local culture in contrast to national culture (ibid; 73). It is a very subtle yet impactful marker that how local culture includes different identity markers such as traditions, customs, economy, history, folk culture and polity. Nevertheless, Welsch's idea of constructing this phenomenon of transculturality becomes very important when we reconstruct the idea into museum systems. With respect to museum functioning, theories of several scholars (Pearce, 1995; Delacruz, 1996; Maggio, 2014; Wexler, 2007; MacDonald, 1997, 2003, 2007) would be easier to interpret from Welsch's viewpoint as he says:

*"Wherever an individual is cast by differing cultural references, the linking of its transcultural components with one another becomes a specific task in identity-forming"* (Welsch, 2001).

Transculturality in Welsch's terms is basically comprising different elements from one's culture as the tools in forming the culture – identity of someone else. The idea of developing a subjective idea about other's culture is a very abstract concept in my understanding. There has been an ongoing debate of why putting the word 'trans' in front of something anthropologist are always searching for, i.e. culture (Orellana, 2017). The debate progresses that transculturality symbolize dynamism. It is not static and always proceed to unpack something people have never been able to (ibid, 210). This term has taken its setback since the time of Bronislaw Malinowski's book, *Argonauts of Western Pacific*, in the early 1920s. The word 'transculturation' has been very much appreciated in later works of

scholars and has been considered as a toolkit of digging deep (Ortiz, 1995, see in Orellana, 2017). The point of transculturality is to provide enough material of understanding and identity perspective in order to deconstruct it. With contemporary understanding, the word 'trans' has taken its full force in the writings of several scholars (Pratt, 1991; Spindler and Spindler, 1992). One perception suggests that transculturality is the way of how culture flows, moves and changes according to new identities in diverse contexts (Pennycook, 2006). Another opinion by Guerra (2007) suggests that Transcultural repositioning is more of rhetoric as it suggests that people move across and within cultural contexts (see Guerra, 2007 in Orellana, 2017). Orellana (2017) postulates her viewpoint as people act as an agency of transcultural praxis. With agreeing to her, I would conceptualise transculturality as more of relative phenomenon where it lies between 'a complete

dynamic process' and 'knowledge' with respect to culture. Transculturality provides an inward flow which drives the people to move within and across culture (Geurra, 2007). Thus the concept provides uniformity in reframing 'identity', 'meaning' and 'interpretation' of a cultural context. However, like Welsch (2001) also details, transculturality cannot function on its own and thus require a secondary medium to implement itself upon. With the case of museums, transculturality takes the pre-knowledge of the objects as medium and anticipates what people wish to see making the museum, ultimately transforming the museums a cultural contact zone.

### **What is a Contact Zone?**

As this paper tries to contemplate primarily on constructing the idea that how museums are transcultural contact zones, it is necessary to

understand first about the idea of the museum as contact zones. James Clifford (1997) came up with his theoretical interpretation of the museums being signified as 'contact zones'. He discussed the criteria extensively as he suggested the contact zone to be a central element. He described the museum as a centre for gathering and the peripheral locus to be the discoveries of theories and ideas. Nevertheless, according to Clifford (1997; 192), the contact zone subject itself into a more narrative form. The contact zones announce a reciprocal tendency such as in case of the museums, the museum as an institution displays artefacts like photographs, objects etc. and in return, they reflect back the memory and experienced past to an individual, group or an event. Clifford provides an integral demarcation (1997; 193) based upon relationship value between museums and humans, contact of thoughts between the museum and indigenous communities, the identity aspect, quantitative entity of negotiation for display etc. Within the contact zones, what is more important is receiving the message. Clifford presents in his idea that, contact zones brings the idea of collective history and context responsibility (1997; 193). These ideas are certainly important in order to provide a structure to cultural meanings interpreted by the audience. With this note, he claims that he had borrowed this concept from Mary Louis Pratt's work, *Imperial Eyes: Travel and Transculturation* (1992; 6 – 7). In Clifford's words, he described Pratt's idea as:

*"...the space in which peoples geographically and historically separated come into contact with each other and establish ongoing relations, usually involving conditions of coercion, radical inequality, and intractable conflict"* (Pratt, 1992; see Clifford, 1997; 192)

Clifford's post-national ideologies provided him with a much better ground to replace the

'frontier' with 'contact zones'. The contact zones not only symbolize a better expression of observation and understanding but also suggest that the museums are contact zones because they provide a two – way understanding. It does not constitute the meaning only through people but objects, messages, interpretation, commodities and economy as well (Clifford, 1997; 195). To be more precise, a "contact" perspective emphasizes how subjects are constituted in and by their relations to each other (ibid; 192). In an assertion, he postulates that the contact zones have responses, as if a person recalls an old story, there is the feeling of loss and struggle while it includes power and continuity as well (ibid; 193). This marks a striking similarity with what the museum produces. With the support of this theory, I will try to provide an extension to it which indicates that museums are transcultural cultural zones as well. They just not only showcase and reflect past and memory (Clifford, 1997; MacDonald, 2003) but also structure a collective effort of individuals involved in it. Along with it, the transculturality aspect is also shown as within museums as with contemporary museum methods, cultural elements are manipulative with respect to political and social conditions. This way, the meaning behind it completely changes and so as the understanding, but the importance of the object in the display is not affected. Museums as an institution not only serves as a representative body but also as a collective memory. The projection of museums in transcultural perspective always rely upon a singular structure and the locus is mainly polity central. Although I will not argue about this idea in this paper, it cannot be ignored too. The political centre of transculturality has been criticized within the discussions by scholars who primarily focused on the intermixing of cultures and its construction to a new form of identity (Welsch, 2001, Said, 1996). As Welsch also marked in his notes, he supported the statement of

Wolf Lepenies, that there is now only hybrid culture and there is an absence of pure culture (see Lepenies, 1995, in Welsch, 2001; 76), and this is the case with contemporary museum representations. The political agenda of displaying culture play a significant role to a greater extent but subtly and symbolically, it gets hidden behind the highlighted objective of the museum.

### **Museums and Transculturality**

With this discussion of transculturality with the context of museums, I would like to highlight how the different aspects of the museum functioning influence the representational output. In the museum, be it of any kind, the role of curators and their subordinators, provide a structure of understanding and reflective identity (Hooper-Greenhill 2007; Crooke, 2007; Ragsdale, 2009) to the displayed objects. Donald Ragsdale has even classified museums into several prospective systems where they constitute a varied intent such as the cultural icon, polemic, collective memory, partisan advocate, pure visual persuasion (Ragsdale 2009: 12, see in Petrov, 2012; 222). In Ragsdale's analysis, the whole museum is a unified message. The artefacts get their prime meaning through their respective placement, aesthetics and symbolic utility. Petrov (2012) suggest that artefacts when taken out of their original context and shifted into the museums, they lose their original meanings and form new ones. She supports her argument with analysis from Crew and Sims (1991; 163) as:

*"With objects transformed from one temporal continuity of use to another, their meanings are*

*entirely reconstituted: the proximity of things to one another perhaps has more authority, more readable meaning than the things themselves"* (Crew and Sims, 1991; see in Petrov, 2012; 222)

Secondly, the artefacts reflect multiple meanings through the skills of curators, who have managed to support the categorical aspects (history, polity, economy etc.; see Clifford, 1991; 121) of the respective time period. This diversified range of skillset of curators, i.e. providing meaning to the object, corresponding the message of the exhibition, sharing the transcultural value and providing a better aesthetic etc., results in developing a boxed – culture<sup>1</sup>. Here, I can say that we are back to square one, asking the same question that with the anticipation of curators in order to enrich the meaning aspect, are we observing a manipulated representation of actual culture in museums? If not, then does transculturality exist on its own in the museum context? Thus hereby, with respect to the idea of the museum as contact zones (Clifford, 1997), I would anticipate by providing an extension to this idea by trying to analyse museums as transcultural contact zones. To explain this perception, I would contemplate on few perspectives of museum functioning which focuses on curators, their duties and contribution, memory and interpretation of meaning within a museum context and contemporary methods of museum functioning. Along with these, one more significant aspect that supports the museum to provide a transcultural insight for the audience is the interpretation of audience and I will rely upon 2 case studies to reflect this perception in brief.

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1. To my interpretation, boxed culture is something that is presented within a closed boundary and in limited space. Although I am not arguing that open air museums (Kisternaya, 2012; Bernath, 2018) are not boxed – culture but boxed – culture represent a newly – patterned shape of culture representation. It is although can be criticized on several grounds but boxed – culture is not just museums with a specifics focus or something, but tribal groups isolated into a certain place, group of people with similar interest or people with relative ideology can also be classified under boxed – culture. In short, a representation of culture in a certain boundary with institutional limits; a 'territory' or a 'zone'

## 1. Museums, memory and its interpretation

Gaynor Kavanagh (1988) points out that interpretation of meaning by the audience is the result of varied cultural background, social assortment, enculturation and memory. On a similar note, Alice Tilche (2015) theorizes in her paper that memory, address towards a significant process of the past. Providing an example of postcolonial identity, she marginalizes that memory not only constructs past but also reframes and rebuilds it. Thus analyzing her idea, she suggests that every time memory comes into play, it is a different process of remembrance altogether (Tilche, 2015). The memory and experience aspects are again crucial in understanding transculturality with the context of museum territory as the exhibits provide a certain form of narrative (Harris, 2018; Clifford, 1991) and thus, its interpretation results in the shaping of the past. Memory is never limited to an individual level and creates a unified identification (Petrov, 2012). Susan Crane calls it, “memory objectified, not belonging to any one individual as to audiences, publics, collectives, and nations, and represented via the museum collections” (Crane 2000: 2). If I postulate Welsch’s (2001)<sup>2</sup> theoretical concept in this context, then it is completely understandable that transculturality within a museum zone is shaped differently with each individual. He contextualizes his theory that people always tend to be different and separate on their own and always wish to defend themselves against merging with a crowd (ibid, 2001; 84). The memory element symbolizes towards an abstract perspective of the

past in my viewpoint. It defines the performance of an actor in front of the exhibit and how he perceives the meaning of it. On a brief assertion, I would also theorize that the political structure of the region, both local and national, plays a crucial part in constructing memory as well. Graham Black (2011) notes about the museum collection as cultural memory. He suggests that each object, be it touchable or not, such as displays, souvenirs or archives, every console triggers a memory – sense (Black, 2011; 420) but it varies on the individual level and it takes a new shape each time an individual goes through that memory. ‘Each time it is more refined’, he further added. Thus such formation of memory in different fields of study always constitutes a more formal and political oriented manner (Black, 2011).

Theoretical interpretation of museum representations always forms an idiomatic memory within an individual and thus I would assert hereby that the museum develops a dynamic transculturality within a particular zone of both meaning and its understanding. The interpreted experience of the audience generally contradicts in an initial thought – process but I would postulate the memory interpretation as a past narrative (-re) told. The form of storyline, semantics and symbols depicts nothing less than a fiction revisited. It is a systematic process of how previous experience (Bennett, 1995, 2012, 2014) gets into a transition phase within a quick time of knowledge and ideal interpretation. Such classification of the memory within a museum context defines a subtle technique

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2. A similar note was penned by Wolfgang Welsch (2001) where he described transculturality as a ‘process’ rather than a ‘factor’. The understanding of the meaning in Welsch’s term is that it is a subtle yet mistaken in the social context where a large number of people follows a single pattern of understanding (in his case, language, see Welsch, 2001; 67). Thus, the transculturality context has a double meaning and it varies depending upon the cultural interpretation. The theory further suggests that it makes a more elemental representation such as linguistic, political, social etc. and no cultural formation is observed (Welsch, 2001). Similarly postulating this idea of transcultural understanding in the museum, it is accurate as the symbolic politics within a museum is completely different from political symbol. Political symbol results in manipulating the meaning of the objects and hence changing it while symbolic politics is just an elemental form of functioning.

of display method which influences the audience on a subconscious level. It results in an involuntary effort and varied reactions on the individual basis towards the display based on the knowledge with the display, experience, culture memory etc. (Bennett, 1995). It eventually leads to a comparative psychoanalytical process of the 'observed culture' and 'self - culture'. The comparison results similarly with what Welsch (2001) notes in his work with respect to questioning the originality of cultural pattern & its following. One crucial point here to understand is how an individual perceives the meaning of an observed culture and develop a completely new understanding out of it and thus the display results in a non - uniform and diversified interpretation of the meaning (Welsch, 2001; 80). The local knowledge of an individual is a very vague discussion here and when it is conceptualised in comparison with similar interest on a national level, it becomes an abstract form of boxed discussions<sup>3</sup>.

My opinion on this aspect would be based on a supportive note to that of Black (2011). The idea of memory and its interpretation surely varies each time the individual observes a particular exhibit. Here, I am not arguing that there is no recollective memory but rather each time, other categorical aspects (history, polity, economy etc.) would have advanced very much respectively to time. While the memory performs its unison with the meaning of the object, it is clear - cut understanding in my perspective that it recreates the historical past into a more narrative form. Each time, an individual sees an object on the display, an event of cultural narrative has already been added (change in the political scenario; migration; transition of cultural practices; social abolishments', socio-political reforms etc.) and thus it just gets added to the

memory narrative. At this point, the analogy breaks between the encultured self and the contemporary self. With the support of Welsch's theory (2001) of transculturality, I would say that it is the ice - breaking point of memory and its interpretation aspect within a museum context, where transculturality plays its very role. The role of memory and its interpretation always constitutes a crucial part in picturing a transcultural value.

## 2. Curators and Manipulated Transculturality

Previous ethnographic studies on museum functioning have questioned about the duties of curators and their efficiency in the projection of a culture, both locally and nationally (Kavanagh, 1988; Pearce, 1995; Adamek and Gann, 2017). The modern demand for a curator has not only included the minimum requirement of being an entrepreneur but also an individual with basic political knowledge, informed about social regulations, new ideas and channeling funds to the museums (MacDonald, 2003). In short, the curatorial aspect of a museum seeks an extensive effort for keeping a balance between 'transculturality' and 'hybridizing culture'<sup>4</sup>. The curators, although, project their concept with a team of a technical and mechanical workforce, but it is a basic understanding that the power of representation is still under the curator. In addition to this, Pearce (1994 [1990], see Bauer, 2002; 43) spoke broadly about how questions in museums have the ability to pass on different messages to the observer. This capacity, she stated, is expected to some degree to the numerous sorts of reactions observers may have and how it includes their own experience while interpreting the display. The interpretation of the objects is 'dynamic' and 'fluid' due to the active observation of the audience, she further added. Arguing in support of the curators,

3. Boxed discussion not only points out towards a single focus of discussion but also it is result oriented. If the discussion doesn't conclude with any final note, the dominated note is considered to be the final word. It is more or less relative rather than normative.

Alice Wexler (2007; 27) claims in her writing that the manipulation of the meaning of the objects by curators does not change the meaning and cultural significance of the object but actually bridge the gap between diverse public and past heritage of culture. Wexler (2007; 32) with a subtle insight, points out that the false assumption while understanding an exhibit does not put the curator in a default position but rather, it is a common mistake that audience, who are visiting the museum, have a very less knowledge of their identity, connection of the identity to the exhibit and thus interpretation of it is never complete. In another storyline, Kavanagh (1988; 94) claims that curators, despite their all the efforts do not get much acknowledgement for their job and are rather always criticized as for manipulating and polluting the meaning behind a cultured display. Elsewhere, it was claimed with respect to the political and social values that curators provide a better strength of highlighting the objective of the display and thus it is very crucial for administration as well to manage a better relationship with other governmental departments such as tourism, public sector, culture department, education etc. (Harris, 2018; Edwards, 2007; Hoare, 2016).

It is a systematic effort when observed through academic streamline that curators are much appreciated for their skills and management techniques. The symbolic effort of curatorial performance also depends on several factors. I am not arguing here that the curators and administrative members of the museum always manipulate the very meaning but there is a

possibility of 'multiple' understanding. I am putting the concept in this form because the interpretation and (-re) formed thought of culture are distinctive processes (see transculturality = uniformisation? in Welsch, 2001; 80). The very sense of meaning to the audience and what the museum representatives are actually trying to show may vary. 'The conscious recognition of the exhibit can form a doubtful image in the mind of the interpreter and may end up with a false assumption', Harris (2018) argues. To be clearer, I would put this as it is not only the curators who are responsible for representing museum with a transcultural value but several other agencies such as donors, journalist, political influence, social fluidity and acceptance, aesthetics and morals, governmental values etc. have their voices behind a display which concludes with the final interpretation by the individual who visits the exhibit. This is the very cross – section where the political dominion in cultural retrospect is deliberately anticipated. It is the very point where cultural mobility and political rationality intersect. In contemporary museum discussion, curators are a part of functional future and visual pluralism (Black, 2011; Clark, 1988). The functioning of a curator, administrative support, collection value, archived objects, displaying methods and aesthetic play, all constitutes to one single point where 'the objects in display' and 'the individual

observing it' intersect resulting in developing a completely new meaning of the object altogether. In this way, the transculturality doesn't exist on its own when seen through ethnographic lenses but

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4. As per Wolfgang Welsch (2001), the concept of Hybridising culture is also a dynamic process. He theorise about hybridizing culture as cultures today are generally characterized as hybridized. He argues that for all culture, all other cultures are observed as an inner content tendentially. This creates a segmental diagram in cultural understanding on the basis of population, merchandise, economy, information etc. (ibid; 68). He further supports his argument on a referential note from Edward Said's observation that All cultures are hybrid; none of them is pure; none of them is identical to a 'pure' folk; none of them consists of a homogenous fabric (Said, 1996; 21 – 25)

rather is improvised or 'amplified' by the regulators and administrators of the museums.

### 3. Contemporary museum methodologies

The museum methodologies will by my third assertive note to observe the transculturality aspect within the museums. I used the term 'methodologies' as it includes a wide variation of museum techniques that ultimately constitutes a structure an overall visual experience to an individual. The modern parameters not only define the traditional museum mechanisms such as collections (Harris, 2018; Baker et. al, 2016), archiving (Watanabe, 2012), display (Clifford, 1991) etc. but has also significantly contributed towards the holistic development of the museum. James Clifford (1991) in his essay, *Four Northwest Coast Museums*, analysed critically about several aspects of museum methodologies such as conceptualization, displaying techniques, the involvement of technology, the evolution of museum and man, the distinction between the display of arts and ethnographic artefacts etc. This acclamation by Clifford primarily highlighted the perception of the audience as a third person. It presented the importance of the audience in a more descriptive form of observation. The displays he mentions, such as in Royal British Columbia's Museum (1997; 118) and in the University of British Columbia, Museum of Anthropology (1997; 113), both had a similar structure of display where the aesthetics, influential and materialistic value of the displayed objects were prioritised. He points out that:

*Each museum, with its distinct mix of contextualization and narration, leaves a possible aesthetics compliment of the objects on display. Each museum develops its own meaning of interpretive categories of art, culture, politics and history* (Clifford, 1997; 121).

Nevertheless, with the writings of Clifford, it can be argued that the transculturality motion has always been a key aspect in the mind of museum officials. Clifford narrates that the museum officials displayed the artefacts with a much politicized vision. Later in his essay, He provides a detailed remark of several stages or says, processes, which can be understood while projecting a display (Clifford, 1999; 121). His categories were mainly based on authenticity, an interest of representing identity, national harmony, demonstrating culture, sense of ownership etc. His idea behind an interesting and interactive display included a pattern that focuses on the transcultural entity within the displayed object. However, with an extension to such analysis, the meaning of the

collected artefacts within a museum context and what such museums, which highlights history, holds in its archive and how they project it with respect to time and political space. The transcultural prospectus in this regard has thus evolved in several layers such as Commercial, mechanical, technological, political and aesthetical techniques. Such markers not only capitalize on a single focal point, i.e. scrutinizing to the best, but also involves a market chain of capital funds (Pearce, 1999).

The contemporary museum methodologies have provided a newer dimension of seeing transculturality. The critical analysis of museums as cultural zones (Clifford, 1997) provide an insight about the newer paradigmatic condition that has forced the museum administrators to modify and represent the cultural symbol in a more symbolic form rather than collective. The literary support of this context has seen a recent development of cultural practices and engagements. The modern dimension of museum representations such as memorial and war museums (Kavanagh, 1988), not only represent a particular gesture of remembrance

but also display the objective of the display in a very contemporary way. Swati Mathur (2017)<sup>5</sup> on an online blog wrote about the Nehru Memorial Museum in New Delhi, India, when a book exhibition was organized. It included books and journals of several scholars and their stories and narratives of different Prime Ministers of India. The column she wrote focused on how Nehru memorial and the books that would be on display were not just simple souvenirs but have a collective memory of past, several individuals who visioned for the nation and how past – politics has been integrated to the history of this nation. Although it is crucial to understand that every generation who visited the exhibition perceived and understood the books and meaning differently but, Mathur (2017) conceptualised as it created a common viewpoint of influential politics and manipulative history. This was one example of how contemporary museum ideologies are changing.

Contemporary museum methodologies are being developed each day. A focus of museum future, capital investments and displaying exotic culture markers as specialization has been a modern trend-setting in studies on museums (Keifer – Boyd, 1997; Duncan, 1995; Wexler, 2007). The focus has now shifted from plain etiquette of the display to a more attractive form, although aesthetic. Along with it, the intervention of technology and modern with the help of modern graphics display system, it is easy to produce techno – thematic diagram within a museum culturalism. Along with this, pluralism as we talk about (Adamek and Gann, 2017) have also placed itself within a significant period of postcolonial museum studies (MacDonald, 2003; Taylor, 1989

– see in MacDonald, 2003) and contemporary museum methodologies (Harris, 2018). Thus it provides a more stable point to answer about how the point of view, thinking and interpretation perspective have changed in public discourse. Along with this, Beatrice Harris (2018) postulates her viewpoint that such contemporary efforts in turning museums as a transcultural zone, it is important to understand the value of ethical practices within a museum as well as change in engagements methods and regulations of policies within the institution. This sense of museum functioning is essential for its growth as a whole and its structural strength. On a similar note, it is possible that such steps influence the museum as a focal point of cultural meaning and it provides a semantic and symbolic apprehension to the audience who are visiting these culture zones with no prior knowledge.

## **Comprehended Transculturality – Case Studies**

### **1. Anthropology Gallery – National Museum, New Delhi, India**

In the summer of 2017, I was sitting on the 2nd floor, where Anthropology gallery and its office section is located at the National Museum in New Delhi. I was appointed as a summer intern under the curator in the Anthropology Department. The prior job was to help in the documentation of the archived objects of the respective department, cross-check the collection of the department and re-tabulate every collected object in the store section. The department has three galleries. The net collection and archives store about 6000 – 7000 objects primarily from the tribal groups of North East India in one gallery and almost every object was collected and donated by British Anthropologist, Verrier Elwin. On this stand, the objects from this

5. See Swati Mathur, 2017; Nehru Memorial Museum and Library to move beyond Nehru with books on PMs, The Times of India e-newspaper, Nov. 10, 2017; <https://timesofindia.indiatimes.com/india/nehru-memorial-museum-and-library-to-move-beyond-nehru-with-books-on-pms/articleshow/61586955.cms>.

archival box were termed as The Verrier Elwin Collection. The time period of this collection was from the mid-1950s to the early 1960s. It showcased objects of social and cultural utility such as hunting, rituals, customs, tradition, pride symbols etc. The collection included a vast range of headgears, daggers, shields, jackets, textiles, armouries, musical instruments, spinning wheel, dance costumes, ritual performance objects and photographs. Although such objects are very common in a museum displaying a cultural and historical perspective. The gallery was a huge hall and the displays were

arranged in the form of narratives. The photographs were also arranged as a form of narrating play<sup>6</sup>. The anthropology gallery provided a brief description at the entrance about the objects inside. The most peculiar description was always about the war equipment of the tribal chief as it was more or less showcased in a valorous assertion than rest others. Such assertive denotation provides a very illustrious image of a leader. The objects were kept in a very schematic placement system. The objects placement was quite important while arranging a gallery aesthetic, was something I learnt only in that period. Each position of each object provided a different narrative altogether. Nevertheless, each object on the display had a small description card along with it. These descriptions were crucial as to provide the most precise information regarding the name of the object, its location, the chronological time period of its use, archive number and its usage description in two lines maximum. The displayed objects were aesthetically conceptualized with a schematic layout. The layout followed as the positioning of the photographs, displayed objects and colour theme. The display would be set up in a historical

chronology of tribal costumes, its utility importance, the consumption and production tools, jewellery etc. in order to provide a typical North

– East Indian ambience, it was crucial to provide a similar experience to the people.

During the period I worked, many times, I participated in moving of the objects from the display box in the gallery to the archival store and vice – versa. This intra – departmental movement of objects was not frequent but was, say, once in every 4 weeks. Many objects such as headgears, textiles, jewellery etc. were displayed repeatedly, but in different combination. Since I did not have any administrable power, thus I also hoped there was another reason as well, along with changing the aesthetics of the gallery, sense of ownership, competence with other galleries and showcasing new objects from the archives within a short period of time in the form of exhibition. The objects which were represented multiple times provided a different meaning in different combination with other displayed objects. The differential value of these cultures was mostly based on the number of times the object was used and its proximity to today's world. The objects, as I said, always corroborated into a more narrative form and described a chronological story of categorical aspects such as art, history, culture, politics, growth of a tribe etc. (see the assertion of tribal galleries, Clifford, 1991; 121 in *Four Northwest Coast Museums: Travel Reflections*).

This description briefly focused on how cultural significance is regulated within the museum. The value of culture although fluctuates regularly with the intra – departmental movement but the heritage symbol remains constant. It was a

6. The term 'Narrating play' was suggested by Dr. A.K. Das, Former Professor in National Museum Institute, New Delhi. Similarly, the photographs were arranged in a sequential and chronological manner depicting the image pattern in story – based form.

fascinating experience to see the objects that are understood singularly, possess a different meaning altogether when put together with other objects in the display. The representation of each object changes accordingly when positioned with respect to the objective of the exhibition and curatorial idea. In a different perception, this can be understood as providing a different viewpoint of understanding culture rather than changing it. It can be interpreted as an alternative to the primary meaning. The primary meaning then shifts itself to represent from what the object in the display actual suggests to what theme the exhibition focuses upon. On a brief additional note, the experience of such displays was not just observing the curatorial skillset, but the presence of supportive voices was also a crucial part. The voices constituted donors, activists, political power – holders, culture representing groups, secular theorists, historians and social influencers. Although I will not describe in detail, the objects in the museum display provide a significant idea. They are presenting the culture's 'then and now'. This criteria primarily analyses several categorical functions such as the transition of a cultural symbol, the practice of culture, knowledge and the interpretation of it with respect to current social and political standings. In addition to it, another distinctive marker that defines the object's significance is academic writing and sense. The academic writers include historians, archaeologists, anthropologists, sociologists' etc. (Palmer and Clark, 2005; 9 in Petrov, 2012; Cameron, 1971; Duncan, 1995; Falk et. al, 1998). The critical acclamation of the importance of such objects has categorized each one into a group of utility tools and conditionally changing the actual interpretation of it. The objects in anthropology gallery at National Museum in New Delhi also focused such acclamations where the historians and ethnographers worked in close

contact as in how such historical symbols will represent ethnography. The process of manipulating the meaning was although under the control of curator and administration but most of it has primarily relied upon the audience.

In this way, in each exhibition, the value, meaning and identity representation changes and constructs a totally different significance altogether, although their importance in the historical narratives remain same. My prime question of this paper that how the transculturality aspect is pictured within the museum as contact zones, could get an answer with such an assertion. The production of meaning through such narratives always impacts the identity and manipulation of it are quite understandable. But still, my note to such context would be that museums do not control the transcultural sense but rather provide a altered viewpoint of it. The visual display in the gallery has not contextualized a new meaning of culture but has produced an extended sense of it. To my understanding and with the support of this case in the National Museum, the museum develops an inert atmosphere of a completely different presentation of identity and cultural narrative. To develop a sense of more inter – connectedness of people with the objects in the display, the manipulation of meaning presentation seems a more sensible method or rather an alternative understanding. Thus within an institution such as the museum, this was one of the perspectives where transculturality plays a subtle yet vital role along with presenting the museums as contact zones.

## **2. Tripura State Museum, Tripura, India**

In this second case study, I would provide another standpoint on which transculturality validates itself within the museum diaspora. The transculturality entity has showcased itself

prominently on a smaller scale as well. When the discussion takes places on a smaller level (Local or State), the transcultural symbol is represented by highlighting the self – image of the museum. During the spring, 2017, I visited Tripura State Museum, Tripura in North Eastern parts of India. The museum now, was the king’s palace, before it got converted into the state museum. Ujjayanta Palace<sup>7</sup> was converted into a museum on 25th September 2013<sup>8</sup> by then Vice President of India, Dr. Hamid Ansari. The state museum, as of today, constitutes about roughly 20 – 24 galleries which primarily displays the state’s culture, tribal communities, ethnic groups, religions, customs, rituals, war equipment and the dominant displays showcase the king’s ruling period, their achievements and their contribution to the state of Tripura. The galleries showing the actions and valor of the kings ranged from 13 to 15. The museum also constitutes a block in which the state library is located. It constitutes books about the cultural symbols of tribal groups in Tripura and neighboring states and political influence within that region. The linguistic variation observed in this library includes Bengali, English, Hindi, Kokborok, Assamese etc. Exhibiting such local image in the prime exhibition was one of the most crucial aspects of describing culture. In a short conversation with one administrative official inside the museum, Mr. Tapan (real name masked), he mentioned that, “the museum tried to picture the local tradition in a way that previous kings who ruled the state have flourished the cultural paradigm and social symbol. The highlighting of the previous kings also suggests that we are trying to connect the history to the coming and modern generations. Thus in order to signify what the kings have already done for their societies to flourish, now it is in the hands

of modern generations to take control similarly”. Such thought processes do not only particularize only to local level but also motivates to carry the culture recognition on a national level as well. Palace, being a political centre in my interpretation and converting it to a museum – being a cultural centre – provides a perfect institution to develop a feeling of pride for the state.



*Ujjayanta Palace, Agartala, Tripura, now converted to Tripura State Museum. Photosource: [https://3.bp.blogspot.com/EbpbkTAl0N2E/WdkEbFx8pDI/AAAAAAAAV04/SvHySIIQIbM9\\_8l3Fv2T4qb45iSuDvkNgCLcBGAs/s1600/Ujjayanta-Palace-3.jpg](https://3.bp.blogspot.com/EbpbkTAl0N2E/WdkEbFx8pDI/AAAAAAAAV04/SvHySIIQIbM9_8l3Fv2T4qb45iSuDvkNgCLcBGAs/s1600/Ujjayanta-Palace-3.jpg)*

My prime idea behind mentioning this instance was to focus upon how museums, construct a local historical image on a nationwide scale. It is crucial as in my understanding, I would see the photographs, paintings and other exhibits as a tourist (being not from the Tripura or North East India). The tourist perspective would provide an internal comparison of two cultural patterns, i.e. my own and observed culture. Secondly, it will create a passage of assumption that how the narratives of the kings would have been followed during their time. The museum in its defense will surely provide a self – assertion on the basis of local culture and how it developed with the course of time, whereas when we talk through the ethnography perspective, it improvises a crude theoretical notion regarding museum’s efficiency, capacity and display

7. A crystal white palace, was built under the rulership of King Radha Kishore Manikya (1896 – 1909); Bennett, Coleman and Co., ‘Ansari inaugurates Tripura State Museum’, in *The Times of India*, New Delhi edition (27th September, 2013)
8. Datta, Sekhar; “History finds royal quarters” in *Telegraphindia.com*. Retrieved 2 August 2016; (20 September 2013).

methodologies. The contemporary thought process, as I analysed the discussion I had with Mr. Tapan, provides a clear picture of what and where a local culture wishes to stand. I would agree to other theoretical references that local cultures have an aspiration to represent itself on a bigger picture (Ter Keurs, 1999; Duncan, 1991). The image of the museum in such cases prove to be an exaggerated cultural display and thus again (as with the case of National Museum) a manipulated one. Although it will be a false acquisition that museums with such assertion provide a false or completely changed display but rather I would say, they again provide a different viewpoint of understanding a local culture. The state museum of Tripura reflects a strong image of local history and past. It is although an assertive notion but the institution is now seen as a unified structure of a specific memory. The entities it showcases, provide a detailed insight into how the state of Tripura has developed with the course of time. The memory and reflection of past this museum holds, not only highlights about categorical aspects such as social, political, economic, regional etc. but it also establishes itself as a capital centre too. The funding and monetary value to the museum from the state government are in a separate budget. The museum has continuously flourished itself on a touristic ground that is, not only with the content had it displayed but aesthetically as well. As per the museum management board, Mr. Tapan, continued that, “the museum always try to provide as much detailed information about us as possible, so that people coming from outside Tripura or India, get much knowledge about the state, tribes and their cultural patterns”.

Such museums prove to be a very good example of reflecting transculturality in Contact Zones (Clifford, 1997; 192). The contact zone, in this case, is the entry threshold of the gallery where the

genre of exhibits is changing (from rituals to politics or from politics to history etc.). I would use this term here as the whole museum focuses on one aspect that is to reflect the local people’s cultural norms and other categorical aspects. The transculturality notion plays its role as the variation in meanings of the exhibits in Tripura State Museum deals with a large range. The thought process as an audience in such museums is constructed in a more or less ‘this and this also’ manner. There is a very less chance of interpreting the exhibits in an ‘either or’ manner. The paradigms, on which transculturality works in such institutions, are a dynamic shift where the meaning and interpretation of exhibits fluctuates. Sometimes, the regional situations support the exhibits and its meaning in the current socio-political context while sometimes it is not the case. The memory and its recollection are very similar to how museums work and display exhibits. For the support of my idea here, I would put this thought in MacDonald’s words as she suggests that:

*“What we see here is not just the potential problem of different perspectives within so-called ‘communities’, but also different perspectives on the role of museums in the representation of identity”* (MacDonald, 2003; 8).

With a critical understanding of this idea, the communal identity of locality and globality. However, there is a strong sense of organizational order as well, else such institutions would be a difficult task to handle. This way the contacts within the institution will always be in a dynamic role of presenting a specified cultural symbol (Clifford, 1997). Such concepts of a museum function not only strengthens the transcultural entity but progresses it into several other dimensions as well. I provided a brief note on how museums have developed the concept of representing a local culture in a spotlight position. Before analysing the assertion by the museum on their history and cultural symbol, it is

important we understand the condition and need of such museums to more focus on the culture reflection according to their geographical location. Along with museum which provides the cases of other cultural reflections (Poovaya Smith 1998; Lippard, 1990; Janes, 2016; Edson, 2016; Ames, 1992), I would present an ethnographic viewpoint of museum transculturality. The new interpretation concept (Wexler, 2007; Harris, 2018; Delacruz, 1996; Gude, 2004) has now developed and considered memory and its (-re) calling as a crude part of transcultural aspect in museums. The Contact Zones theory (Clifford, 1997) suggest that the centre is a location of gathering, which involves people in a mass (such as a metropolitan) while the periphery includes the location of culture in different regions. Thus the contact zone becomes active when the exhibit is transferred from a peripheral location to the centre. However, with the case as in Tripura State Museum, I would argue that it is still a contact zone where the centre is located within the periphery and yet provide a different perception of the periphery altogether.

### **Conclusion:**

The transcultural aspect of a museum has surely seen the transition with time (Welsch, 2001; MacDonald, 2003). Several theoretical value and ideas have been focused since last two decades and so has been the advancements in the respective concept. Museums, being a primal unit of representing a cultural centre, it provides a variety of perspective to understand a cultural standpoint. In this paper, my primary question focused on that Clifford (1997) claimed museums to be a contact zone of cultural symbols and semantics, can we experience the transculturality aspect within the museum? Can we consider museums as a transcultural contact zone? My anticipation for this question would be on a positive note. The three

explanations on museums reflect transculturality provide a detailed insight into the symbolic representation of museums. First emphasizing on memory and its interpretation sees itself as one fundamental entity while analyzing transculturality. Certainly, the observed culture and self – culture debate always provide contrasting results. Thus in this first picture, the contact zones being the museums, have their symbols being played with the memory of the audience. The second description follows as a brief outline about curators playing their parts in constructing transculturality. Although I did not focus on policy reformations and management system within the museum and how it affects the cultural symbol but the job was done by curators in presenting the cultural in different viewpoints, criteria and orders surely improvise a differential cultural zona. Thus curators are, as I would surely consider, a significant factor in constructing transculturality. Although to my question in the initial part of this paper that are curators manipulating the culture display and its identity? I would answer in support of curators that, no they are rather providing an extension to its meaning. Again, there is no corruption of identity but rather a different setting. With the growth of museums in a modern world, contemporary museum ethics have included the capitalistic aspect in their agenda of museum growth as well (Pearce, 1995). This constitutes to my third implication of museum as the transcultural contact zone which mainly prioritizes the modern museum functioning methods has been marked in the contemporary theory of museums. With additions to technological advances of the 21st Century, museums have taken a step further in expanding their cultural reflection (Hall, 1987; Knox, 1997). Nonetheless, the usage of internet has boomed the distribution of knowledge exponentially, such as the case of Swati Mathur's

blog could be read on a majority scale over the internet as compared to writings of James Clifford in *Four Northwest Coast Museums – Travel Reflections* in the form of writing. Similarly, museums have anticipated themselves onto an online prospectus which increases the cross – interdisciplinary debate on a wider range.

My two case studies, one in the National Museum in New Delhi and other in Tripura State Museum, Tripura, provide a concrete discussion to support the concept of museums as transcultural contact zones. The first analysis in National Museum describes the role of curators, displaying methods, anticipatory politics and involvement of memory interpretation. In the first case, tribal objects from

North East India<sup>9</sup> were collected and showcased in New Delhi<sup>10</sup>. My further argument here is that people who observe these displays would have more or less a vague description in mind and since the museum provide a less textual description, the gallery would be a 'leisure time experience' for the people with no knowledge with respect to the exhibits. In other words, it would be difficult for the people to co-relate the objects and their correct meaning but rather the meaning which will be developed would correspond from current socio-political scenario of the individual observing it. Thus the interpretation of culture would fluctuate on the basis of historical knowledge of the region, tribe and symbols represented. Relatively, in my second case study of Tripura State Museum, the displayed objects are more or less representing the tribal culture and political history from the same location as of the museum. The audience, on a generalized level and information gathered from Mr. Tapan, belongs from the respective state, Tripura and its neighbouring

states. Thus the knowledge regarding the history and cultural manifestations in the periphery would be just the same as in the centre. In Clifford's terms, the centre and the periphery share a common identity. The transcultural paradigms are primarily focused upon memory and its interpretation, historical significance and symbol of nationalist feeling. However, for the audience like me, who was more or less an outsider to such contextual identities, the museum provides enough details in its self – assertion. The understanding of cultural meaning in such contact zones is relatively higher because the prime focus is based on its own categorical aspects. Thus in addition to this, it would be a better point that museums, what Clifford (1997) postulated as contact zones of culture and memory and experience, are more than just revisiting memories for an individual. I am not arguing here that transcultural value is only based on knowledge but it provides a greater understanding of the meaning behind the reflected culture. Museums are stronghold mirrors of symbols and semantics (Pearce, 1995; Harris, 2018; Kavanagh, 1988) regarding a social construction which acts as an open theatre to the people where each individual can perceive the act or the play (display or exhibition as in this case) in his own term. An individual can persuade new formulation, self – experiences, revisit memories and provide a completely new dimension to the represented exhibit. On a last assertive note, I will conclude that museums can be symbolized as transcultural contact zones where not only categorical aspects (Clifford, 1991; 121) are recognized but involvement of scholars from different academic background, interpretation of studies, engagement of people from different

9. 'Periphery' in this case as in the terms of Clifford's description of Contact Zone (Clifford, 1997; 193)

10. 'Center' in this case as in the terms of Clifford's description of Contact Zone (Ibid, 193)

professional and cultural background, sense of ownership, tendency of a nationalist harmony and fine distinction between academic fields (such as fine arts and ethnographical representations) are also observed. Transculturality signifies various theoretical approaches and it is very possible that museums also develop a multicultural prospectus, but with this work, I would provide an extension to Clifford's (1997) idea that museums are a centre to reflect transcultural significance along with being as just contact zones.

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## MUSEUM AND MANUSCRIPTS (WITH SPECIAL REFERENCE TO ODISHA STATE MUSEUM)

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### Abstract:

Manuscript means hand written document depicting historical, cultural, scientific and aesthetic value of a society and this tradition exists in different civilizations of the world through space and time. Ever since language has evolved as a medium of communication, it was an inherent desire of man to record his skill and knowledge, ideas and belief, thoughts and feelings, all over the world and across all religious beliefs or cultural ethos not only for himself but for next generations upon a suitable support material. Thus, manuscripts are the intellectual heritage of the mankind. So, it is our moral and ethical responsibility to promote, preserve and protect these manuscripts through both individual as well as institutional mechanisms through the permanent and non-profit institutions like Museums in different parts of the world. The author has stressed how manuscripts are integral part of museum establishment through ages with special importance to Odisha State Museum with one of the largest holding of palm-leaf manuscripts of the world.

**Key Words:** *Museum, Manuscripts, Palm leaf, Odisha State Museum*

### Introduction

As defined by Collingwood; "History is a kind of research or inquiry. It proceeds by the interpretation of evidence, where evidence is a collective name for things which simply are called documents and a document is a thing existing here and now, of such a kind that the historian by thinking about it, can get answers to the questions he asks about past events. The value of history is that, it teaches us what man has done and thus what man is (Sharma Tejram1987). If interpretation of evidence through documents leads to writing or re-constructing history then these are nothing but source material for historians. Source materials may be primary or secondary. But it is the former that is more important and relevant for re-constructing the

past events and is a kind of raw material given as input for any research or inquiry into the past.

We know that there is a strong tendency of human civilization from the days of oral tradition to the tradition of writing which made them an historic populace thereby recording man's own acts or activities that resulted transcending knowledge from generations to generations and started a new era in building a civilized society. Thus the knowledge system developed all over the world through language and literature, history and culture, philosophy and religion, science and technology, art and music, folklore and folk art etc and all these knowledge system is retained through the help of a standardized script and support material that gives

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birth to the origin of “Manuscript”, a physical entity as a carrier of wisdom and knowledge, in different parts of the world in different form, format and style while employing various processes or techniques as available to them in that period of history.

Manuscripts are important not only these are objects of past but also, they are repositories of the information and knowledge as discussed above that they contain. Manuscripts are records of by-gone era and invention of paper is a great mile stone in the development of human civilization and it changed the history of manuscripts in the world. However, before the invention of paper man’s record were carved on stones, metal, wood, clay tablets, etc. Stone is probably the first material since used in ancient times upon which epitaphs, characters and letters were engraved. In India some inscriptions dated back 4<sup>th</sup> Century B.C. are available on stones. Even in western countries stone was used for this purpose. Similarly, the earliest inscription on brick (300 B.C.) exists in Babylon. The bricks or the clay tablets were also used in Chandra Gupta period from 3<sup>rd</sup> C. BC onwards. Some inscriptions on Buddhist and Jain monks are available on potteries. The text was incised on the bricks while soft, later on they were baked. From 9<sup>th</sup> Century B.C. onwards, the wood was introduced for writing purposes. The slabs of wood were coated with was, chalk or plaster. The writings were executed by stretching the latter with metal. Since ancient times all over the world, leaves were used for writing purposes in 23-79 C.A.D.

### ***Manuscript as a Tangible Heritage:***

The Latin word ‘Manuscript’ has two syllables in it, i.e., ‘Manus’ means by hand and ‘script’ means to scribe or write upon. So, Manuscript (Mss) means to write upon some suitable support material by hand; hence original hand written document by an

author. Basically, those Mss having more than 75 years old with historical, cultural, literary, ethical or aesthetic and scientific significance are preserved by various repositories of the Government like Museums, Libraries etc. as the treasure trove of a nation; hence a priceless documentary heritage of mankind.

As stated in the definitions of UNESCO as well as ICOM the Manuscripts come under the classification of that cultural heritage which are tangible heritage themselves; hence due to its existence as physical entity need not only protection but also conservation and preservation from various factors of deterioration. Now question comes as what is Heritage?

In common parlance it is nothing but the things which are inherited from past, which may be practices, properties, customs, beliefs etc that are handed down from preceding generations to present.

According to the Definition of General Conference of United Nations Education, Scientific and Cultural Organisation (UNESCO) meeting in Paris from on 16<sup>th</sup> November, 1972 (Article-1) the cultural heritage constitutes monuments like architectural works, sculptures, paintings, elements or structures or sites of an archaeological nature, inscriptions, cave dwellings and combinations of features which are of outstanding universal value from the point of view of history, art or science.

And similarly, Article-2 speaks about natural heritage which constitutes that of natural features consisting of physical, geological, natural or biological formations or groups of such formations which are of outstanding universal value from the aesthetic or scientific point of view. UNESCO seeks to encourage the identification, protection, and preservation of Cultural and Natural heritage around

the world considered to be of outstanding value to humanity. This is embodied in an International Treaty called the Convention Concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO, 1972.

The 1972 Convention became operational in 1975, upon ratification by twenty countries and as of 4<sup>th</sup> December, 1992, one hundred and thirty-two States have ratified the Convention, have accepted it, or adhered to it to preserve, promote, protect and conserve the heritage for posterity by all its means. Thus, Heritage is a broad term and also has a wide-ranging definition as exemplified by UNESCO and subsequently by many eminent scholars and institutions. Heritage can be divided into two types, i.e., Tangible and Intangible Heritage.

#### **Intangible Heritage:**

Those are the heritage which are not perceptible by touch, hence intangible but can be realized by us. The examples are dance, drama, theatre, music, song, folk cultures, etc which have no physical existence but can be realized by our sense organs. In India we have innumerable forms of intangible heritage and in Odisha we have Odissi, and Chhou dance, Sambalpuri Music, tribal dance-music-song etc.

#### **Tangible Heritage:**

The Tangible Heritages are those properties which are perceptible by touch and are capable of being possessed or realized. These are having physical existence. This may be Natural or man-made.

The Man-made Heritage are those which have been made or constructed by human beings be it Emperors, Kings or Queens or royal dynasties, land lords, nobles, even by common man. This built-heritage are of various types and forms; like that of

architectures, sculptures, temples, forts, worshipping centres, monasteries, coins, inscriptions, manuscripts, epigraphical records, textiles, murals, miniature paintings, wooden carvings and objects, skeletal objects, arms and armoury, pattachitras, papier-machie works, palm-leaf engravings, etc. and varieties of ethnographic materials that were used by the human beings in their course of development which a volume of their past activities in the annals of history; all these are valuable source materials, mostly primary ones though the earlier records or archival resources are also thought to be another raw material for re-writing or re-constructing the history of India or for that any regions.

#### **Manuscripts (Mss) through the ages:**

Manuscript are basically hand written document of yester years and it started due to standardized script and literature as told earlier and that too happened as a great innovation and entrepreneurship of man's skill and knowledge all over the world and across all religious beliefs or cultural ethos. They recorded their activities good or evil, ideas or ideals, passion and compassion upon whatever support material they have at their disposal after lot of hit and trial experiments, probably and it is obvious. Thus, the manuscript tradition initiated in different parts of the world simultaneously after they discovered the suitable support material to scribe upon their script for recording their past achievements and activities.

The oldest known writing in the world is on a tablet of solid lime stone found in the ancient city of Kish in Mesopotamia some 5500 years ago. The oldest painted manuscripts found in Egyptian tombs from 3500 Century B.C. were written on papers (Bilashini Devi, 2009)

In Japan there was a tradition of making

handmade paper for writing purposes, called as *Uda* paper from the inner white bast of '*kozo*' plant belonging to the family '*Moraceae*' in its *Yashino* area since 7<sup>th</sup> Century AD and that practice with age old method may not be abundant in Japan but it is still practised by some traditional artists to save this art form from being lost. Though there was a strong tradition of manuscripts, still it got momentum due to advent of modern paper which was not prevalent at that time. Still it is believed that the ancient version of paper making tradition was seen to be there in '*Tee-Shi-Loon*' from '*Lising*' belonging to Honan province in China in 105 Century AD.

However it was kept secret for six hundreds of years to be known to the exterior world only when Chinese were invaded by Arabs and some Chinese soldiers taken as captives taught the art of paper making techniques to the Arabs at Samarkand in the year 751 C AD and in 8<sup>th</sup> Century AD it was found to be seen in Damascus also. From these two cities the paper making tradition spread to both Eastern and Western countries including that of India when in 10<sup>th</sup> Century AD paper reached to us via Kashmir during the invasion of Mohammad Ghorī. During the year 1420 to 1470 AD it was India which was very much popular for the production of best quality paper. In England, paper was used for printing Bible was even known as India paper that proves that the use of paper in India has been since six to seven centuries before printing materials started producing in India. As a result, we have a holy Quran dating back to 7<sup>th</sup> C.A.D is in collection of National Museum, New Delhi. In Bhandarkar Oriental Research Institute, Pune we have large collections of ancient documents in manuscript forms on birch bark and palm leaves that dates back to 5<sup>th</sup> to 7<sup>th</sup> C. A.D. (Gupta, C.B, 1998). Still we have calligraphic manuscripts executed on a calligraphic board belonging to the Taj Mahal, Agra and similar objects

are in custody of Archaeological Survey of India and being subjected to treatment in its laboratory of Dehradun, Chemistry Branch.

Even in Europe in medieval period the great Renaissance or Re-Birth took place that resulted a new revolution in the learning, education, art and architecture, science and invention, geography and exploration including the religion during Fourteenth to sixteenth Century A.D. through revival of learning that received its impulses from Italy. Italian scholars became more and more devoted to ancient studies and they began to visit Constantinople where Greek learning had been preserved. There they hunted out, copied and eagerly studied the precious manuscripts of the past and these opened up a new world of thoughts. Though the revival began in Italy, the new ideas were rapidly circulated by the new printing presses and every nation in due course played its part in the Renaissance.

The great and wealthy city of Florence was the epicentre of the Italian Renaissance. Medici, a merchant prince (1434) became the ruler of the city and was a patron of the New Learning, and he encouraged Greek scholars to settle in Florence. His grandson, known as The Magnificent, loved to spend thousands of pounds in a year on the books and he caused 200 rare manuscripts to be brought from the East to the Medici Library.

Then Rome was the second centre of New Learning. The Popes became great patrons of learning. Nicholas V (1447) founded the Vatican Library, on the greatest in the World and was a repository of old books and manuscripts of the then-era. Later on, Renaissance propagated new ideas which revolutionised the entire world; but this happened due to learning and cultivating ideas from old manuscripts and books preserved in the Library; hence a great awakening took place.

Throughout the entire Middle Ages, parchment, alongside papyrus, was the predominant writing material in Europe, the Near and Middle East. It is obtained from the skin of the animals, such as sheep and goats. The Manuscripts made up of parchment membrane are very much durable as compared to the paper manuscripts. (Gupta, K.K, 2010). In Imperial Rome during 4<sup>th</sup> Century A.D, Ivory Manuscripts in the form of ivory tablets were used prepared by making a shallow depression into an ivory tablet leaving raised frame at the edges; the two or more such ivory tablets were joined together with hinges by rings or loops of wire by leather or thread (Gupta, K.K, 2010). The development and contribution of Manuscript is immense to entire human civilization as it propagated the knowledge and knowledge system all over the globe not only the period of Renaissance but throughout the history of world civilizations in time and space.

### **Manuscripts (Mss) in India**

As far as Indian sub-continent is concerned the tradition of writing goes back to the Harappan period, though it is hard to decipher this script now. The post-Harappan period, we see the inscriptions of 3<sup>rd</sup> century B.C. in the Brahmi scripts of Ashokan Period. This script however kept evolving gradually from Mauryan (3<sup>rd</sup> Century BC to 2<sup>nd</sup> Century BC), to Sunga (2<sup>nd</sup> to 1<sup>st</sup> Century BC), from Sunga to Kushan (1<sup>st</sup> Century to 2<sup>nd</sup> Century AD), from Kushan to Gupta (300 to 550 AD) period and so on and so forth.

However, it is worth-while to mention the fact that even in 11<sup>th</sup> Century A.D. ALBERUNI has mentioned how India has strong tradition of Manuscripts with different styles. As narrated by him in North India it was called *Bhuj Patra* and in South India it was known as *burs*. People were writing from left to right and he went through the various Mss to find out how there were numerous

scripts in different regions of India (K.C.Khanna, 1971)

Thus in different parts of India we have different types of manuscripts, like in North-eastern states of country, such as in Assam, Tripura and Meghalaya, they call it *Sanchipot*, which is prepared from the bark of the *sanchi* or *agaru* trees or aloes woods (*Aquilaria agallocha*), birch bark or *bhujpatra* (*Betula papyrifera*) in North-West India including Kashmir, *Kadita* or *kadaitain* Karnataka, prepared from a long piece of cloth with paste of ground tamarind seeds and charcoal powder that looks like a black paper. (Kharbade, 2010)

### **Manuscript tradition in Odisha:**

The earliest archaeological proof of writing tradition in Odisha dates back to the Ashokan Rock Edict at Dhauli Hillock that bears testimony to the tradition of Brahmi script prevalent during that period in 3<sup>rd</sup> Century B.C. or 261 B.C known as Kalinga War with Ashoka, the Great. Subsequently we have another ancient proof of Inscription of Kharavela in HatiGumpha of Udayagiri-Khandagiri twin hillock dates back to 1<sup>st</sup> Century B.C., the inscriptions being in post-Brahmi script. However, the oldest inscription bearing Odia script is that of 1051 AD, called as proto-Odia script though it took its formalized shape in 15<sup>th</sup> Century AD after coming in cultural contact with North and South of India.

But when this script was copied from stone into palm leaf it was changed into its cursive look due to nature of palm leaf just in the tradition of South Indian script. It is to be noted that in South India it was palm leaf that was used in vogue just like Odisha; hence the character of Odia, though its language is Indo-Aryan like North India. Moreover, it is in 15<sup>th</sup> Century AD that Odia became the court language and enriched during rule of Kapilendra Deva and Purusottam Deva though towards later

part of Ganga dynasty, say Narasingha IV it was introduced to some extent as before that the language of inscription was Sanskrit. We have the great Mahabharat written in Odia by Sarala Das during the rule of Kapilendra Deva. Now the Odia script and language were used in palm leaf and took its shape from 15<sup>th</sup>/16<sup>th</sup> Century A.D., when the Mss writing was at its peak due to Bhakti movement in the erstwhile Utkalawhich was Vaishnavite in its character, to 19<sup>th</sup> Century AD till the advent of paper printing through printing press in 1869 after introduction of activities of Christian Missionary in Odisha for propagation of Bible.

Due to loss of then palm leaf manuscripts, we don't have the original texts with proto-Odia script, hence no proto-Odia manuscripts have been discovered so far which was very much popular from 15<sup>th</sup> to 17<sup>th</sup> Century AD in Odisha. So whatever manuscripts that we found today are copies of original texts with changed script.

Fortunately, India is one of the fore-runner countries in World in preserving the past records/antiquities/art/architecture in the form of Museums, Archives, Record centres all over the country and this has been enshrined in our constitution as embodied in both Article.49 as well as in Article-51-A as seen in Fundamental Duties. As a result, we have enacted various Acts/Rules, Regulations not only by Union Government, but also by different provincial Governments like Odisha. And this should be our noble and humble duty to promote, protect and preserve our cultural and natural heritage which bespeaks the achievements of our past generation.

Further, Ayurvedic Manuscripts is put into better and greater bio-chemical research including that of the retrieving our ancient knowledge system that might provide some insight into the earlier

society. By using these manuscripts, we can make further research on medicinal herbs and plants that could give fruitful result to society when modern medical treatment is not yielding its due result in many diseases. The research and development of ancient health system will get momentum if these Ayurvedic manuscripts could be collected, preserved, published and disseminated with proper research.

Thus it should be our moral duty to scientifically document, conserve and disseminate its themes and things that the posterior generation needs to know and keep it preserved as long as it goes and whatever manuscripts that we have seen in Odisha it is because of its natural tendency to withstand the wear and tear of nature though it is organic artefact and it is possible still we have palm leaf manuscripts of more than hundreds of years old. It is possible due to the nature of seasoning and processing of palm leaves that give its characteristic strength and stamina or prevents the forces or factors of deteriorations like light, temperature, moisture, microbes or biological attacks, human vandalism and negligence etc.

### **Seasoning of palm leaves:**

The process of preparing palm leaf for manuscripts starts just after collection from the palm trees and then mid ribs are removed and boiled in water for three to four hours, sun dried without being exposed to strong sun light and shouldn't be completely dried and subjected to dew for two to three nights.

Sometimes the leaves are put under mud or marshy water to season it further in a particular temperature and moisture in natural manner for a week or so together. Then retrieved, and washed and they are once again dried but this time, they are air-dried but not being exposed to sun. After this, these dried leaves are kept inside the grain stores and put

inside the paddy heaps. This treatment is the final seasoning of the leaves which makes them insect-proof and stiff. These seasoned leaves are then stitched and stringed together as per the need. The etching whether of words or of artistic designs is done with the help of an iron stylus with patience and perseverance.

After the etching is complete the leaf is rubbed with a paste made of bean-leaves, charcoal made of burnt coconut shells, til oil and turmeric paste. The leaves are then wiped with a piece of cloth and the paste deposited in the etched portions of the palm-leaves reveal prominently the engraved design. For painting the palm-leaves, vegetable and mineral colours are used. Now the leaf that turns supple, light in weight are strong and durable. Then all the leaves are assembled as a bundle and then perforated in the middle of the leaf with a heated iron rod to pass the cord for tying the bundle. The leaves are then cut into sizes; the edges being tightly pressed together are singed with hot iron rod to remove the irregularities of edges. The bundles of leaves are then pressed with two flat wooden cover boards and tied with a cord. The material of cord should be cotton in nature, no synthetic cord be used as it may damage the holes while widening it further due to its stiffness. As palm leaf doesn't absorb writing ink and so the text has to be incised upon the surface of leaf by a pointed metal stylus and then lamp black or carbon black prepared from burning the *til oil* are used as pigment powder by rubbing it into the engraved letters. These carbon pigments are deposited in the grooves thereby creating contrast and make the letters visible and readable.

For painting or illustrations of the palm-leaves, the vegetable and mineral colours are used. This process of seasoning the palm-leaves before writing or engraving gives it a characteristic colour as well as insecticidal properties while infusing flexibility

in long run and for this reason our palm-leaf manuscripts can be preserved normally for hundreds of years if not exposed to extremes of the climatic variations of temperature, relative humidity, light, etc which makes the palm-leaves brittle and destroy eventually.

Also, the contents of the palm-leaf manuscripts reflect the socio-cultural belief of the by-gone era of our society. So, it would enlighten us about our local tradition and ethos of then period.

Moreover, the ancient manuscripts are not only our treasure trove but it is a dying technique as writing through a stylus upon palm-leaf is not prevalent in modern days. To scribe upon palm leaves it needs expertise, patience and interest which is not seen now-a-days. So, this a show case of the ancient India to our posterity as a form of art and antiquities which is having its heritage value. Hence preserving the manuscripts and copying it further would keep the long tradition of writing upon palm-leaf intact. As a cultural material, this should be preserved and propagated through these institutions so that the antiquities could be better disseminated to the generations.

### **Museums in Odisha and establishment of Odisha State Museum:**

In a modern and democratic world like ours Museum is a public institution and meant for the people without any distinction on caste, colour, race or ethnicity. So, it is the public for which museum is created perhaps all over the globe, so also in India. In our ancient literature we get references on *Chitrashalas* in the Royal Court that houses the paintings, decorative of arts, and their belongings including that of the gems, jewellery, ornaments brought from their victory march. However, all these art-galleries were not meant for public, and if opened then at their whims and fancies. Similar

things happen all over world as far as royal dynasties are concerned. Though these institutions can't be called as Museums, but no doubt, it is a step forward towards development of museums in the world.

International Council of Museums (ICOM) in its general conference held at Copenhagen in 1974 has adopted a definition of Museum as follows: "A Museum is a non-profit making permanent institution in the services of the societies conserves, researches, communicates, and exhibits, for the purpose of study, education and enjoyment, material evidence of humankind, and its development." Similarly, in its 5<sup>th</sup> Regional Seminar UNESCO defines that "The Museum is an institution which functions through its exhibits, research projects and planned activities as a cultural centre within a community. Serving in both an educational and integrative capacity its major objectives are the preservation of the history and individuality of the community which it accomplishes while simultaneously discovering, protecting, diffusing and sponsoring universal human values, located in specific place within a structure housing its collections, laboratories, and exhibits the museum functions under a wide and general programme of educations, artistic and recreational activities. The museum serves on a local, regional or national level an actual and potential, transient or localised, segment of the public and constitute centripetal cultural force for the better integration of the community". (Behera et al,2007)"

So both the definitions say Museum is a permanent, non-profit making organisation and it is cultural centre where objects, either man made or natural are collected, preserved and displayed and thus it acts as a knowledge centre for study, research, education and enjoyment of common man, thus functions as epicentre of art and cultural heritage of the region/nation. Therefore, going by the

scientific definitions of museum as stated above, it is the Ashmolean Museum which was recognised as first museum of the modern world in the year 1683 in the Oxford University, England. Subsequently museums started growing in Europe, and outside Europe. But in India first museum was Indian Museum, Kolkata established in 1814 due to the effort of The Asiatic Society of Bengal under the leadership of Sir William Jones and it was seconded by Madras Museum, in 1851; thus, museum movement got the boost in different parts of India, so also Odisha. In similar fashion, Baripada Museum in Mayurbhanj is the first museum in Odisha that was established in 1904 by the late Maharaja Sri Rama Chandra Bhanjadeva of the then Princely State of Mayurbhanj though it came under the control of Odisha Government after merger of the Mayurbhanja State with Odisha in 1949.

However it is the Odisha State Museum that acted as show piece of art, culture and heritage of Odisha being a multipurpose museum of its kind and the genesis of which goes back to 1932 when two eminent scholars and historians Prof. Ghanashyam Das and Prof. N.C.Banerjee of Ravenshaw College started a small museum with collections of archaeological specimens from various places inside the premises of the college. In 1938 it was converted into the Provincial Museum of Odisha after it got the Special Province status in 1936. Later on, it was shifted to Bhubaneswar, the new Capital in 1948 while collection of antiquities started growing since then. However, on 29<sup>th</sup> December 1957, it got its existing building and laid by Dr. Rajendra Prasad, the then President of Indian Union. (Malla, B.2011, *Museums of Odisha*, Odisha State Museum, Bhubaneswar, p 21 & 22) Over a period of time the collections of art and antiquities started growing enormously and now we have at least 15 galleries in Odisha State Museum namely, Archaeology,

Epigraphy, Numismatics, Art and Craft, Geology, Contemporary Art, Arms & Armoury, Metal, Paintings, Anthropology, Natural History, Manuscript, Postal, Maritime, Paika Rebellion etc.

### **Important Collection of Manuscripts in Odisha State Museum:**

However out of these galleries with their exhibits of different artefacts and antiquities it is the Manuscript Section with one of the richest collections of palm leaf manuscripts of India that needs special discussion due to varieties in content and context of the manuscripts seen in contemporary India. If some scholar desires to know about the manuscripts, then Odisha State Museum is a must visit destination. Now it has around 37,000 Palm-leaf Manuscripts with various themes or subjects. The collection has at least 26 field of studies as follows: Veda, Tantra, Jyotisha, Dharmashastra, Ayurveda, Ganita, Silpasastra, Samgita, Abhidhana, Vyakarana, Sanskrit, Purana, Kavya, Alamkara, Bengali, Devnagari, Odia Purana, Odia Kavya, Odia Prose and historical literature, Paper Manuscripts in Odia, Arabic, Telugu, Darsana, and Illustrated Manuscripts, hence an excellent source materials for the scholars, students and historians to have their research and studies (Malla, B, *Museums of Odisha*, 2011, Odisha State Museum, Bhubaneswar, p58)

Odisha State Museum has distinction of not only largest collection of the palm leaf manuscripts in India but also has very important collections worth of mentioning. The important of them is the works of Sarala Das like *Sapta Kanda*, *Ramayana*, *Chandi Purana*, *Valmiki Ramayana*, *MalasriJanana*, *Mahalakshmi Vrata* besides his magnum opus, called *Mahabharat*, which date back to 15<sup>th</sup> C.A.D. Other Mahabharat that collected in State Museum are that of Krishna Simha, Purusottam Das, Jagannath Das and Kapileswar Nanda. The Bhagavata Purana has

become a house hold name in Odisha as written by Atibadi Jagannath Das also adorns the Manuscript gallery of State Museum with several of its copies that shows the nature of collections to preserve variations seen in the manuscripts due to scribal error or innovations. It is worth-while to mention that the Bhagavata Purana was completed by Atibadi before the arrival and influence of Sri Chaitanya in Puri during the reign of Gajapati Pratap Rudra Dev of Surya dynasty and though it was a translation work from Sanskrit still its relevance was immensely felt as common Odia people were unable to read, write and speak Sanskrit language and hence credit goes to *Atibadi* for this masterly work which proves not only his competence in Sanskrit but his skill of translation in a lucid and simple manner so that it could be comprehensible to masses.

Moreover, this translation work quenched the desire of thirst of people as well as it paved the way for literary movement and concept of *Bhagavata Ghara* developed in Odisha as every pious Odia would like to listen and read Bhagavata Purana prior to his death. Similarly after Balaram Das, the great epic like *Ramayana* has got various authors like Krishna Chandra Rajendra, Krishna Chandra Patnaik and many scholars of then-Odisha. The great works of Upendra Bhanja, Banamali Das, Dinakrushna Das, Sadananda Kavisurya Brahma, Abhimanyu SamantaSimhara and that of many scholars related to various themes of Odia literature have been collected in the Museum since its inception till date and thus earns the credit of being one of the largest palm leaf manuscript collection of India. From point of view of conservation and preservation it is the illustrated palm leaf manuscripts that need special mentioning. The numerous illustrated palm leaves have rich artistic tradition engraved by stylus on palm leaf depicting various themes on Ramayana, Mahabharat, Bhagavata Purana, myths and legends, etc.

Odisha is one of the few states in India having cave murals of pre-historic times in places like Ulupgarh, Bikramkhol of Sambalpur, Manikmada, Ushakothi, of Sundergarh and Gudahandi and Jogimath in Kalahandi, Gupta period painting of Sitabinjhi of Keonjhar districts to that of wall paintings in temple walls like that of Biranchi Narayan Temple, Buguda, Dhakote Jagannath Temple in Ganjam and so many places like Mutts, Royal palaces, etc which are still available in different parts of Odisha. In continuation of the best practices Odia artists have successfully made *patta* paintings and paintings on palm leaf manuscripts. Palm leaf illustrations are executed by iron made stylus; figures being delineated by drawings through outlines in carbon black.

These outlines are then subjected to application of earth and mineral colours like *Hingula, Haritala, Gorachana, Kumkum, Kajjala, Geru*, etc and if required vegetable pigments are also used in these paintings according to the subject matter and theme of the episodes. (Malla, B. *Museums of Odisha*, p61) The preparation of manuscripts is same as that of textual manuscript so also the processes employed to execute the etching and paintings except one thing that for paintings the leaves are stitched vertically and folded like a bellow, though instances of cutting it into fancy shapes like fish, garland, beads are also seen in Odishan illustrated manuscripts to make it more attractive and give importance. The example of most famous illustrated palm leaf manuscripts in display in the gallery are *Amarusataka, Vidagdha Madhava Nataka, Ushavilasa, Gita Govinda, Chitra Kavya Bandhodaya, Chusathi Rati Bandha, KandarpaRatha, Gopalila, Ganjapa*, a playing card, etc to name a few. Another important attraction of illustrated manuscripts is that of its various styles and techniques which is employed so that it will be shaped in the form of

fish, fan, dagger, garlands, beads, etc. One of the examples is *Chitrakavya Bandhodaya* in which verses are arranged in the form of *Ratha, Vimana, Mandapa, Nauka, Vina, Matsya, Padma* etc and it gives added artistic vision and styles of Odia artists. Besides palm leaf there are also other support materials like that of bamboo, ivory, paper manuscripts that are seen in Odisha State Museum, hence a variety to the illustrated manuscript collections.

### **Digitization and Conservation of Manuscripts under National Mission for Manuscripts:**

Digitization is a process that tries to replace the original manuscript with a facsimile so that it would decrease the use of original object to a great extent (Arora, Anurag. 2010). It is to be noted that the old manuscripts or the archival documents are basically organic materials and hence subjected to various factors of deteriorations, hence it should be handled minimally. Due to its large and important collections of palm leaf manuscripts stored as repositories in various parts of India so also abroad, National Mission for Manuscripts (NMM), under Ministry of Culture, Government of India has taken up the digitization and conservation of manuscripts since the year 2003 as its primary objective is to preserve the manuscripts both in digital as well as tangible format. For digital preservation the NMM has taken up several projects at various repositories in India after consultation with experts in this field while observing due procedure and guidelines of digitization. This will help the researchers to a great extent without physically handling the same as being organic object the palm leaves which are dried, brittle and acidic will be lost forever. So instead of handling it physically digitization has opened up a new opportunity for the scholars, researchers, students, academicians to make catalogue, edit, research and publication and make accessible to the

present and successive generations for dissemination of knowledge and wisdom contained in these manuscripts which are hitherto unknown to the public. The guidelines for digitization are meant for any organization planning to digitize the manuscripts, printed books, maps, photographs, slide, negatives, microfilms etc and these guidelines are prescribed to maintain consistency of image quality, scanning methods, and accessibility (*Guidelines for Digitization of Archival Material*, National Mission for Manuscripts, New Delhi, p19). By this methodology NMM has created a accurate production of the original documents on a long lasting medium which would also be helpful to curators, archivists, librarians, and other concerned technical personnel working in this field of study and research. While maintaining due guidelines NMM has taken up to digitize the palm leaf manuscripts of Odisha State Museum to digitally preserve these artefacts as well as the memory of Odisha. In the similar manner another mandate of NMM is to conserve the palm leaf and other manuscripts of State Museum and doing it since the inception this organisation both preventive as well as curative conservation which are required to restore, repair, conserve and preserve for the posterior generations at its own through its recognised Manuscript Conservation Centres (MCC) spread all over India. These MCCs are given both trained human as well as financial resources so that uniformity will be maintained throughout the country as far its scientific conservation and preservation are concerned. They have their own established nuclear conservation experts in New Delhi which provides technical as well as innovative ideas while organising workshops, seminars, symposiums, exhibitions, lecture programmes and also having its own publication unit to propagate the concept of conservation and preservation.

## CONCLUSION:

So as discussed above, it is heartening to note that National Mission for Manuscripts has taken up both digitization and conservation of manuscripts or palm leaf manuscripts of Odisha State Museum that not only represents the memory of the by-gone era, but serves as a dying art that manifests various forms and style prevalent in ancient India or Odisha and represent both regional as well as local history which has not come to the lime light. Even in the expedition for survey, listing, documentation and conservation of palm leaf manuscripts the researcher (myself) has come across a number of palm leaf manuscript custodians or '*Gadighara*' in the rural villages having thousands of manuscripts on their own who became surprised with great honour to know some of the local historical traditions being engraved in their own palm leaf but to of no knowledge to them. One of the example may be cited in this context when we surveyed a '*mutt*' called '*Jerkand Mutt*' in Mahanga, Cuttack District, where-in our research team in their enthusiasm could unravel the period of the establishment of that '*mutt*' while deciphering the palm leaf manuscripts of the concerned mutt; thus it created lot of interest in the minds of the inmates of the mutt to their own collections who were otherwise deaf and dumb, literally speaking, having lackadaisical approach to their own '*pothis*' and since then the inmates of the said '*Jerkand Mutt*' took lot of pain to preserve those manuscripts which were lying unprotected since years as they could get to know the importance of the '*pothis*' stored in their mutt after being informed of their ancestral history being engraved in the manuscripts. Thus, we have palm leaf manuscripts which are repositories of knowledge and wisdom not only in a particular locality but all over the state and nation. And due to its particular style of etching through stylus upon seasoned palm leaf it has carved

a niche for itself as a dying art forms also that need to be protected, promoted, and preserved in Museums or Archives for posterior generations; otherwise these priceless heritage would be lost into oblivion causing a great loss not only to Odisha but also our civilizational history.

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## LIVELIHOOD AND SOCIO-ECONOMIC LIFE OF THE PATIENTS AFFECTED WITH TUBERCULOSIS (TB)

Mamata Jena<sup>1</sup>

### Abstract:

Tuberculosis (TB) affects the most productive age group and the resultant economic cost for society is high. Even though diagnostic and treatment services under TB control are offered free of cost, TB patients do incur out of pocket expenditure. In this study interview of TB patients enrolled under TB control programme in Orissa was conducted and assessed the socioeconomic status of patients and economic impact on patients, families and the impact of TB on livelihood of patients. In addition patient's perceptions of physical, mental, social well being during treatment were also elicited. The study revealed that majority of the patients registered under RNTCP were poor and almost 70% of TB patients are aged between the ages of 15 and 54 years of age. While two thirds of the cases are male, TB takes a disproportionately larger toll among young females, with more than 50% of female cases occurring before 30 years of age.

The present study also revealed that on an average 3 to 4 months of work time is lost as result of TB, resulting in an average lost potential earning of 20-30% of the annual household income. This leads to increased debt burden, particularly for the poor and marginalized sections of the population. The vast majority of the economic burden of TB in India is caused by the loss of life rather than by morbidity. This is due to the fact that TB mortality incurs a greater loss in the number of life-years per event than does TB morbidity- despite the fact that there are many more prevalent cases than deaths. Patients' and provider costs and the impact on patients including families on account of TB were enormous. About half of TB patients, despite completing treatment successfully had persistent respiratory ill health resulting in frequent health facilities. This information is vital for programme planners indicating that the existing control programs have been ineffective. To achieve success in control programs, public health education is necessary to make the people aware about preventive aspects of the disease and it also facilitates patients to improve their economic status.

**Keywords:** Tuberculosis, Prevalence of TB, economic impact, social impact, RNTCP, India.

### Introduction

The increased focus on addressing the social determinants of TB has been stimulated from both within and beyond the TB sector. A key factor has simply been the increasing number of TB cases and their inequitable distribution throughout the world. Not only did 2010 see more cases of TB than ever

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before in human history, but these cases continue to cluster among disadvantaged groups such as the poor, the hungry, and ethnic minorities. DOTS particularly emphasize early case detection and successful treatment. DOTS have significantly reduced TB morbidity and mortality and are one of the most cost-effective public health interventions ever implemented. The Commission for Social Development of Health (CSDH) defines structural determinants of health as “those conditions that generate or reinforce social stratification in society”. Social stratification in turn gives rise to an unequal distribution of the social determinants of health, including material living conditions and psychosocial circumstances as well as behavioural and biological risk factors. These conditions give rise to unequal distributions of key social determinants of TB, including food insecurity and malnutrition, poor housing and environmental conditions, and financial, geographic, and cultural barriers to health care access. In turn, the population distribution of TB reflects the distribution of these social determinants, which influence the 4 stages of TB pathogenesis: exposure to infection, progression to disease, late or inappropriate diagnosis and treatment, and poor treatment adherence and success. These social determinants are among the key determinants for T.B. Individuals with TB symptoms such as a persistent cough often face significant social and economic barriers that delay their contact with health systems in which an appropriate diagnosis might be made, including difficulties in transport to health facilities etc.

In the present study an attempt has been made to highlight social and economic status of patients afflicted with TB. The patients are mostly selected from different caste categories of rural Orissa. Although the caste structure of India as well as Orissa has been categorized as General Castes, OBCs,

SCs and STs but in actuality the Orissa caste hierarchy is like Brahmin and Karan castes belong to the higher caste category, Khandayat/ Kshatriya caste out of which few sub-castes are included in higher caste whereas the others are OBCs /SEBCs and the castes in service of higher castes or the Dalits are taken as the SCs. The tribals are under the category of STs. Still there are few castes like Barbers who in spite of belonging to service providing castes are not taken as SCs but as OBCs. Similarly the caste like ‘Chasa’ or farmer/ agriculturalist caste belong to OBCs but not considered as Khandayat/ Kshatriya. Above all the individual identities of the patients with relation to their community provide a better platform to address the disease from a holistic point of view. So taking into account all of the above social configurations, it is necessary to explain caste community-disease pattern as per the comparison presented in the figure (1).

The caste wise distribution of the studied 276 tuberculosis patients reveals that the people belonging to Brahmin and Karan castes have comparatively lower prevalence rate (i.e. 6% Brahmin and 3% Karan) of tuberculosis infection than other castes. The prevalence rate of tuberculosis infection in Khandayat community is higher than other caste groups. Similarly the rate of infection in Schedule Castes and OBC/SEBC were also very high, each castes with 14% and 34% of patients respectively. The caste wise distribution of the studied 357 control groups included 34% of Khandayat caste, 17% of Brahmin caste, 9% of Karan caste, 11% of OBC/SEBCs and 29% of Schedule castes. The annual risk of tuberculosis infection is one of the most reliable indicators of the tuberculosis situation in a community. As per the report of DNTB the rate of transmission of infection, which in turn depends on the load of infectious cases

in the community as well as the efficiency of disease control programmes, the ARTI was estimated at 1.7-1.8%, which indicates a high prevalence of infectious cases in the community. It represents a high rate of transmission of infection wherein as many as 1700-1800 people out of every 100,000 population acquire new infection every year, accumulating to the total pool of 'the infected' from which future cases continues to emerge.

### Distribution of TB patients according to occupation

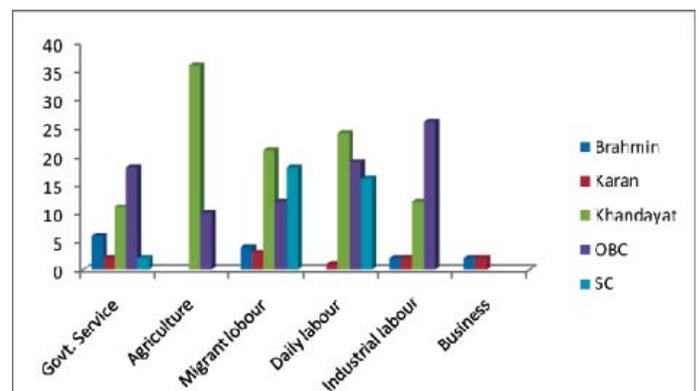
As the present study involves the genetic susceptibility as one of its dimensions, the caste base of the patients has been taken into consideration to examine that if there is any caste-

tubercular infection relation. It is more explanatory that genetic susceptibility has a lot in gene-environmental interaction which leads to further disease expression. Similarly the socio-economic status and conditions as well as the occupation patterns involving working environment need to be taken into consideration for the better understanding on different dimensions of the disease as well as its prevention. Occupation is considered as a vital non-genetic factor, which play an important role towards disease susceptibility to tuberculosis. The mentioned and studied castes in this section categorized as general caste (Brahmin, Karan, Khandayat), OBCs, and SCs taken as per caste system of Indian caste structure.

**Table 1 : Distribution of Caste-occupation among TB patients of studied population.**

Occupational Category	Caste groups					
	Brahmin	Karan	Khandayat	OBC	SC	Total
Govt. Service	6	2	11	18	2	61
Agriculture			36	10		36
Migrant labour	4	3	21	12	18	46
Daily labour		1	24	19	16	60
Industrial labour	2	2	12	26		42
Business	2	2				4
Total	14	10	104	85	36	249

From the table it can clearly be understood that the Scheduled Castes and the Other Backward Classes combined constitute the maximum of the infected. The incidences of tubercular infection in OBCs and SCs combined, is highest with 121 of the total cases being followed by general castes such as Brahmin with 14, Karan 10 and Khandayat 104. Here, it is noteworthy that the maximum admixture will be found in between OBCs and SCs which contains many types of caste groups.



**Fig 1: Histogram showing caste-occupation distribution among TB patients of studied population.**

At the same time, according to the observation from Table no (1), while occupation is considered, daily wage labourers have been found to be the most vulnerable section with 60 of the total studied cases followed by with 46 migrant labourers and the both combined counts 106 of the total infected cases. While the caste-occupation set is examined, it is found that the infected people in the daily wage and migrant labourer categories from OBCs caste group are highest with 85 numbers of the total studied cases followed by SC group with 36 numbers from the same occupation categories and it is 121 of the total studied incidences. Both the OBCs and SCs groups from the daily wage and migrant labourer categories constitute the highest 65 numbers of the total studied patients. Minimum number of patients has been found in the business categories of occupations with 4 numbers from the total patients. Again 36 earn their livelihood from agriculture and 42 are industrial labourer, which is the only livelihood category where migration has taken place leading to tubercular infection.

The lack of proper nutrition out of poverty leading to low immunity has come as the prime cause. But in some cases the patients belonging to non-poor/well-to-do category have shown a strong disease history of TB in family, which implies that lower socioeconomic status may not always pave way for tubercular infection.

### **Livelihood, Infection and Treatment**

The outcomes of the present study show that disease infection completely breaks down the economic and earning capacity of the poor patients since the patients are compelled to invest most part of their income on treatment. With respect to reported and admitted migrant labourers, it was observed that when a migrant worker gets infected of T.B. at his work place, he returns to home for

treatment. But being the earning member of the family his stay at house put the family into serious financial scarcity. So before being fully cured he returns to his work place again after a short relief. This leads to the discontinuity of the treatment. Such irrational drug use as well as non-compliance of patients with their regimens is the major contributing factors of emergence and re-emergence of tuberculosis, which in further leads to drug resistance forms of TB like MDR TB and so on. In addition, poor ventilation and overcrowding in homes, workplaces, and communities increased the likelihood of uninfected individuals being exposed to TB infection as stated by the relatives of the patients.

### **Social and Economic Implications of TB**

Tuberculosis as a disease, when infects, destroys the physical health as well as the social and economic status of a person. This disease in remote areas is still identified as the result of the previous sin. So this situation leads the patient to suffer from many social stigmas and some times of being out caste. The patient is neglected at societal as well as at family level. Many a times the old aged parents are ousted by their children, infected wife is deserted or divorced by husband. The suffering children face difficulty in schooling. Even during the visit to health centre for DOTS course they maintain secrecy.

Besides the disease burden, TB also causes an enormous socio-economic burden to India. TB primarily affects people in their most productive years of life with important socio-economic consequences for the household and the disease is even more common among the poorest and marginalized sections of the community. Our study reveals that almost 70% of TB patients are aged between the ages of 15 and 54 years of age. While two thirds of the cases are male, TB takes a

disproportionately larger toll among young females, with more than 50% of female cases occurring before 30 years of age. The present study suggests that on an average 3 to 4 months of work time is lost as result of TB, resulting in an average lost potential earning of 20-30% of the annual household income. This leads to increased debt burden, particularly for the poor and marginalized sections of the population. The vast majority of the economic burden of TB in India is caused by the loss of life rather than by morbidity. This is due to the fact that TB mortality incurs a greater loss in the number of life-years per event than does TB morbidity- despite the fact that there are many more prevalent cases than deaths. The social stigma also remained unchanged even after completing treatment in both men and women. These findings suggest that there is a need to allay the needless fears of patients by providing appropriate counseling to patients and health education to community. Increased awareness about TB will remove stigma in the community.

### **Knowledge and perception about the disease and its treatment**

In the present study, it has been found that there is conspicuous lack of knowledge and perception about the cause and treatment of tuberculosis especially among the poor, illiterate and backward caste patients. Out of total numbers of studied cases, nearly 68% of total cases, the infected patients have been found to have relied on treatment other than prescribed treatment of T.B. The precise reason is that the afflicted patients did not have basic knowledge about the symptoms leading to T.B. Ignorance couple with reliance on local, traditional, herbal and even magico-religious way of treatment of disease led to paying heavy price by the people. The other important fact is that patients, in many cases have continued this practice

for three to five months. The patients in most cases have been found to have started the medication first with local herbal and magico-religious way followed by homeopathic and local quakes treatments considering the ailment as cough and fever. Even in some cases, local doctors without recommending for radiological and sputum test have treated patients as being afflicted with viral fever. This lapse at the onset of the disease makes the condition of the patient more critical and puts him to a further long period of treatment to be cured. Only those people who have previous instances of T.B. in their family or who were educated have directly started with T.B. treatment. The incidence of such people in present study was found to be of only 28% of the total cases. People working as wage labourers in different industries and urban areas when became critical due to TB infection on account of poor socio-economic condition, insanitary and inhospitable living condition return back to their respective villages carrying of the disease with them and found spreading the disease among family members and even among friends and relatives.

As is observed from the study, the tubercular patients who were in the habit of consuming heavy liquor, ganja, bidi etc. were compelled to abandon such habits during the course of treatment. As soon as the severity was found receding, they again started consuming alcohol and other intoxicants, which resulted in re-occurrence of the disease in severe form. Individuals with T.B symptoms such as persistent cough very often faced significant social and economic barriers that delayed their contact with health institutions in which an appropriate diagnosis could have been made including difficulties in transporting to hospital, fear of stigmatization if they seek a TB diagnosis and lack of social support to seek care when they fall sick.

## Gender Perspective

The role of gender assumes great significance in decision making process with respect to providing health care facility. The role of women in decision making process especially in the domain of selecting appropriate health choice in India is marginal. In most of the cases, husbands used to impose their decision on women. In the present study, it has been observed that the decision for health checks up and medication in case of most of the reported female patients was taken by their respective husbands or by the other family members, sadly not in the beginning stage of tubercular infection. Some of women patients were not allowed to stay with their husbands and children and even three women patients were forcibly deserted their in-law families on the pretext that the disease is incurable and the woman is an all-time burden on family.

## Social, economic, cultural and environmental health/ hygienic factors facilitating susceptibility to T.B

Health is a function, not only of medical care, but also of the overall integrated development of a society at all fronts– cultural, economic, educational, social and political. The health status of a society is intimately related to its value system, philosophical and cultural traditions, and the social, economic and political organization. The socio-economic, socio-cultural and ecological settings have mainly determined the health and nutrition problems of Indian population. Socio-cultural and environmental dimension of the present study revealed that widespread poverty, insanitary conditions, ignorance, lack of personal hygiene and health education along with the increased genetic susceptibility are the major predisposing factors responsible for tubercular infection. Tuberculosis

contributes a number of physical, social, psychological and economic problems to the patient as well as to the family members. The poor people are at higher risk not only for disease but also for not being able to access high-quality TB care, as a result of financial and other access barriers (Pantoja et. al, 2009).The women patients become weak and feeble and their children face malnutrition which leads to a devastated family life (Rajeswari et. al, 1999).The slum dwellers and other tuberculosis prone areas should be kept under regular surveillance. To reduce the incidence of tuberculosis the RNTCP strategy should be strictly followed by the health care professionals. Lack of health education and community awareness towards disease progression also another cause of disease transmission. The review of plans, programs, policies and implementation should be done at regular interval with immediate change or enhancement as per the need. Preferential involvement of Public-Private partnership is also needed to eradicate Tuberculosis from the society. Suggestive methods employed to characterize TB stigma; instruments to measure TB and study the effects of TB stigma on diagnosis and treatment; and interventions to reduce TB stigma.

## Conclusion

Each of the above disease aspects leaves a deep influence on health, which, in turn, influences all other developmental aspect and prospects. Good health and good society go together. This is possible only when supportive services such as nutrition and improvements in the environmental conditions and education reach to a higher level. The overall scenario for Orissa state suggests a high rate of transmission of tuberculosis infection and points to the need to intensify concerted and sustained tuberculosis control efforts.

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## STRUCTURAL AND FUNCTIONAL CONTEXTUALIZATION OF 'VIOLIN' AND 'KENDARA' IN HUMAN SOCIETY: A CULTURAL ANALYSIS

Laxmi Prasad Pattanayak<sup>1</sup> and Jagannath Dash<sup>2</sup>

### Abstract:

Any musical instrument in human society primarily forms an essential part of its society's material culture. "Violin" in global context and "Kendara" in local context are no exception to it. Whatever their origin may be they are products of culture and do contribute to the production of melodious music in socio-religious contexts. "Kendara" is purely a string instrument of both the tribes and castes of Odisha. Similarly, "Violin" is another string instrument used in almost all countries in the world. Though "Violin" is a western instrument, it has been compared with the local string instrument "Kendara" both structurally and functionally in this paper through the delineation of aspects like man and musical instruments, historical background of "Violin" and "Kendara" and finally their structural and functional contextualisation.

**Key Words:** *Musical Instruments, Violin, Kendara, Material culture*

### Introduction

The study of musical instrument is a very important aspect of material culture in all human societies. The invention of musical instruments though not known exactly, it is very well said that man in the beginning must have developed music out of natural sound in the surrounding. It is also imagined that after the hard toil of the day, man must be relaxing through the making of various musical sounds either with dance or without it. Whatever the origin it may be, from the historical time onwards on the basis of available evidences found through painting, sculpture etc. basically on the temple walls, we come across the use of musical instruments in the ancient society. In this sense music or musical instruments are very intimately connected with the important events of human life. The Encyclopaedia of music says that "The history

of music is a part of the history of the humanity. Ethnographic studies of ritual among primitive societies have provided plenty of evidence to show that music-making is a basic and universal instinct." (2011:10).

### Man and Musical Instruments:

Henry Wadsworth Longfellow (1807-1882) has written that "Music is the universal language of mankind" (ibid, p.10). In writing Robert Burton (1577-1640) has said that "music is a tonic to the saddened soul" (ibid. p.12). It is also said that the making of music is not restricted to human beings alone. Many animals and birds also make natural sound in a musical manner for communication. In general, it may be said that music is a succession of sound waves. When such sound waves are created

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with certain regularity systematically; it may give rise to some beautiful notes of sound or music.

As regards the musical instruments, it is observed that all kinds of everyday used objects can be used as musical instruments. In the beginning of human civilization, though musical instruments were started with everyday objects, subsequently few gifted people must have made specialised musical instruments to create certain specific musical sounds. Thus, the story of musical instrument has always been a part of the history of human society and culture. The musical instruments are specifically made for a rhythmic articulation of sound by means of an instrument. Since the dawn of human civilization we have been noticing the use of scrappers (percussion instrument), shakers or rattles, conch -shell, musical bows etc. as some of the earliest musical instruments. The Encyclopaedia of music notes that, "obviously, we do not know the world's first tunes. The development of music predates the invention of writing by thousands of years, and there is no way of knowing what sounds the Neanderthals and early Homo sapiens enjoyed. The first instrument was certainly the human voice and ritual chanting is likely to have been accompanied by rhythmic clapping or stamping. This in turn would have led to the striking of an object, such as a convenient long log or stone, which could produce a different and probably louder sound (2011:14-15).

Starting from the early musical instruments termed as idiophones which tell the use of modern musical instruments. Several developments have been made in the making of various musical instruments which are classified as – (i) *Ghana Vadya*: solid musical instrument (idiophone), (ii) *Avanaddha Vadya*: covered musical instrument (membranophone), (iii) *Susira Vadya*: hollow musical instrument (aerophone) and (iv) *Tata*

*Vadya*: stringed musical instrument(chordophone) specifically in Indian context. Out of the four main Indian classifications of musical instruments which are being used both by tribal and non-tribal people; we are specially discussing here the *Tata Vadya* which is known as stringed instrument in Indian context. *Tata Vadya* is further divided into *Tata and Betata*, which are mostly played by a metallic pick called a *mizraab* and bow respectively. Out of the two, we are once again specialising in the study of stringed instrument played by the help of bows. We are taking Violin as the most well-known *Betata* instruments used at the internationally level and comparing it with the Indian *Betata* instrument used in especially Odisha, known as *Kendara*. Both the instruments are bowed stringed instruments but have different cultural contexts.

In this paper, we have attempted a cultural analysis of both the stringed instruments in order to show their differences and similarities. Broadly speaking, Violin has its origin and development in the Christian world, though used now in all religions. But the *Kendara* on the other hand, is indigenously developed in India especially in Odisha specifically in the context of *Nath Yogi* Cult. Musical instruments in India, in general, refer to a unique tradition in contrast to that of the origin of western world. Again in India, music and musical instruments have several dimensions in which the important ones are tribal and non-tribal musical systems and within the non-tribal musical system, we broadly find classical and folk varieties. The tribal musical instruments on one hand are mostly developed for the sake of entertainment being very much associated with dance, song, lifecycle rituals and other festivals. In non-tribal musical instruments categories, we come across some developed types of instruments which follow through certain notations and documented rhythms. In nut shell, the non-tribal musical

instruments usually follow an elaborate system of notation and performance. In general, we can say that non-tribal musical instruments follow both a traditional system as well as a modernized system of music imitated from the western types of music.

In the present paper, we have tried to compare the stringed instruments; one is from the traditional folk music at the local level and the other one from the western music system at the international level, both structurally and functionally as already mentioned earlier. We are comparing the local string instrument *Kendara* mostly used by *Nath Yogis* as a part of their socio-religious tradition in which a system of singing and practice of begging alms mostly in kind are involved. The other instrument for comparison is the violin belonging to western tradition. The purpose of comparison is to assess the similarities and differences in both the

instruments. For this reason, we have taken up two-fold dimensions, from the viewpoints of their structure and functions.

### Structural Dimensions:

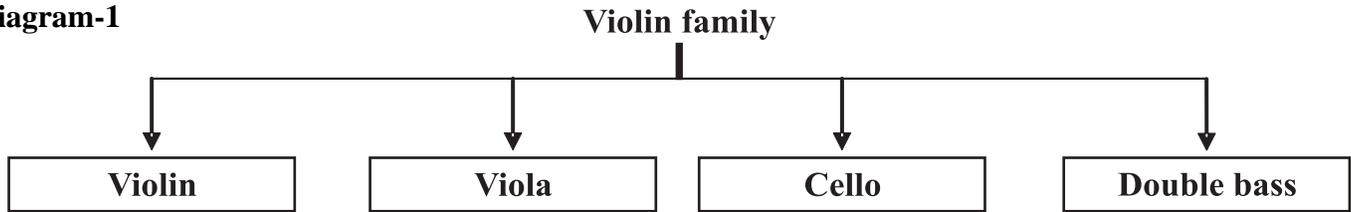
Structurally both the musical instruments follow the basic ground structure made up of bamboo/wood, hide of monitor lizard and string. The traditional instrument here is *kendara* which is used for a similar propose like that of the violin. *Kendara* is specifically a local stringed instrument of Odisha which is mostly used by the non-tribals, especially by the *Natha Yogis*. A variety of string instruments are usually used by the tribals of Odisha like the Saora, the Santal, the Kol and few others. Such tribal stringed instruments are though similar in structure, they seem to be more archaic in both structure and function. The structure of a *kendara* is presented below in the following tabular form.

Table-1 **Structure of a Kendara**

SL. No.	Name of the body parts in Violin	Similar parts In local Kendara	Materials used in Kendara	Size in <i>kendara</i> (approx.)
1	Front Belly	Godhi Chamada(hide)	Leather	6 Inch
2	Back Belly	Nadia Sadheyi	Coconut Shell	5 Inch
3	Finger board	Baunsha Nala	Bamboo Tube (Balangi Bamboo)	20 Inch
4	Peg	Muthiya or Kanamoda or Modani	wood	3.1/2 Inch
5	Peg Box	-	-	-
6	Bridge	Ghudiya	wood	1.1/2 Inch
7	String	Kendara Danda	Horse Hair, Tree Skin, Metal	-
8	Tail piece	Pichha Danda		
9	Nut	Chabi Khunti		
10	End Pin	Chhada	Iron	8 Inch
11	Bridge	Anta pati	Iron	-
12	Bow	Hata	Wood/Bamboo	1 hand (as per age group)

Culturally Violin and *Kendara* though belong to western instrument and it has so many members in its same stringed instrument category; at the socio-cultural level they remain different from each other. Violin is a family which may be called as violin, viola, cello and double bass.

**Diagram-1**



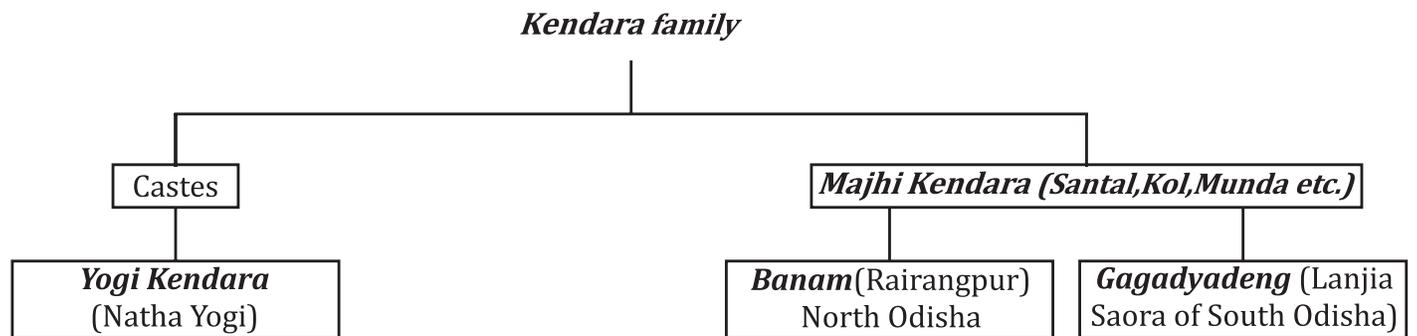
**Table-2: Structure of a Violin**

S.L No.	Name of the body parts in Violin	Materials used in Violin	Size in Violin (approx.)
1	Neck	Maple Wood	Length (Neck to wrist):-4/4 violin 54 cm, 3/4 violin 52 cm, 1/2 violin 48.5 cm, and 1/4 violin 44 cm.
2	Pegs	Ebony wood	-
3	Scroll	Maple wood	-
4	Bridge	Maple wood	3.1cm at G string side and 2.6 cm at E string side (www.violinist.com)
5	Tail piece	Rose wood or Ebony wood	4/4 violin length 112 mm, 3/4 violin length 105 mm, 1/2 violin 95 mm, and 1/4 violin 89 mm (www.woodsoundstudio.com )
6	Chin rest	Ebony Wood	-
7	Strings	Steel or synthetic material	4/4 violin string length 13 inches,3/4 violin string length 12.1/4 inches,1/2 violin string length 11.1/4 inches, and 1/4 violin string length 10.1/4 inches. (www.fretlessfingerguides.com)
8	Ribs	Maple wood	1mm thick (www.doranviolins.com )
9	Finger Board	Ebony wood	4/4 size violin 270mm long, 3/4 violin size 250 mm long,1/2 violin size 230 mm long ,1/4 violin size 210 mm long. (www.woodsoundstudio.com )
10	Sound Post	wood	Sound post Diameter 4/4 violin size 6.0, 3/2 violin size 6.0, 1/2 violin size 5.0, 1/4 violin size 5.0
11	Back Belly/ Front Belly	Maple wood	4/4 violin belly length 353 mm and width 210 mm,3/4 violin belly length 332 mm and width 197 mm,1/2 violin belly length 310 mm and width 186,1/4 violin belly length 288 mm and width171 mm(www.google.com)
12	Bow	Pernambuco wood, Ebony wood (www.madehow.com)	4/4 violin bow size 75 cm,3/4 violin bow size 68.6 cm,1/2violin bow size 62.2 cm, and 1/4 violin bow size 57.15 cm (www.fiddleheads.ca)

Keeping in view the western music octave, they have been set to produce a similar music in western tune and rhythm as the basic principle is similar to other non-western instruments. Violin is also used in almost all non-western music systems but in case of *kendara* the basic principle of tuning and rhythm is to some extent similar due to some local differences in its structure and function. In both violin and *kendara*, the structural factor is very important mainly because the structure always directly contribute to their musical functions. In nutshell, structurally and functionally violin takes care of all the notes in octave, whereas *kendara* with its limited local structure, is only taking care of middle octave (In violin all the three types like higher octave, middle octave and lower octave are comfortably possible). The difference between the two stringed instruments is visible especially through the cultural factors of need and necessity.

Already we have identified the major body parts in a tabular form. It shows that *Kendara* is made out of locally available raw materials like wood, bamboo or coconut shell, the yarn of palm tree (at present people also use metal wire available in the market), the hide of female lizard, horse hair and steel. In Odisha, broadly speaking, *Kendara* is used both by the tribals and non-tribals in different names. In the caste society of Odisha, *Kendara* is popularly used by Nath *Yogis*. It is structurally and functionally same in all parts of Odisha. Among the tribals the *Kendara* is popularly known as *Majhi Kendara* mostly used by Santal, Kol, Munda in Northern Odisha which has a specific name *Banam* in Mayurbhanj district (Rairangpur ). In South Odisha also several tribes use it, out of which the stringed instrument of Lanjia Saora is very prominent. The Lanjia Saora calls it *Gagadyadeng*.

### Diagram-2



In society today, the traditional violin called Acoustic violin, has been followed by the modern Electric violin which is simply provided with an electric output. Both in traditional Acoustic Violin and Electric violin usually four strings are used though sometimes in Acoustic Violin a fifth string is also used for the sake of convenience to produce the lower Octave. In some cases, also the fifth additional fifth string helps to produce higher Octave notes. As regards the standardization of violin and *Kendara* in ordinary observation, though the violin and

*Kendara* look to follow a similar structure and size, actually it is not so. Keeping in view the body size of the players both the stringed instruments follow the instruments of different sizes. In violin, we usually find four sizes of instruments namely,

(1) 4/4 size, (2) 3/4 size, (3) 1/2 size, (4) 1/4 size.

Usually for the adult (11years above) 4/4 size is required which is the largest of the four types. In the next, for the age group (9 to 11years) 3/4 size is required, similarly for the age group (6 to 10years)

½ size is required and lastly for the children in between age (4 to 7years), the 1/4 size violin is used. This may be clearly understood from the following table.

**Table-3: Size of the Violin according to Age-group**

Violin Size	Length (Neck to Wrist)	Age Group
1/16	35.5 cm or 14 inch	3 to 5 years old
1/10	38 cm, 15 inch	3 to 5 years old
1/8	42 cm, 16 inch	3 to 5 years old
1/4	47 cm, 18.5 inch	5 to 7 years old
1/2	51 cm, 20 inches	7 to 9 years old
3/4	56 cm, 22 inch	9 to 11 years old
4/4	58.5 cm, 23 inch	11 years old +

From Source: [www.musicalinstrumenthire.com](http://www.musicalinstrumenthire.com)

In case of *Kendara*, such a universal standardization is not followed at all. Here comes the culture as well as the personal body size of the player. The instrument as per the western standard which is mostly taken according to the age group is not accepted by the local Odia people. To them, within the same age group, one may be tall, short or dwarf. Therefore, the instrument according to the age group may not be right. To both tall and short under the same age group, the discrepancy has been solved by the local *Kendara* players. They have very thought- fully set the principle as per the body size or requirement of the concerned player. Usually what they do is that for the player according to the length of the hand with fingers open (elbow to little finger which known as *Kani*) the length is calculated. Sometimes they also measure the length by the finger which is 20 fingers long. On the whole, the length is not including the *Belly*. It only takes the measurement of the shafts of the *Kendara*.

## Historical Background of Violin and Kendara

### Violin:

In Western music, it is always said that violin is the lead instrument in the Orchestra, may be modern or traditional. Four strings in the violin give the instrument a range over four Octaves (in India mainly three Octaves are used) because in its emotional appeal and extra-ordinary musical versatility, it has become a key instrument in the western Orchestra. As regard the origin of violin no one knows who invented it. However, the first famous violin maker was *Andre Amati* (1525-1611) who was born in Cremona and became the founder of Cremonese school of violin making. Thus, the violin was invented in Italy in 16<sup>th</sup> century, but did not continue for long. By the end of 18<sup>th</sup> century, France became the centre of excellence in violin making and one of the greatest French violin makers was *Nicolas Lupot* (1788-1824). There after another French Violin maker was *Francois Tourte* (1747-1835) who revolutionized and standardized the design of the bow (The Encyclopedia of Music 2011:105). In a very popular way famous musicians have expressed their feelings about the differences in the violin. *Charles-Auguste De Beriot* (1802-70) has said that, “The true mission of the violin is to imitate the accents of the human voice, a noble mission that has earned for the violin the glory of being called the king of instruments” (ibid.p.102). Regarding Viola, *Albert Lavignat* (1846-1916) has stated that, “The Viola is a philosopher, sad and helpful; always ready to come to the aid of others, but reluctant to call attention to himself” (ibid.p.108). Similarly, for the Cello, *Pablo Casals* (1876-1973) has said that, “The Cello is like a beautiful woman who has not grown older but younger with time, more slender, more subtle and more graceful” (ibid.p.110). For the Double bass,

*Gioseffo Zarlino* (1517-90) has mentioned that, “A composition without a bass would be full of confusion and dissonance” (ibid.p.112).

The above mentioned statements of famous musicians indicate the importance of violin. Not much is needed to express anything better about them. As regard violin, it is the smallest member of the violin family and produces the highest pitches. On the other hand, Viola is larger in size and plays deeper notes than the violin. The next member Cello is larger than Viola which plays low sounds and the last member Double Bass is the largest of the four which plays the lowest notes. Very interestingly all the four members are very much interlinking in their string arrangement and note production.

The last pitch of Double Bass became the base pitch of Cello and similarly the end pitch of Cello became the base pitch of Viola. The end pitch of Viola similarly becomes the first or base pitch of Violin. Perhaps because of such an interesting link, all the four stringed instruments are closely related to each other and make a happy family. The *Kendara* on other the hand is a local folk instrument having no connection to any Orchestra or musical celebration. They are mostly used by “*Yogis*” who play it while begging. In Odisha, such “*Yogis*” belong to the *Natha* great tradition and popularly called as *Natha Yogis*. In Odisha among the caste people only the *Natha Yogis* used *Kendara*. Whereas among the tribes, several communities in North Odisha, South Odisha, Central and Western Odisha play it as a part of their musical tradition. The structural description has already been described earlier in the paper. As we are concentrating only on the *Kendara* used by the *Natha Yogis* or caste people, we are not highlighting the tribal string Instruments similar to *Kendara*. It is said that *Kendara* came to Odia folk culture, mostly with *Natha* cult and taking clue from this, it is said that “This instrument goes to popularity during 12<sup>th</sup>

century when Sanskrit was made the official language of the-then-Utkal Kingdom” (Wikipedia). Unlike violin which is very much connected to Orchestra, *Kendara* is simply connected to a folk tradition confined to a religious cult. It is always played by the individual as an accompanying instrument while begging and goes with the singing of religious narratives connected to *Natha* cult. Such songs are popularly called as *Kendara Gita*. In Odisha, in some - specific locality like Narsinghpur area of Cuttack district, people called it “*Kandara*” (crying) mainly because it produces an emotional note like that of human crying. Therefore, some local people believe that because of its crying sounds (*Kanda*), the term *Kendara* must have been originated/derived. Some people also said that in the district of Kendrapara where *Natha Yogis* were found in good numbers, there is some possible connection of the term is linked to this place name. In this mythological narration, the myth of *Kendara swara* is also linked to the place Kendrapara and the musical instrument *Kendara*. Usually in case of *Kendara*, no Orchestra is connected. Mostly the *Natha Yogis* play it while singing. On this basis, though it does not mention any family group like that of Violin, on the basis of the similarity, it is only connected to tribal counterparts which look very much like *Kendara* but followed strictly a tribal cultural tradition. There is no more connectivity in between tribal and caste *Kendara*. From functional point of view, as found among the members of the violin family, in general observation, it is found that the so-called *Kendara* among Santal tribe or in North Odisha, mainly the instrument is made up of wood and the box is also being made similarly and fixed to a hide but the *Yogi Kendaras* are made out of bamboo and the box is out of coconut cell. *Yogi Kendara* is smaller in size than the *Santal Kendaras* but surprisingly the string instruments of *Langia Saora* tribe maintain more

similarity with the *Natha Yogi Kendara* in its physical look and structure. But in case of the bow structure, the several factors are observed. Where as in *Yogi Kendara* the main body is of bamboo and the bow is made up of wood, the case of tribal *Kendara* or specifically Santal *Kendara* the body is of wood but the bow is made out of bamboo split.

### The Functional Contextualization

It is always found that structure and function of a particular instrument follow each other intricately. Therefore, the structure of a particular instrument is specifically made to justify a specific function. In this regard, the function of violin and *Kendara* can be well perceived from their basic structure. As already mentioned, violin is specifically a western instrument which according to different age group is divided into seven to eight types. With different sizes, different types of notes are connected to them. The major thing is for the adult category (whatever the body size may be, tall or short) the adult or full size Violin is mainly used and such incoherence is not found in the structure of *Kendara*. All the adults are not categorised under one size of the *Kendara*. As already highlighted earlier for each person, the *Kendara* is made specifically according to the body size of the person who will play that. So the size of the *Kendarais* quite flexible or changeable according to the hand size of the player.

Coming directly to the function, the Western violin when used in India, its function is also culturally modified. In Indian way, violin is mostly played with the strategic changes of fingertip, where as in western tradition the music is mostly produced by strategic playing of the bow. Coming to the playing of violin in India, it is functionally found that according to classical music, the strategic ornamentation is usually made. Culturally several

ornaments like *Kana Swara*, *Meend*, *Gamak*, *Khataka*, *Andolan* etc. are created for the recruitment of the classical tune. All such ornaments very much add grace and melody to Indian classical music. It is always said that the Indian classical songs are usually sung with *Kana-swara* (A small quantity of note or grace note). It is borrowed from an adjacent note in a musical phrase because of its mellifluousness and expressiveness. *Kana swara* is highly essential in Indian classical music. Therefore, it is always said that without the appropriate *Kana swara*, the melody will no longer sound like Indian classical music. Because of this, it is believed that if one has to pick up a single ornament for the purpose of Indian classical music, it would be none but the *Kana swara*. Another ornament of Indian violin is *Meend* which is a smooth glide from one note to another functionally. During the slower part of a melody, *Kana-swara* also becomes *Meend*. The next ornament is *Gamak*, which is a word that is used to describe the movement from one note to another and involves repeating the pitch of a note. *Gamak* involves the variation of pitch of a note, using heavy forceful oscillations between adjacent and distant notes. The next ornament is *Khatka* which involves the performance of a single note as a cluster of notes. *Khatkas* are very common but their application is far from random. Thus, different notes in different Ragas lend themselves, but not to all the used *Khatkas* all the time. On the other hand, another ornament '*Andolona*' which is a slow isolation is also applied to a note.

Here we find with the western string instrument violin, cultural manipulations are made in different parts of India to make the violin more applicable to Indian classical music. In western culture, the function of violin is orchestra oriented, where as in Indian culture, violin is linked mostly to melody.

Coming to the next cultural level string instrument *Kendara*, we reach a folk cultural level where it is maintained only with a folk tradition of singing and dancing. Thus, *Kendara* has a very limited application. It has never been universalized. As a result of this its existence is very much dependent, on the continuity of the cultural tradition followed by the *Nath yogis* which if transformed or died, then *Kendara* tradition will be nowhere and it may vanish within no time. Though; among the tribes of Odisha, the *Kendara* tradition will survive as long as the tribes will continue to maintain their musical traditions. On the other hand, it is also said that due to modernization if the tribal culture will be acculturated or drastically transformed, their traditional music along with stringed instruments like *Kendara* will be also in trouble.

So far as the specific melody production is concerned, the Violin has a very wider application from the highest note to lowest note, but in *Kendara*, the sound production is very much restricted to only the medium note. *Kendara* has been designed in a cultural manner only to fit one or more *Kendara geeta* or song with which it manages very well. As a result, it is only confined to the production of *Karunya bhava* and *rasa*. On the other hand, violin feeds itself to a large variety of classical notes at the level of Indian great tradition. It has no limit and it has been universalized for almost all cultures and the traditions but on the other hand, because of adherence to a specific culture tradition at the level of local/little tradition, *Kendara* has been a specific stringed Instrument for a specific cultural use whose continuity goes hand in hand with the continuity of the concerned cultural tradition.

## Conclusion

After examining the structural and functional contextualization of a western stringed instrument

violin and a local handmade stringed instrument of Odisha *Kendara* in human society, the overall comparison gives rise to a cultural analysis of both the instruments. Structurally and functionally violin has maintained a very wider range where every type of Indian and western music can be fitted into. Moreover, the rhythm and tunes of violin have been very much flexible to be used in Indian classical music too. In this sense violin in India is no more a western musical instrument from the viewpoint of its functional application. On the other hand, structurally and functionally the local *Odia* stringed instrument *Kendara* is an individually handmade instrument with a simple design and limited application. With an emotional tune, it creates music of medium note and the player with manipulated effort applies it to a large variety of folk music.

In this way, though a *Kendara* bears all the major structural components like that of a violin, it is a unique instrument because of its association with *Odia* culture including the tribals. It has never been used for an orchestra or any music melody. In non-tribal cultures, it is mostly confined to *Natha Yogis* of Odisha who form a definite religious cult in Odisha. It is therefore concluded that structurally *Kendara* is a cultural product adopted by the *Yogis* of Odisha as well as several tribal communities in different parts of Odisha. In a similar manner it is also further continued that functionally *Kendara* accompanies a cultural song with a cultural profession of begging for the sake of a religious tradition. In nutshell, structurally and functionally violin has been musically standardized where as *Kendara* as an indigenous stringed instruments have certain structural and functional limitations from music point of view. However, the *Kendara* is a cultural product and functionally with limited use of medium note, it will remain as a cultural musical Instrument till *Odia* culture survives or exists.

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## HUMAN NEEDS AND SOCIO-CULTURAL STRATEGIES OF ADVERTISEMENT: AN ARTISTIC AND REALISTIC ANALYSIS

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### Abstract:

Fulfilment of basic needs is the most common pursuit of man in each and every part of the world since the time immemorial. For meeting the basic needs like food, clothe and shelter, man in the past was directly depending on natural recourses on the basis of acquired knowledge about them. In course of time when marketing system developed, people came to know about different requirements of daily life which they need but do not produce. Gradually with the development of communication system, people came to know more and more about all such products which were produced elsewhere in the world and eventually when advertisement system was developed, need fulfilment became much easier and far-off products came to door-step. People came to know about such new but much required items mostly from advertisements. On the basis of such socio-cultural needs and strategies of advertisement, attempts have been made in this paper to go for the analysis of the artistic realistic nature of the advertisement to cast out nature and reliability of the advertisement in the so called modern society today.

**Key Words:** *Human Needs, Advertisement, Products, Socio-cultural strategies*

### Introduction

Man in general, is in constant pursuit of fulfilling its basic needs starting from food, shelter to all kinds of personal and group needs. In the past, man was searching for all the basic needs directly from the nature and on the basis of adequate knowledge, man was continuing to avail all kinds of natural resources for fulfilling its basic and other needs. During the pre-historic and proto-historic days, by means of personal quest, man was gathering knowledge about the availability of specific resources in the immediate surroundings. In the beginning, due to egalitarian mode of living, all the persons in a settlement were sharing their own knowledge of natural resources among each other as a result of which there was no need of advertisements noticed during such time periods. When man promoted food production activities and accrued surplus, the need for marketing the surplus was felt. When marketing system was developed soon after the Neolithic age, people developed the need for knowing about the availability of different resources or commodities which they need but never produce. Gradually with the development of marketing system in the society, the producers of specific product started advertising in a very traditional manner. Due to lack of print media, the producers usually advertise their product in public gathering especially in market places by shouting a slogan with the beating of drum. Sometime also messengers were sent to tell personally about the

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availability of the product to the consumers or customers. In the ancient period advertisement through wall painting is not very much informative due to the fact that such wall paintings were drawn specifically for magico-religious purposes. However, in the past, advertisement system was being very traditional and, in the market places the seller cum producer was advertising himself about his own product simply by shouting. Such advertisement systems were very common since the medieval period.

In the system of advertising management, advertisement is considered to be the key element for promotion of marketing. Advertisement in this sense creates a brand image for the consumers and customers. Though advertisement is understood as a tool of marketing, basically it informs about the brand of a product to the people. Whatever the nature of advertisement it may be, the basic purpose is to inform the common people about the product which in the long run may help the process of marketing.

For spreading the advertisement of a specific product, the role of media of mass communication such as radio, television, newspaper and magazine is very important, which came only after medieval period when all such media of mass communication developed significantly. In the modern society today marketing has gone up to undertake business activity through planning, pricing, promoting, and the distribution. Such factors are scientifically defined as 4Ps by E. Jerome McCarthy's and they stand for Product, Price, Promotion and Place. Such 4Ps concept is based on the 12 elements of Borden's marketing mix. They are Product, Planning, Pricing, Branding, Channels of distribution, Personal selling, advertising, Promotions, Packaging, Display, Servicing, Physical handling, Fact finding and analysis. McCarthy's 4Ps are amalgamated (1960) by Borden's 12 elements (1964).

## **Human Need for Advertisement:**

Both in the traditional and modern human society, advertisement provide a very basic and fundamental role for developing salesmanship, sales promotion, publicity, public relation and marketing. Marketing has always been considered through direct and indirect marketing systems where the marketing organisations, manufacturers or producers reach the customers directly or through a middle man. Such facts are very much common both in the tribal and non-tribal societies.

In the modern society today, advertisement is considered to be a business activity employing creative techniques to design persuasive communication in mass media for the promotion of ideas, goods and services (Jethwaney and Jain, 2006:7). In general, it is observed that such business activities are grounded only on social and cultural dimensions of a human society. In the society today, advertisement in mass media has been modernised through digital media where the culture specific background has been neutralised by universal human needs.

From the view point of the social and cultural anthropology, it is mostly found that human needs are categorised into three fold manner, namely, universal, socio-cultural and individual. The universal needs are mostly oriented towards biological factors very common to all human beings and other animals. The second categories of needs are found specific to a society or culture. Here some people, not all, refer to the situation where some people in the society are affiliated to a specific way of life or culture. The third category explains that all the characters or features are unique to only human individuals where needs are personal and different from each other, therefore the casting of advertisement in the mass media, newspaper etc.

are made in accordance with the universal, socio-cultural or the individual/ personal needs. The companies usually make different products for different need groups. In the beginning year of research, the companies, in addition to advertisement also approach people both personally and in groups to enhance the demands of the people. The advertising agencies also keep eyes on the behaviour of the women and their culture specific needs in a larger scale which ultimately give rise to the understanding of people's needs. However, for the purpose of designing advertisement for the universal needs do not need any specific approach under a specific culture or society as all of them are common to all societies and their members in general. But as regard the socio-cultural factors they are highly essential along with the personal or individual needs. In this process, all forms of advertisement are very much oriented towards the culture and society of Odisha. For all states of India when advertisements are planned, mostly the universal needs are considered mainly because they are included in both the types of human needs.

When the companies try to draw the attention of Odia people, both in general and specific ways, the cultural feelings of Odia people are reflected in the advertisement by citing their emotional sentiments like the glory of Lord Jagannath, Konark temple or several gods or goddess of different regions of Odisha. Similarly, regarding a specific society or culture, the concerned tribal and non-tribal cultures are very much given as the theme of advertisement. People when they find the mention of their society or culture in the advertisement, they feel happy and are psychologically attracted towards the product.

### **Human Behaviour and Advertisement**

To win the hearts and minds of the people is the sole purpose of the advertisement. By

understanding the basic reasons why the people give priority to some of the branded product and not to other products, is very much essential to know. This is a very fundamental question where man developed interest for something on the basis of his personal, socio cultural, and universal desires which ultimately influence the producers for the making of certain goods or commodities. Besides, the discussion about the behaviour is an acquired phenomenon, which is not permanent in nature. People do change their minds often. Therefore, consumer behaviour is an applied approach based on an analytical framework which will be able to provide useful insights. There are several external elements which influence consumer behaviour very much. Some of them are mentioned below for reference.

- Family
- Society
- Social-class
- Reference group
- Opinion leaders
- Culture

In the family tradition of India, specifically in Odisha, the age old traditions mostly follow the attitude and belief about the right and wrong, good and bad, religion, gender, political organization, religion, personal and public morality and ethics. The family also determines our level of socialisation from an early age. Family also shapes our attitude towards different products purchasing habits. With the change from joint to nuclear family, members have been changed accordingly with regard to their specific choices, but the basic and traditional values remain unchanged. Television in the modern times has taken over the role of grandparents in children's lives where traditionality was very much maintained, but now-a-days television plays a major

role to change the attitude of the children to a great extent by affecting severely the continuity of culture specific traditional products. Because of this, children as well as their family members are very much attracted towards the universal type of needs and similar modern products.

In a similar manner, the role of the society and social class can be very much similar in order to influence the type of advertisement and the production of specific goods. But on the other hand the influence of the reference groups and peer groups are very much applied by the young generation. A similar role is also played by opinion leaders who are found anywhere, everywhere and in almost all fields. When some big and reputed people say something about a product, people are very much attracted to them. In India today, the nature of advertisement is very much judged through opinion leaders. Whatever the modernisation may be, culture has been the most dominating factor for addressing the basic requirements of a group. In some cultural zones people may favour sweets very much where as in other zones, it may be the opposite. Therefore, the company's business organisation produces culture specific foods and other products to attract the people, who are the consumers.

### **Socio Cultural Strategies for Advertisement**

It is said that advertisement is not more than three centuries old. In April 1704 the Boston News Letter carried a notice inviting advertisement. In May issue of this Newsletter continued three more notices for advertisement. In this issue two advertisements offered rewards for the capture of thieves and the third one was about the sale of real-estate in New York (Cohen,1988). In this way the advertisement was started and continued. However, the first advertising agency was established in Philadelphia in 1841.

In India advertisement process considered two different approaches –

- (1) General or Secular
- (2) Sacred or religious sentiment

India is dominated by the Hindus and members of all other great religions also inhabit India as minorities. The Hindus have numerous festive or religious ceremonies and when they are added to the festive occasions of the minorities, the number becomes very high which make a paradise for the advertising agents. All over the world advertisement follow mostly general and secular factors and in India though both factors are present, the sacred factors always exceed the secular ones here.

Thus, in India culture enters into the field of advertisement in a very significant way. Though culture includes both secular and sacred factors, mostly the sacred factors contain the core elements of the culture. In our research, we have mostly taken newspaper for the publication of advertisements, and all over the world, newspapers are most popular agents as the chief source of advertisement. The basic reason is that in the radio, advertisements come suddenly and passes on very quickly after few seconds. In the Television also the same thing happens. In these two strong visual media, people primarily enjoy entertainment programs and people do not tolerate the intervention of advertisement very much. But in the newspapers things are completely different. Mainly because it is a print media, people comfortably read between lines and words of both the news and advertisements.

Coming to the situations of Odisha, it is generally said that Odia Hindus as the dominant group here, have major festival occasions like *Dussehra, Kartik Purnima, Shivratri, Holi, Baishakh Punima, Raja Festival, The Car Festival, Rakshya Bandhan, Janmastami, New Year day* etc. as the

major festive occasions of the year. On these occasions people pay sacred visit to the temples, wear new dresses and prepare sweets, cakes of various kind. Therefore, the advertising agents get ample scope for advertising their products like food, fabrics and so many other things. Under general and secular matters, people pass through various needs like cooking oil, hair oil, various types of cosmetics, mobile phones or land phones, wristwatch, tooth brush and paste, shoes and several others daily requirements. Culturally speaking, the festive occasion comes at certain intervals where as for the general or secular needs advertisements are made daily. Day by day advertisements are made in the visual media with lot of popular techniques and due to the inclusion of the famous personalities like actor, actresses and sports-men, people are becoming more interested to see and enjoy these advertisements and thereby get the message of these advertisements through such entertaining advertisements. However, various discount sales especially during this occasion make people attracted to buy their required goods, both for the sacred and secular purposes. Now a day, people are acquainting themselves with the goods and their brand names at home through different media and before going to the shop, they finalize what to buy and which brand to buy. This way because of intricate marketing system advertisement process has become very complex and because of cultural

and religious sentiments, people continued to buy them and ultimately the purpose of advertisement is fulfilled very successfully. In the past, may be prior to independence the old generation people were not depending on the advertisement and due to the availability of the product of few brand names, the buyers were selecting their goods or necessities only in the shop itself. One most striking factor is that prior to independence most of the rural and tribal people of the state as well as country were illiterate. They don't have also any newspaper reaching their village daily. Under such circumstances it is worth mentioning that soon after independence with the increase of literacy rate, advertising system has become very much suitable for the common people to accept and follow. We have selected only the newspaper 'The Samaj' which was the widely circulated Odia newspaper prior to independence and about the other newspapers, it is generally said that only some of them were started during independence time are continued now and few others were started much later. In the daily *Samaj* we have taken into consideration the advertisements since 26<sup>th</sup> January 1950, the republic day of India and we have marked the following advertisements both in the sacred and secular or general matters. In the beginning, the agencies were new and newspaper editors were also very much inexperienced as a result of which advertisements in the cultural sectors took a lot of time to grow.

**Table-1: Some Sample Advertisements of 1950 in 'The Samaj' (Odia Daily)**

SLNo.	Commodities	Statement	Slogan
1	Hamam Soap	ପ୍ରତ୍ୟେକଙ୍କର ମନଲାଖି ବଡ଼ ସାବୁନ୍	ହାମାମ୍ ଶରୀର ଅଧିକ ନିର୍ମଳ ରୁହେ ସ୍ନିଗ୍ଧ ଓ ସୁଖକର ଦୀନା ତୁଳନାରେ ସାବୁନ ବଡ଼



2	ଝେଷ୍ଟ ଏଣ୍ଡ ଡିଜାଇନ୍ ଘଠି।	ଅଳ୍ପ କେତେଟି ମାତ୍ର ଅଛି ପାଠି ବର୍ଷ ଲାଗି ଗ୍ୟାରେଠିଡ଼	ଝେଷ୍ଟଏଣ୍ଡାଚର ବିଭିନ୍ନ ମଡେଲସହ ତା ଦାମବିଷୟରେ ଓ ସେଠୁରୀ କ୍ୟାଲେଣ୍ଡର ମାଗଣା ମିଳେ
3	ସିଜରସ୍ ସିଗାରେଟ	ଉଲ୍ଲସ୍ ସିଜର ସିଗାରେଟ ଧୂମପାନ ଚମକାର ଓ ଆରାମଦାୟକ	-
4	ଡକ୍ଟର R.H.S. ଟାଇର	ବଡ଼-ଭାରି-ନିରାପଦ ଝେଲଟେକ୍ସରେ ଭିଜା ସୁତା	ଚଉଡ଼ା ଓ ଭାରି ଟ୍ରେଡ଼ ପାଇଁ ଶତକଡ଼ା ଦଶ ଭାଗ ବେଶୀ ରବର ଓ ନୂଆ ଧରଣର ବଡ଼କେସିଂ
5	Lipton Tea	ସମସ୍ତଙ୍କର ପ୍ରିୟ ଲିପ୍ଟନ୍ ହିମାଳୟାନ୍ ବ୍ଲେଣ୍ଡ ଟା' କିଶତ୍ତୁ	-
6	India Electric Fans (IEW)	-	ଆଇ.ଇ.ଡବ୍ଲ୍ୟୁ. ଫ୍ୟାନର ବିଶେଷତ୍ତ୍ୱ - ଅଳ୍ପ କରେଠି ଖର୍ଚ୍ଚ, -ଧାର ସଠିକ୍ ମାନ, -ବିନାଖର୍ଚ୍ଚରେ ମରାମତି, - ଦୁଇବର୍ଷର ଫାକ୍ତି ଗ୍ୟାରେଠି, ୨୫ ବର୍ଷର ଅଭିଜ୍ଞତା ସହିତ ଉଷା
7	501 Detergent Soap	୫୦୧ ସାବୁନ୍ ଦର କମିଛି	ମୋ ପିଲାଙ୍କର ଲୁଗା ବହୁତ ଦିନ ରହେ । ମୁଁ ବଠିମାନ ଏହି ଆଶ୍ଚର୍ଯ୍ୟ ସାବୁନ ବ୍ୟବହାର କରୁଛି
8	Enos' Fruit Salt	ଗରମ ଦିନରେକି ପ୍ରଫୁଲ୍ଲ ରୁହନ୍ତୁ	ଇନୋଜ୍ ଫ୍ରୁଟ୍ ସଲ୍ଟ, ଶରୀରକୁ ଶୀତଳ ଓ ନିରୋଗ ରଖେ
9	BSC Quality Shoes	ପରିବେଷଣ କରୁଅଛି ଆଉ ଦୁଇଟି ନୂଆ ପ୍ରକାର ଜୋତା 'କିସାନ' ଓ 'ବହାର'	ସମସ୍ତ ବଡ଼ବଡ଼ ଜୋତା ଦୋକାନରେ ମିଳେ
10	କୂସୁମ ରକ୍ଷା ଘିଅ	ଶହସ୍ରାଧିକ ପରିବାର ବ୍ୟବହାର କରନ୍ତି କୂସୁମ	କୂସୁମ ରକ୍ଷା ଖାଦ୍ୟ ଅତି ଉଠିମ, ଲୋଭନୀୟ ମିଠାଜିନିଷ ତିଆରି କରିବା ପାଇଁ



11 Bata Foot Weer ଭାରତର କୋଟିକୋଟି ଲୋକଙ୍କର ସେବାକରୁ

Bata for all occasion



12 ଲିଟଲର ଓରିଏଣ୍ଟାଲ ବାମ୍ ଥରେ ଲଗାଇଲେ ବ୍ୟଥା ଉପଶମ ହୋଇଥାଏ

ଲିଟଲର ଓରିଏଣ୍ଟାଲ ବାମ୍ ସମସ୍ତ ପ୍ରକାର ବ୍ୟଥା ଓ ଯନ୍ତ୍ରଣାପାଇଁ



### Society, Culture and Consumer Behaviour

Jethwaney and Jain (2010) have mentioned that there are several external elements which influence the consumer behaviour. Among such elements, the most important elements are society, culture, social class, reference group, opinion leaders etc. The family level training from the early childhood determines our socialization process. Now a day's television has taken over the role of grandparents and while watching television children are attracted to certain products and ultimately behave as a consumer and most often they demand certain branded electronic and digital products. This has also influenced the advertising agencies to use children in the advertisements of various reading material, writing materials, painting materials, sport goods etc. In a similar manner other adults of the family also look at their own choice products in different advertisements where society and culture play a greater role. Jethwaney and Jain have also discussed that, 'human beings are social animals and are influenced by this social community and opinion leaders, who influenced their behaviours both at manifest and subliminal level' (2010:189). They have also stated that, India being a multi-cultural, multi-ethnic, multi-lingual and multi-religious society poses extraordinary challenges as well as opportunities to business men. In the field of culture, the factors like dress pattern, socialization, habits, art, customs, eating habits, superstitions etc. will have a great bearing on the behaviour of people as

consumers. Cultural beliefs, values, and attitudes are passed on from generation to generation and as a result of this, advertisers study the cultural habits and specific lifestyle of a community, sometimes a dominant community and accordingly they design their advertisements. Therefore, culture and society also play a very significant role in the process of advertisements. Punjabis love 'Paratha' for breakfast, Bengalis prefer to have sweets and most of the south Indians prefers 'rasam' and 'samber' in their daily food in a similar manner. People of Odisha on the border line reveal a mixed culture along with these Bengali, Chhatishgadi and south Indian. However, in central and costal Odisha the middle class and lower class people prefer watered rice and parched rice in their daily diet. Besides this there are several elements of culture starting from the dress to ritual celebrations which take part significant role in the field of advertisements.

Along with the newspapers we have already mentioned about the reference group and opinion leader. In the society today where individual culture is somehow lost in the environment of multi-cultural background, concept of social class is coming up. Here people belonging to similar social classes have similar attitudes, status symbols and more or less similar spending pattern. In addition to consider society and culture in majority of advertisements it also advertises to attract the consumer of all social classes from lower to higher economic status.

Thus, it is essential to study human behaviour and understand culture for the successful operation of advertisements in Indian society. In cultural anthropology researches use ethnography, semiotics and in-depth interviews to find out the specific cultural contexts of the people, to study their cultural processes, and to understand the meaning of certain cultural traits in cultural milieu for the successful application in advertisement process. The insurance companies also use marriage ceremonies to attract the customers by composing the slogans. As Sindoor the Insurance Policy has developed a slogan, life insurance will render protection at each and every step of human life. In another type, an umbrella is also represented in a symbolic manner to show that life insurance policy will protect the people just like an umbrella from rain and sun. However, culture plays a pivotal role in defining the needs of its members which are ultimately basic and useful as promotional tools for advertisements. The role of locational segmentation or the social and physical geography of an area, it is explained that along with geography the culture plays a definite role in so many ways. Broadly speaking, India is divided into the wheat growing area in North and the rice growing area in South India. In South India winter is very mild where as it is severe in North India. Such cultural and geographical factors have also great bearing on the making of advertisements. In Odisha similar districts are found in different cultural zones. Though broadly, language and culture have great impacts on the making of advertisements, there are several other segmentations like demographic segmentation, behaviouristic and psychographic segmentation, where people with numerical strength, accordingly develop a specific cultural and religious behaviour. On the whole, market researches in India has classified Indian society

mostly on the basis of rural-urban marketing system. The economic organisation of the rural, tribal and urban sections of the society has been studied to find out the purchasing capacity of these three sections and they are to be understood along with that culture.

In Odisha when, ceremonies like marriage, 'Raja' Festival and 'Dussehra' Festival along with *Kumar Purnima*, come for celebration, people with family members and friends visit markets for the purchase of ritual and other goods for the cultural celebration. Though there are regional disparities, like 'Raja' in coastal and central Odisha which show certain common or universal celebrations, some similar advertisements are possible in the newspapers.

Coming to the cultural example collected from the oldest daily newspaper of Odisha, in 'The Samaj', it is found that toward 1950 when this newspaper started the publication initially, no much cultural study was undertaken to present the cultural needs of the people. It is evidenced from 'The Samaj' that in 1950 advertisements were made for the body soap 'Hamam', 'West End Watch', 'Cigarette', 'Auto Mobiles Tyre', 'Lipton Tea', 'USHA fan', '501' 'washing shop', 'Soft Drink', 'BSC shoes', 'Laxmi Bilash Hair Oil' etc. All such objects are daily used materials and are basically general or universal. In 1953 we find some new tea brands, new cigarettes companies and toothpaste brands like 'Colgate', 'Forhance' etc. were found place in *the Samaj*. Up to 1980 the nature of advertisement in Odisha especially in the *Samaj* was based on general or secular items, after which few changes in the advertisement type were noticed in the same newspaper.

After 1980, the cultural occasions are very much found reflected in the advertisements. In different cultural zones of Odisha, the regional

festivals were very much reflected in the advertisements where as per the requirement of the local people especially for the ceremony, companies specifically advertise. In Coastal Odisha on the occasion of 'Raja' Festival, 'Iaxmipuja (Kumar Purnima)', x-mas, and other ceremonial occasions like marriage, sacred thread ceremony and various life cycle rituals starting from birth to death advertisements are made by companies to attract as well as motivate the people. In western Odisha besides such ceremonial occasions, the unique celebration of *Nuakhai*, *Dhanuyatra* etc. are very much popular. In all such sacred and ceremonial occasions all people from poor to rich, everybody needs new garments and various food products for the sacred offering as a result of which the advertising agencies and media use it very carefully for motivation. In South Odisha as the caste people follow the common ceremonial performances as in Coastal Odisha. But among the tribals, from agricultural point of view, though have some common features, in their specific cultural celebrations, they are very much different from tribe to tribe. As a result of this for such diverse population and culture, the secular advertisements hold good. In north Odisha except major tribes like Santal, Kol, Bhumij, etc. rest of the people belong to the caste communities, and like the south Odishan situation, the tribals do not need any advertisement for market purchases but the caste people follow the general, secular and sacred advertisements as in coastal Odisha.

It is worthwhile to mention here that during 1950s, the sense of marketing are not very much developed and people mostly from the radios, movies in the cinema hall and lastly from the local newspapers coming across the advertisements. In most of the interior hill pockets, the primitive tribes were choosing the available commodities only in the

local weekly tribal markets and the impact of advertisement was most minimum on such illiterate and economically backward people. Moreover, the access to radio was also not possible in all interior areas and reach of the daily newspaper was also very rare in such areas in the past. In such remote villages, access to cinema hall was also very rare. Therefore, majority of the tribes did not come under the motivation of advertisements for a long time. Another factor is the purchasing capacity of the people where mostly the well to do tribe and caste people fit into. Soon after 1970s when marketing opportunities grew up, marketing agencies come up and various production companies extended their activities to small towns and partly to remote areas mostly through weekly markets. Thus, the sense of advertisement entered into the peoples mind slowly and gradually. And with the development of different media especially through internet system at a later phase, mobile phones and smart TVs, the importance of advertisements reached the nook and corner of the state.

### **The Socio Cultural Strategies**

Earlier we have defined the human needs on the basis of different ceremonial occasions. As an extension to such needs, different production companies use various socio-cultural strategies to attract people from all sections of the society. Often such strategies are used through the receipt of gift, discount or some other benefits to attract the poor illiterate people. Sometimes in the rural markets such strategies are not reflected in the advertisement, but declared in the gathering especially in the weekly markets by beating drums or through presentation of posters. In cultural strategies, different ways are mostly followed in Odisha. Through empirical inquiry we have found that companies whenever attach any gift item for

**Table-II: Some Common Advertisements in ‘The Samaj’ (Odia Daily ) From 1950**

Sl No	Common Commodities	Brand Names	Slogan
1	Soap	Hamam, Himani, Jai, Nahan, Life boy, Lux, Margo	-Skin remain Fresh and Glowing-Best Fragrance
2	Cigarette	Scissors, Berkley, Cavander’s Navy cut, Maypole Verginia, Panama 20, Charminar, Gold Flake, CAPSTAN	-The Taste is Very sweet and made with good Tobacco -Smoking is wonderful and Fun
3	Tyre	Dunlop R.H.S., Supar India, Good Year, Inchek, Ralko, Dunlop RTM	-Relax and be safe-Cost is low
4	Tea	Lipton, Brooke Bond, TOSH’S BIVORA, TATA, Lipton Top Star,	-Fresh and Good-Choice of many people
5	Fan	I.E.W., Usha, M.E.I,	-Long term sustainability -Relax with Beauty
6	Foot ware	Bata, B.S.C, King Kong	-Light and soft Slipper -Good to ware
7	Headache balm	Littles Oriental Balm, Amrutanjan, Aspro, Saridon,	-Feel Relax-Immediately relieves headache
8	Hair Oil	DaburAmla, Laxmibilas, BirajaAmla, Kokla, Loma, Colgate Perfumed Castor Hair Oil, Jewel’s Amla Oil, Pagoda, Kesha, TATA Castor hair Oil, Keo-Carpin Hair Oil,	-Best for Long and Strong Hair -For the beauty of the Black Hair
9	Tooth Paste	Forhans, Colgate Ribbon, Pepsodent, Ajanta	-Strong and White Teeth
10	Biscuit	Royal Cream, Britannia, Gluco,	-Good Taste and Healthy

the purchases, keeping in view the festive occasion, people usually select them. The local people who are in need of the main product and the associated gift, both of which are the immediate the needs of the person or family, they become quite attractive for the consumers to buy. Secondly, such gift items are also selected in view of the requirement of the small children considering the festive or cultural occasion. So, when the adults purchase the commodities or materials for their festive needs, the accompanied children are very much attracted towards the gifts.

On the whole, the family head buys the commodities combining the requests of the children and their mother who are found to be strongly motivated to buy the product. Thirdly, the established and branded companies attach very beautiful and attractive human and other images in the advertisement to justify the quality and consequence of their product. When the ladies find in the advertisement, someone is becoming fair and beautiful by using the face cream, they go for the product. Before the coming of colour photography

and colour printing, in B/W presentation also, the advertisement was made attractive by making the figure or image very bright and good looking. Most of the time, the photographs of beautiful girls are used in the advertisements. But in most of the advertisements in the past prior to 1955s, the B/W pictures are very much used to attract the consumers. There is also another practice occasionally found in some companies where a beautifully edited the photograph of a local person or girl is presented in the advertisement mentioning the locality or area which all the people young and old from same locality like it most. They feel better and become eager for the product. Socially and psychologically they feel that if a girl from the same locality feeling happy with something or looking attractive by using some cosmetics then, they must buy the product.

### **Artistic and Realistic Analysis**

Advertisement is basically a strategy of marketing and while applying it, the companies though design things socio culturally to attract the local consumers; most often they exaggerate the advertisement to motivate the consumers. Here we present some sort of analysis to examine the contents of the advertisements from artistic and realistic points of view. As presented in the earlier mentioned tables, in case of advertisement for the body soap and face crème like snow (which is no more in the market now) very beautiful images of the girls are presented. If it is a photograph, proper editing is done to magnify the beauty of the face and if it is a painting, the ear, eye, nose and hair styles are usually edited very artistically, sometimes in a

very decorative manner. In the advertisement of '*The Samaj*' even in case of commodities like a cigarette, tyre, wrist watch etc. the painted diagrams are sometimes very much highlighted and exaggerated to attract the common people. Here both the types of analysis artistic, and realistic going in two different directions. The one which is very much artistic often exaggerated to reflect a realistic pattern. Similarly when the advertisement is made realistic, the artistic side has to be reduced to some extent. Only in very rare occasions artistic and realistic factors go together hand in hand with the quality of the product.

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## SOCIO-CULTURAL CONTEXT AND AESTHETIC VALUES OF 'JHOTI'

Chintamani Biswal<sup>1</sup> and Jagannath Dash<sup>2</sup>

### Abstract:

Jhoti is an age old ritual painting tradition mostly maintained by the agricultural communities of Odisha. This has been directly connected to the harvest of paddy. Soon after the harvest, paddy stalks are brought home and with the traditional paintings of rice paste, Odia ladies of agricultural communities invoke Goddess Laxmi, the goddess of wealth to appease her and have her blessings. Paddy or rice is taken to be the symbolic form of Goddess Laxmi as a result of which she is paid reverence through such traditional rice-paste-paintings soon after the harvest especially on the four/five *Gurubaras* (Thursdays) of *Margashira* month (December). Such a painting tradition has been depicted as a socio-cultural tradition which is systematically explained in this paper as a ritual art through delineation of mythological background, socio-cultural contexts, techniques of painting, painting of various traditional / cultural designs and the ritual occasions of paintings.

**Key words:** *Jhoti, Ancient painting, Tradition, Goddess Laxmi*

### Introduction

'Jhoti' is an ancient painting tradition of Odisha. Its origin and historical development has not been known so far. However, in the context of agricultural tradition in Odisha, 'Jhoti' came in to Odia tradition as a sacred painting to invite and invoke goddess Lakhmi mainly to the house of the agriculturists. Therefore, in Odisha 'Jhoti' has been conceptualized as a sacred art in connection with goddess Lakhmi, the Deity of Wealth. Though in Anthropological literature, art/paintings on the wall and floor have been mentioned with reference to Paleolithic and Neolithic cultures, specifically found in the rock shelters or caves. But hardly are they hardly comparable to 'Jhoti' tradition of Odisha. In the pre-historic art such as graphic design and

diagrams with mono-colour base line and graphic designs are mainly drawn to depict hunting scenes to a large extent. Though the traditional 'Jhoti' tradition goes with a similar purpose, there are lot of differences with regard to society, culture, and economy of the people practicing it. In this sense, it can be emphatically said that no art is possible without the ground and background of society, culture and economy. 'Jhoti' is primarily an artistic manifestation specifically by the people depending on agricultural-economy, which is subsequently connected to goddess of wealth Laxmi. Thus, a permanent traditional painting tradition was created out of socio-cultural necessity and all of them together made a culture of painting tradition.

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Mainly because of this we have analyzed 'Jhoti' as traditional painting designs because of socio-cultural requirements specifically in the field of agricultural economy.

### **Mythological Background:**

So far as the mythological background is concerned, in Odisha, the background is traced back to 'Mahalaxmi Puran' by Balaram Dash, one of the 'Panchasakha' writers who have given a vivid account of 'Jhoti' tradition its raw materials. Its sacred design of goddess 'Laxmi' and her foot print on and around a new measuring pot decorated with rice paste. In the narration, Balaram Dash has also mentioned about the decorative designs in symbolic form and in the process, the entrance of the house doors, wall, courtyard and door jamb are all decorated by such symbolic sacred paintings. For some time, about two three months, each house remains decorated with sacred "jhoti" painting, the smell of the paddy and the presence of goddess Laxmi are felt by the people both from outside and inside. Besides 'Mahalaxmi Puran', in 'Padma Puran' also the invocation of goddess Laxmi to the house on the occasion of agricultural harvest has been also mentioned in the context of Laxmi Puja and Sudasha Brata. In Padma Puran it is mentioned about the myth of the queen of King Bikramaditya celebration of 'Sudasha Brata' and some form of 'Jhoti' or symbolic designs. Earlier, Balaram Dash has narrated the story of Lord Jagannath, Lord Balabhadra and Goddess Laxmi with reference to the worship of Mahalaxmi by ShriyaChandaluni belonging to an untouchable caste. In both the descriptions mentions of the raw materials and art forms in rice Paste are discussed very commonly. There may be few more instances of 'Jhoti' painting in other Puranic literature. But for the 'Jhoti' tradition in Odisha, these two references are very popular which are usually followed by almost all Odia agriculturists.

### **Socio-Cultural Context**

As discussed earlier 'Jhoti' tradition was created mostly in the agricultural society where after the harvest of paddy, agriculturalists worship goddess Laxmi by inviting her through sacred foot prints with lotus mark and the basic purpose was to recognize her blessings for the agricultural harvest. Therefore it is coming obviously to an agricultural context where other rural economies seem to be neglected. But it is not so. In rural Odisha, agriculture is the main occupation of the people and the people usually looked down those who do not have land or cultivation due to the fact that persons without agriculture have no other occasion to invoke goddess Laxmi in to the house and local people designate such person as 'Laxmichhada' or without Laxmi. However, almost all people in rural Odisha go for agricultural activity directly or indirectly. Those who have land, they have direct cultivation work and the landless people usually join the agricultural activity through their labour input. In this case, it is observed that all people directly or indirectly connected to paddy cultivation, celebrate Mahalaxmi Puja and thereby draw several Sacred Jhoti designs to invite the goddess in a symbolic manner. In urban Odisha people also give equal importance to 'Mahalaxmi Puja' soon after the harvest time in rural Odisha and on the same day people urban and semi urban centres also draw the traditional designs of Jhoti in rice paste and celebrate the occasion in a symbolic manner.

In the context of Mahalaxmi Puja in connection with harvest of paddy Jhoti was elaborately drawn on the floor and wall of the house, there are also few more occasions where 'Jhoti' designs of different symbolic form represented for a sacred purpose. For different ritual occasions the designs differ and as per the specific celebration, specific designs of 'jhoti' are drawn. So far we discussed only about the agricultural people belonging to rural Odisha

especially to caste society. In tribal society also, agriculture is the main stay of the people except a few communities belonging to hunting, gathering and pastoral economies. Such tribal agriculturists again are divided into Hinduized and Non-Hindu sections. The Hinduized tribes like Bathudi, Khadia, Sounti and Bhuniya also go for such post harvest Mahalaxmi Puja through the drawing of sacred Jhoti designs. Other tribes have also their own traditional paintings in rice paste in different rituals and festivals which are very rarely connected with goddess Laxmi. On the whole, both in agricultural and non-agricultural societies, in tribal and non-tribal societies, Jhoti design with rice paste are unanimously followed. However, the statutory guidelines for the Jhoti tradition affirm that all the societies which are specifically belonging to Hindu religion follow this sacred tradition of 'Jhoti Painting'.

### **Jhoti as a Ritual Art:**

As already discussed 'Jhoti' is a sacred art which is highlighted very much during post-harvest ritual called "Gurubara Manabasa". After the harvest is over in the month of November, during the next Odia month "Margasira" (November-December) in all four or five Thursdays Goddess Laxmi is invoked to the house through such sacred paintings. On this occasion paddy is considered as the symbol of goddess Laxmi and all the connected materials like measuring pot, agricultural implements, paddy storage bin etc. are all considered sacred. On the Wednesday the ladies of the house if do not have monthly pollution, clean and smear the courtyard, entrance passage, floor and walls of the house with cow dung water and make traditional designs of Jhoti on such places by rice paste water. On this day ladies clean the measuring pot with cow dung water and paint it by the help of rice paste water and make a vermilion mask and finally fill the measuring pot

with paddy and goddess Laxmi is worshipped there in a symbolic form. Usually ladies of the house make beautiful 'Jhoti' designs by rice paste and the whole house on this occasion is beautifully decorated by Jhoti designs and the house gives a sacred feelings as well as a look as the abode of goddess Laxmi till the designs are visible. In Odisha 'Jhoti' is elaborately drawn or painted on these Thursdays of "Margasira" month. However in most of the ceremonies also such Jhoti paintings are also drawn for the ritual purpose. Outside Odisha also similar tradition of painting on the wall or floor in other State of South India as well as North India is practiced. In almost all Hindu communities, irrespective of state or caste, agricultural people or the so called rural people worshipped goddess 'Laxmi and in her honour draw various sacred' designs in accordance with the occasion of ritual or festival. Throughout the day ladies prepare various rice cakes to grace the occasion. It is well marked in the paintings that the traditional designs are mostly related to agriculture and the ladies make designs related to goddess Laxmi directly.

Though in Manabasa Gurubara Jhoti is painted in a very elaborate form, in almost all rituals 'Jhoti' designs of different symbolic images are also drawn in the honour of the concerned deity. Some such rituals are mentioned below to observe a 'Jhoti' painting tradition suitable to other concerned ritual or festival occasions.

1. During the month of Margasira there is another ritual in Odia culture which is popularly called as 'Prathamastami'. The 'Jhoti' painting on 'Prathamastami' occasion is locally known as 'Badhiana Badho'. This is a pyramidal structure made up of eight rectangular structures. This is a very unique geometrical design which shows the measurement skill of Odia women.

2. On the occasion of Kumar Purnima Goddess Laxmi is worshipped by the unmarried girls. They usually invoke the full moon and make a kind of painting on the ground which is called as Kainfula (Water Lilly) Jhanhi Fula (Flower of Ridge Gourd) Kothi (dwelling place). Following Kumar Purnima comes the "Hobisa" rituals by the widows in the month of Kartik (Moth of October-November). On this occasion widows make several designs of Lord Jagannath, Balabhadra and Maa Subhadra and the images of ten incarnation of God by locally made colour powders popularly known as "Muruja". During this occasion of Habisa rituals several designs like 'Rai Damodar', 'Baga Baguli', 'Jatia Siba', 'Panapatra', Tulasi Gacha, Patta Chudi, Sindura Farua etc are also drawn by different colour powders (Muruja) usually around the sacred Basil Plant.
3. During the full moon day of "Pausa" (January) the tribal and non-tribal women of Koraput region, erect a pole of Silk Cotton tree on the ground and several traditional designs are drawn around the pole by the help of colour powders. In these designs the image of one dove couple is specifically drawn as per the description of 'Markandaya Puruna'.
4. Dakhina Sankranti Osha-This celebration is an agriculture based rituals especially in the districts of Ganjam and Puri in which a drawing of an altar is made on the wall and it is divided into four designs of different types are painted. Around the altar, different designs of grain storage, grain packets (Olia), cattle and the images of various agricultural implements are drawn.
5. Khudurakuni Osha: This is another popular festival of Coastal Odisha in which different types of rice paste paintings are drawn with specific reference to goddess Mangala and the narration of 'Taapoi' folktale. The picture of a country boat is also drawn along with seven brothers, seven wives and finally the image of 'Taapoi' the youngest sister. Along with 'Taapoi' her goat is also painted in the panel. On the whole, the narration of "Taapoi" folktale is completely depicted on the wall through rice paste painting.
6. In another popular "Osha" or celebration is 'Budhibaman' Osha where the images of upside down swan, in 'Dhanamanika Osha' the image of elephant and owl, in 'Baga Panchaka' the image of 'Baga Baguli' (He-crane and She-crane) and in 'Langala Dhua Purnima' or Birth day of Lord Baladev, on the walls of cowshed the image of plough, yoke and cattle are usually drawn. This 'Langaladhua Purnima' is directly connected to the worship of Goddess Laxmi as it is linked to agriculture and harvest of paddy.
7. There is also another little known celebration called as 'Bali Trutiya Osha' which is celebrated in connection with the expedition of the Odia Traders to Bali Island for trading in the past. On this occasion ladies of the family mostly in Coastal Odisha in the courtyard of the house draw the image of a boat painted by rice paste and most of the house hold belongings are kept on there till the ritual is over. This celebration of Bali Trutiya is connected to the symbolic representation of sea-treading tradition of Odisha.
8. During the month of 'Aswina' (October) Odia ladies make various types of 'Mandala-Jhoti' specifically for the celebration of 'Gouri Brata' and Durgastami Brata. On the wall of the house the symbolic image of Lord Siva and Goddess

Durga are drawn. In Western Odisha on this occasion of Dusshera usually in the prayer/ puja room of the house ladies paint the wall with palm prints of rice paste arranged in a pyramidal manner. In addition to this, plants, animals, birds and flowers are also drawn on the wall.

9. In rural Odisha, there are a variety of Osha or communal celebration like Budhei Osha, Bata Osha, Bhalukuni Osha, Kulei Osha, Pandu Osha, Bada Osha etc are celebrated which are very much associated with the 'Jhoti' paintings. Among the 'Bratas', Odia people observed several 'Bratas/ like 'Ananta Brata', 'Nursinha Brata', 'Sudasha Brata', 'Somanath Brata', 'Kartika Brata' etc. with utmost sincerity throughout the year. Unlike the Osha, in 'Brata' rice paste is not used and in its place colour powder or 'Muruja' prepared out of natural pigments are very much used to draw a sacred art design.

### **Raw materials and Techniques of 'Jhoti' Painting**

The simplicity of Jhoti-painting is directly connected to the painting tradition of the ancient society. Mainly because Jhoti tradition is a sacred art tradition of the past, no other colour than white has been used. Since the time immemorial, rice has been the symbol of Goddess Laxmi. For this reason only the rice paste painting is used to invoke Goddess Laxmi and except vermilion which is a symbolic mark of the Goddess, any other colour is strictly prohibited in this 'Jhoti painting'. In Hindu tradition as well as rural Odisha, paddy and rice grains are considered sacred and while making rice paste people specifically consider the sacred rice grains. Thus, raw rice is always considered sacred, which is locally called as 'arua rice' or sometimes as white rice. For all ritual celebrations in Hinduism either

the raw rice grains or their paste are mostly used. In Odisha some people use raw rice as staple food where as others specifically boil the paddy and collect the par-boiled rice for staple food. This type of par-boiled rice is known as 'usuna rice' which is nutritionally better than the raw rice. But the par boiled rice or 'usuna' rice is never considered sacred mainly because it is pre-boiled. It is not used as sacred rice for the purpose of ritual ceremonies. Thus, in all rituals of Hinduism and especially for 'Jhoti' painting tradition, only the raw rice paste is used.

After preparing the rice paste, ladies generally add water to dilute it for the use in painting. Traditionally, Odia ladies paint the design in two types of application. Firstly they paint the floor or wall making lines by the help of finger tips of right hand. Every time the middle finger is dipped into the rice paste colour and the line or design is drawn by the finger. Most often with the middle finger the ladies hold a small piece of cloth which soak the rice paste colour to draw the lines while drawing the design. Once the cloth is dried, it is once again put in to rice paste colour and the painting continues. Sometime the ladies also use a handmade brush by the help of a small piece of cloth tied to a small stick. Every time rice past is prepared fresh in order to maintain its sacredness. It is needless to mention that before painting on the wall, the wall is cleaned and well prepared by the smearing of cow dung and on this prepared background of the wall, the white painting of 'Jhoti' looks very beautiful and prominent from a distance. We may add here that the traditional rural houses with the mud wall and floor which are made up of soil or earth, the traditional Jhoti paintings are very much suitable on the application of cow dung water which is also another sacred element in Hindu rituals. Application of both cow dung water and rice paste colour, the sacredness of the Jhoti painting is well marked.

At present due to modernization the rural thatched houses have been replaced by concrete houses with chemical painted walls and the polished or vitrified floor which are not at all suitable for cow dung smearing and rice paste Jhoti paintings. As a result 'Jhoti' tradition of art and painting is gradually fading away from Odia culture. Modern Odia people now days have started using white 'Jhoti' sticker available in the market which severely damaging the sacred nature of the Jhoti painting.

### **Type of Jhoti Designs**

As already mentioned, in almost all Hindu rituals the ladies either paint the wall or courtyard and floor to maintain sacredness of the house where the concerned God or Goddess are to receive the offerings and prayer and finally to bless the family for all kinds of prosperity. Therefore, in different ritual occasions, as per the purpose of ritual and the nature of the God or Goddess, the designs are selected in a traditional way. As mentioned earlier, Odia ladies make Jhoti designs elaborately mostly on the occasion of 'Gurubara-Manabasa' (Thursday) of Margasira (December) month. Therefore, during this month almost all rural houses are beautifully painted with Jhoti paintings which create a very sacred feeling, attitude and atmosphere in the village.

Jhoti painting is a unique painting tradition of Odisha, where the painting is mostly performed in a definite marked area which is known as positive area and outside of it the remaining surrounding area is termed as negative area. While designing a Jhoti painting usually two types of area are identified, circular and quadrangular (may be also square or rectangle). In traditional Odia 'Jhoti' paintings the circular 'Jhotis' are symbolically considered to be a lotus form where as the quadrangular types are popularly known as Mandala. Out of all designs, the lotus design is very much predominating mainly

because 'lotus' is the symbol of Hindu culture. While making traditional designs, Odia ladies usually follow the real image. They mostly make a decorative pattern which sometimes makes it relatively unreal but highly decorative and symbolic. In traditional Jhoti designs, lotus of different types like eight petaled lotus, ten-petaled lotus, and sixteen petaled lotuses are drawn and painted.

In traditional Odia 'Jhoti' design almost all painting designs are connected to various ritual celebrations. Mainly because of this, such traditional 'Jhoti' designs are considered sacred by nature. On the basis of various rituals and marriage celebrations, designs vary from occasion to occasion. As it is mentioned earlier, the most popular occasion of Jhoti making is the worship of Laxmi, in all Thursdays of 'Margasira' (November-December) month. The most popular of all the designs are the symbolic painting of paddy stalks, lotus, fish, pitcher etc. Often designs of elephant, conch shell are also drawn. In all parts of Odisha three designs are very commonly found, they are lotus, paddy stalk, and the pyramidal design of finger prints, which is very popularly known as 'Bengei' Chita. These three designs are typical Odia designs very common in all part of Odisha 'Among other Jhoti designs, some popular figures are plant with flowers (Phula dacha) parrots in reverse order (Olata Sua), peacock and other common birds, cow, Jagannath Trinity with conch shell disc, candle (others) the symbolic designs of Swastik and trap. In most of the occasion ladies also draw the designs of pitcher (Kalasha) double fish (Jodi Mancha) birds, like myna (Sari) brown Orile (Bani) Butterflies (Prajapti), dear (Harina) etc are also drawn on the wall. Usually, ladies prepare painting brush out of the roots of grass and sometimes they wrap small cloth around a small stick to use as a painting brush. On the occasions of marriage the figures of Lord Ram and Devi Sita,

Crown, grooms palinki, brides Sabitri along with the conch shell blower, drum beater, a man carrying various gift and a pitcher full with water are usually drawn on the wall. On such occasions the figure of a plantain tree and the image of 'Nabagunjar' are very popularly drawn. In Odia Jhoti designs several designs are named after lotus, They are Sankha-Padma, Gadda-Padma, Machha Padma, Nagfeni-Padma, Kundali Padma etc.. In a similar manner another variety of 'Jhoti' is known as 'Mandal Jhoti' or 'Mandal Chita'. Some such designs are Sankha-Mandala, Mukta-Mandal, Khamba-Mandal, Padma-Mandal, Pharua Mandal, Changudi Mandal etc. In other forms of ritual celebration of Odisha, most well known are Osha and Brata. In such occasions of various ritual celebrations like Bada Osha, Khudurukuni Osha, Sathi Osha, Dutiya Osha, Budhei Osha and Janhi osha, Jhotisof several designs are seen. Similarly in different Bratas of Odisha like Kartika Brata, Ananta Brata, Sudasha Brata, Nrusingha Brata, Somanath Brata etc., jhotis of different designs are also drawn. In such Osha and Brata occasions, Odia ladies prepare various Jhoti designs partly along with the designs by Muruja powders. It is obviously observed that Jhoti's are mostly painted both on the floor and wall of this house, where as Muruja powders are made by sprinkling only on the floor.

Odia ladies collect white colour from lime stones or raw rice flour, red colour from powder of hematite stones, yellow colour from turmeric powder, green colour from the leaves of bottle guard, and black colour from the powder of burnt coconut for making various traditional designs on the floor or ground.

#### **Aesthetic Values:**

Every art or activity has its aesthetic values in different forms. When Jhoti designs explain various decorative images and figures, it contains several

realistic values for the insiders as well as outsiders. As already described, in various theme oriented narrative designs on the occasions of marriage and various Osha and Bratas, a very high sense of artistic realism is revealed. Though artistic skill varies from person to person on the whole, the combinations of border designs, along with the main figures add to the beauty of the whole diagram. With practice, the ladies acquire the skill from the older generation to make a proportionate diagrams and use of thick or thin designs as and when required in the diagram. Mostly with the drawings of birds, flowers and animals though variation is very much observed, they create varieties of images with a good sense of beauty. The skilled hands attract the attention of everybody because of its high sense of realistic image which greatly helps the new learners to master the skill and improve the ability. It goes without saying that the mediocre painters though remain away from the realistic representations of Jhoti designs because of diversified images, it creates a new form and remains as attractive though not superior to the skilled designs.

Comparing at the individual label, various degrees of aesthetic values are obviously marked but when one looks at the narration of designs on the walls of each and every house, from a distance in a combine manner, all of them create a very beautiful back ground and scene adding to the aesthetic values irrespective of their skilled or unskilled representation.

#### **CONCLUSION:**

In each traditional society and culture, people maintain a symbolic tradition of ritual art to propitiate different Gods and Goddesses to have their blessings. In all Socio-economic matters in different states of India, people continue a tradition of satisfying the Gods and Goddesses in different

symbolic ways. In Odisha 'Jhoti' is a similar tradition linked with agricultural harvest, every year. Though it is started in relation to agricultural economy and ritual traditions, ultimately, it is identified as a traditional art form which can be named as a cultural art. As mentioned in the paper, 'Jhoti' art tradition is based on the mythological back ground written by Balaram Dash and a few other ritual celebrations of Odisha. In different types of Jhoti design, though artistic or aesthetic impulses are very much noticed, their association with religious values has given it a specific identity as a sacred art form. On few occasions, 'Jhoti' designs are also manifested for secular purpose to decorate the floor as well as the wall of the house. Looking at all the sacred and secular attributes of a Jhoti, it is concluded that 'Jhoti' is a unique blend of society, economy and religion. On the whole it is worth mentioning that, 'Jhoti' is a

cultural product and it will carry the cultural message from generation to generation and maintain traditional values which will ultimately help to continue the identity of Odia Art and culture in the rural sector.

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## HYPERTENSION- AN EMERGING HEALTH ISSUES AMONG TRIBAL COMMUNITIES OF KALIAPANI MINING AREA, JAJPUR DISTRICT, ODISHA

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### Abstract:

The Present Study was carried out to assess the prevalence of hypertension among tribal communities of Jajpur district of Odisha. A community based cross sectional Study was conducted among the 378 *Santal* and 298 *Munda* tribal communities inhabiting in 7 villages in and around Kaliapani mining area of Sukinda Block of Jajpur district of Odisha. The basic socio economic profile like age, sex, occupation, income was recorded through predesigned format. Systolic and diastolic blood pressure (SBP and DBP) were recorded through pre calibrated mercury sphygmomanometer. Among *Santal* 17.46 % (Male: 9.52 % Female: 7.93 %) respondents have shown Stage-1 hypertension for SBP and 10.31 % (Male: 7.67 % Female: 2.64 %) respondents exhibiting Stage-2 hypertension for SBP. Total of 22.48 % (Male: 13.49 % Female: 8.99 %) respondents have shown Stage-1 hypertension for DBP and 9.52 % (Male:5.29 %, Female:4.23 %) respondents exhibiting Stage-2 hypertension for DBP. Out of the total sampled there are 28.50 % males and 11.82 % female respondents exhibiting hypertensive tendency. Among *Munda* 10.06 % (Male: 6.04 % Female: 4.02 %) respondents have shown Stage-1 hypertension for SBP and 6.37 % (Male: 1.00 % Female: 5.36 %) respondents exhibiting Stage-2 hypertension for SBP. Total of 14.76 % (Male: 8.05 % Female: 6.71 %) respondents have shown Stage-1 hypertension for DBP and 8.05 % (Male:3.35%, Female:4.69 %) respondents exhibiting Stage-2 hypertension for DBP. Out of the total sampled there are 14.20 % males and 12.00 % female respondents exhibiting hypertensive tendency. In the present study higher prevalence of hypertension among *Santal* was observed possibly attributed due to migration, acculturation, alcohol consumption, and tobacco addiction, high salt intake and adoption of modern lifestyle. Prevalence rate among *Santal* was higher than *Munda* group. As *Santal* are most developed tribal group in India, they are more acculturated and adopted modern life style rapidly which make them fall in the clutches lifestyle disease like hypertension. More study with their detailed culture might help to throw light on any other factors responsible for prevalence of hypertension among studied communities.

**Key words:** Blood pressure, Systolic blood pressure (SBP), diastolic blood pressure (DBP), *Santal*, *Munda*, Hypertension

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## Introduction

Hypertension has been identified as a major cause of morbidity and mortality in both developed and developing countries. 'An elevated blood pressure contribute alone to majority of cardiovascular diseases (CVD) at worldwide, Hypertension is a risk factor for various degenerative diseases, imposing a great burden at global level' (Kearney et al, 2005). Hypertension is the third 'killer' disease, accounting for one in every eight deaths worldwide (WHO), well recognized as a public health problem among urban as well as rural adults in India (Gupta et al.) High blood pressure is a prevalent condition in all developing countries irrespective of their present stage of health transition and both sexes are affected in large number. A widely spread misconception among the general population about cardiovascular diseases in developing countries is that these only affect richer persons. However, as the epidemic of cardiovascular disease matures, the disease burden shifts from richer and better-educated segments of a society to the poorer and less educated (Kshatriya, 2014).

Hypertension is one of the leading risk factors for global mortality and is estimated to have caused 9.4 million deaths and 7% of disease burden – as measured in DALYs “ in 2010 . Raised blood pressure is a major cardiovascular risk factor. The global prevalence of raised blood pressure (defined as systolic and/or diastolic blood pressure e”140/90 mmHg) in adults aged 18 years and over was around 22% in 2014 (WHO, 2014).

High blood pressure affects one out of

every four Indians over the age of 18, with the prevalence rising by 10% between 2010 and 2014. High blood pressure along with high blood sugar, unhealthy diet and overweight together contribute about 25% of the total disease burden in India. (ICMR, 2017) In India, hypertension is a leading non-communicable disease (NCD) and estimated to be attributable to nearly 10 percent of all NCD's.

Several studies on prevalence of blood pressure among tribal populations have shown that they have a lower prevalence, and that their Blood Pressure does not rise with age (Kusuma et al, 2004). Studies on hypertension, one of the important risk factor for cardiovascular disorders in rural India are scarce because more importance has been given to infectious diseases in rural and tribal areas. But, because of changes in the life style and environmental factors, the prevalence of hypertension is increasing (Rizwan et al, 2014). However recent studies reported high prevalence among tribes in India (Borah et al, 2011), prevalence is increasing among rural and tribal area because of change in life style and environment factors (Rizwan et al, 2014). Increasing tendency of high blood pressure among tribal groups in India and Odisha observed due to various factors like altering life style, industrialization, modernization, migration, high salt intake and alcohol consumption (Sathiyannarayn et al, 2019, Satapathy et al, 2019, Khatriya et al, 2016). Hence an attempt has been made in the present study to find out the distribution of blood pressure (systolic and diastolic) and

its prevalence among *Santal* and *Munda* tribal groups inhabiting villages near by Kaliapani mining area of Jajpur district.

### **Area and People**

Odisha is unique in the ethnic map of India since it has the most culturally diverse tribal communities. is inhabited by 62 tribal communities and 13 Particularly vulnerable tribal groups (PVTGs), with a total strength of approximately six million (5,915,067) constituting 22.85 per cent of the total state population and rank as third largest tribal state in terms of population proportion (Census,2011).

The district of Jajpur is one of Odisha's most centrally positioned between 85°40' and 86°44' East longitude and 20°33' and 21°10' North latitude. Jajpur district constitutes 8.3 percent of tribal population to total population of the district (Census, 2011, Ota et al 2015).

The *Santal* one of the populous tribal communities of India is the third largest tribe in India. They are mainly found in the districts of Mayurbhanj, Keonjhar and Balasore in the state of Odisha. Besides, they are also found in Jajpur. *Santal* is a combination of two words: *santa*, which means calm and tranquil, and *ala*, which means man. Majority of *Santal* in Jajpur district were engaged as labourer in many mining and allied industry. The Santals are a progressive community among the Odishan tribes.

*Munda* as a tribe is a classic representative of the great Kolarian race. They are dispersed in different districts of

Odisha like Sundargarh, Sambalpur, Keonjhar, Mayurbhanj and Jajpur district. They consider themselves as the descendants of Singh Bonga, the Supreme Sun God. Mundari is their mother tongue which belongs to the Austro-Asiatic language family. Majority of *Munda* in Jajpur district are engaged themselves in different mining industry of this area as mining labourer and wage labourer in nearby urban area.

### **Methods and Material: Samples**

A community based cross-sectional study was conducted during January to March 2019 among *Santal* and *Munda* tribal communities inhabiting 7 villages adjacent to Kaliapani mining area of Jajpur district of Odisha. Data was collected from 378 *Santal* and 298 *Munda* tribal groups who voluntarily participated in the study. Data was collected as per ICMR Ethical guidelines, 2017.

### **Inclusion and exclusion criteria**

Males and females of above 18 years age group who belong to *Santal* and *Munda* tribal groups.

People suffering from illness and bed ridden, children and person below 18 years are excluded from study.

### **Measurement and criteria for classification of hypertension**

The basic socio economic profile like age, sex, family income and occupation was recorded in predesigned format. Systolic and diastolic blood pressure (SBP and DBP) were recorded thrice with regular interval using pre calibrated mercury sphygmomanometer on

the right hand arm of the participants. Finally average of measurements was recorded.

For assessment of prevalence rate of blood pressure among participants, recommendation of JNC 7 Classification of Blood Pressure (2007) was adopted.

### Statistical analysis

After entering Data in Microsoft Excel 2007, analysis was made through SPSS 20.0 Software. Descriptive statistics like mean and Standard deviation were used for analysis. Prevalence of hypertension (systolic and diastolic) and overall percentage among male and female of Santal and Munda participants was recorded.

### Results and Discussion:

Socio economic profile of the present study among *Santal* and *Munda* communities reveal that there are 676 individuals participated in survey, out of which 55.9% (378) belong to *Santal* tribal group and 44.1% (298) belong to *Munda* tribal group. Santal are more in number than *Munda* group. Age group distributions of the studied Population reveal that there are 21.9% (148) of individuals are under <25 years category, 51.6% (349) are in 25-51 years age category

and 26.5 % ( 179) individuals are above 52 age groups. More than half of studied population belong to middle age group. Distribution of Sex of studied Ethnic groups shows that there are 45.3% (306) are males and 54.7% (370) are females, i.e. females are more than that of male individuals. Distribution of Education status of the studied population shows that there are 22.8% (154) individuals are Illiterate .Out of literate category, 31.2% are primary literate followed by 20.3% are upper primary level of literacy followed by 17.8%(120) are secondary level of literacy, followed by 4.3%are attained graduation/Diploma qualification. Educational status indicates low level of literacy among the studied population. Occupational distribution among the studied population reveal that 54.4% individuals are Labourer followed by 12.6% Businessmen, followed by 11.7% are driver followed by 21.3% service holder of different grade. Majority of individuals engaged themselves in different labour activity. Income distribution reveal that there are 17.3% earning per month fall < 7000 Rs p followed by 57.5 % income between 7000 Rs- 13,000 Rs followed by 25.1 % earning > Rs 13,000

**Table 1: JNC 7 Classification of Blood Pressure (2007)**

Category	Cut off level of Blood pressure (mmHg)
Normal	SBP: <120 and DBP: <80
Prehypertension	SBP: 120-139 and /or DBP 80-89
Stage-1 Hypertension	SBP: 140-159 and /or DBP 90-99
Stage 2 Hypertension	SBP >=160 and /or DBP>=160

**Table-2: Distribution of Systolic Blood Pressure (SBP) among Santal adults**

SBP Classification	Male N (%)	Female N (%)	Total N (%)
Normal	35(9.25)	90(23.80)	125(33.06)
Pre-hypertension	58(15.34)	90(23.80)	148(39.15)
Hypertension Stage-I	36(9.52)	30(7.93)	66(17.46)
Hypertension Stage-II	29(7.67)	10(2.64)	39(10.31)
<b>Total</b>	<b>158(41.79)</b>	<b>220(58.20)</b>	<b>378(100.00)</b>

The distribution of Systolic Blood pressure as shown in Table-2 reveals that among Santal population 33.06 % of total sampled respondent were exhibiting normal blood pressure where as 39.15% respondents exhibiting pre-hypertensive stage of systolic blood pressure which constitutes 15.34 % males and 23.80 % females respectively. A total of 17.46 % respondents have shown Satge-1 hypertension for systolic blood pressure out of

which 9.52 % were male and 7.93% were female respondents. Similarly 10.31% respondents exhibiting Stge-2 hypertension for systolic blood pressure which constitutes 7.67% males and 2.64% females respectively. Percentage of respondents exhibiting satge-1 hypertension was more than satge-2 hypertension. Percentage of males were more than females in both Stage-1 and satge-2 hypertension category.

**Table -3: Distribution of Diastolic Blood Pressure (DBP) among Santal Population**

SBP Classification	Male N (%)	Female N (%)	Total N (%)
Normal	42(11.11)	84(22.22)	126(33.33)
Pre-hypertension	45(11.90)	86(22.75)	131(34.65)
Hypertension Stage-I	51(13.49)	34(8.99)	85(22.48)
Hypertension Stage-II	20(5.29)	16(4.23)	36(9.52)
<b>Total</b>	<b>158(41.79)</b>	<b>220(58.20)</b>	<b>378(100.00)</b>

The distribution of Diastolic Blood pressure as shown in Table-3 reveals that among Santal population 33.33 % of total sampled respondent were exhibiting normal blood pressure where as 34.65 % respondents exhibiting pre-hypertensive stage of diastolic blood pressure which constitutes 11.90 % males and 22.75 % females respectively. A total of 22.48 % respondents have shown Satge-1 hypertension for diastolic blood pressure out of

which 13.49 % were male and 8.99 % were female respondents. Similarly 9.52 % respondents exhibiting Stge-2 hypertension for diastolic blood pressure which constitutes 5.29 % males and 4.23 % females respectively. So far diastolic blood pressure is concerned; percentage of respondents fall in stage-1 hypertension was more than satge-2 hypertension. Percentages of male respondents are higher than female in both stage of hypertension.

**Table-4: Distribution of Blood Pressure (SBP & DBP) among Santal Population**

Category of hypertension	Male N (%)	Female N (%)	Total N (%)	÷
Mormotensive	113(71.50)	194(88.18)	307(81.20)	18.737***
Hypertensive	45(28.50)	26(11.82)	71(18.80)	
Total	158(100.00)	220(100.00)	378(100.00)	

Distribution of Blood pressure among Santal population from table-4 shows that there are 71.20 % male respondents and 88.18 % female respondents exhibit normal blood pressure where as 81.20 % of combined male and female exhibits normal blood pressure. Out of the total sampled males, 28.50 %

male respondents exhibiting hypertensive tendency and 11.82 % female respondents exhibiting hypertensive tendency out of the total sampled female. There is highly significant association between blood pressure and sex in studied Santal population ( $\div = 18.737, p > 0.001$ )

**Table-5: Distribution of Systolic Blood Pressure (SBP) among Munda Population**

SBP Classification	Male N (%)	Female N (%)	Total N (%)
Normal	35(11.74)	46(15.43)	81(27.18)
Pre-hypertension	92(30.87)	76(25.50)	168(56.37)
Hypertension Stage-I	18(6.04)	12(4.02)	30(10.06)
Hypertension Stage-II	3(1.00)	16(5.36)	19(6.37)
Total	148(49.66)	150(50.33)	298(100.00)

The distribution of Systolic Blood pressure indicated in Table-5 reveals that among the Munda population, 27.18 % of total sampled respondent were exhibiting normal blood pressure. Whereas 56.37 % respondents exhibit pre-hypertensive stage of systolic blood pressure which constitutes 30.87 % males and 25.50 % females respectively. A total of 10.06 % respondents have shown Satge-1 hypertension for systolic blood pressure out of which 6.04 % were male and 4.02 % were female

respondents. Similarly 6.37 % respondents exhibiting Stge-2 hypertension for systolic blood pressure which constitutes 1.00 % males and 5.36 % females respectively. Among the studied Munda, more respondents exhibit stage-1 hypertension than stage-2 hypertension. So far as sathge-1 hypertension among Munda is concerned, there are more male respondents than female. Similarly more female respondents exhibit satge-2 hypertension than males.

**Table-6: Distribution of Diastolic Blood Pressure (DBP) among Munda Population**

SBP Classification	Male N (%)	Female N (%)	Total N (%)
Normal	50(16.77)	58(19.46)	108(36.24)
Pre-hypertension	64(21.47)	58(19.46)	122(40.93)
Hypertension Stage-I	24(8.05)	20(6.71)	44(14.76)
Hypertension Stage-II	10(3.35)	14(4.69)	24(8.05)
Total	148(49.66 )	150(50.33)	298(100.00)

The distribution of Diastolic Blood pressure as shown in Table-6 shows that among the Munda population, it is 36.24 % of total sampled respondent were exhibiting normal blood pressure where as 40.93 % respondents exhibiting pre-hypertensive stage of diastolic blood pressure which constitutes 21.47 % males and 19.46 % females respectively. A total of 14.76 % respondents have shown Stage-1

hypertension for diastolic blood pressure out of which 8.05 % were male and 6.71 % were female respondents. Similarly 8.05 % respondents exhibiting Stage-2 hypertension for diastolic blood pressure which constitutes 3.35 % males and 4.69 % females respectively. So far as diastolic blood pressure among Munda is concerned, more male respondents fall in stage-1 hypertension than females.

**Table:-7: Distribution of Blood Pressure (SBP & DBP) among Munda Population**

Category of Hypertension	Male N (%)	Female N (%)	Total N (%)	÷
Normotensive	127(85.80)	132(88.00)	259(86.90)	0.314
Hypertensive	21(14.20)	18(12.00)	39(13.10)	
Total	148(100.00)	150(100.00)	298(100.00)	

Distribution of Blood pressure among Munda population from table-7 reveal that there are 85.80 % male respondents and 88.00% female respondents exhibit normal blood pressure where as 86.90 % of combined male and female exhibits normal blood

pressure. Out of the total sampled males, 14.20 % males and 12.00 % female respondents exhibiting hypertensive tendency. There is no association between blood pressure and sex among Munda community.

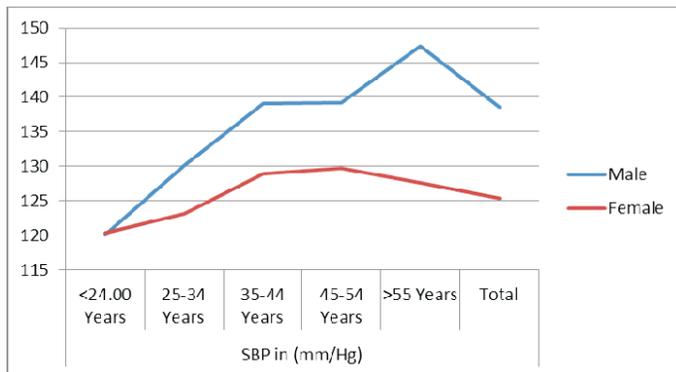
**Table:-7: Distribution of Blood Pressure (SBP & DBP) among Munda Population**

Category of Blood Pressure	Age Groups	Sex					
		Male			Female		
		N	Mean	SD	N	Mean	SD
SBP in (mm/Hg)	<24.00 Years	16	120.06	13.16	26	120.38	15.78
	25-34 Years	22	130.05	11.39	90	123.11	15.12
	35-44 Years	46	139.04	12.51	44	128.91	17.44
	45-54 Years	23	139.17	33.31	24	129.75	23.83
	>55 Years	51	147.33	31.28	36	127.56	18.91
	Total	158	138.56	24.82	220	125.40	17.56
DBP (mm/Hg)	<24.00 Years	16	78.38	2.16	26	79.92	12.32
	25-34 Years	22	83.64	6.89	90	82.33	8.59
	35-44 Years	46	90.37	5.05	44	85.18	10.07
	45-54 Years	23	88.22	23.28	24	86.83	13.56
	>55 Years	51	90.90	17.21	36	81.39	9.32
	Total	158	88.08	14.17	220	82.95	10.23

Observation made from the table-8 reveals that Mean SBP (mm/Hg) of *Santal* males in present study is  $138.56 \pm SD 24.82$  and that of female is  $125.40 \pm SD 17.56$ . Mean systolic blood pressure among *Santal* male and female show an increasing tendency by advancing age, i.e. older adults have shown higher systolic blood pressure than younger one. Average SBP of male is higher than female Mean DBP (mm/

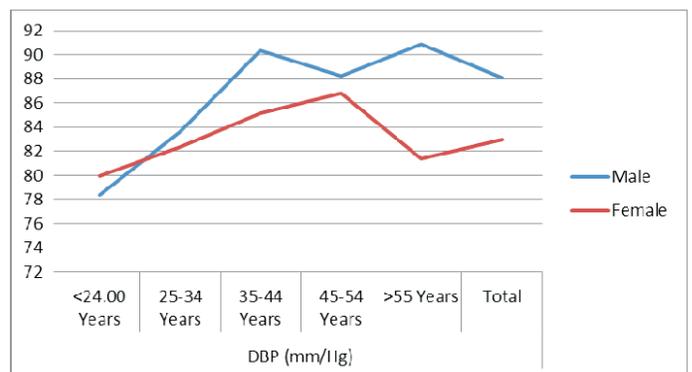
Hg) of *Santal* males in the present study is  $88.08 \pm SD 14.17$  and that of female is  $82.95 \pm SD 10.23$ . Mean diastolic blood pressure among *Santal* male and female show an increased tendency by advancing age i.e. older adults have shown higher diastolic blood pressure than younger one. Average DBP of male is higher than female.

**Figure-1 Mean SBP among adult males and females of *Santal* community**



The Figure-1 shows that mean SBP of male participants were higher than female participants among *Santal*.

**Figure -2 Mean DBP among adult males and females of *Santal* community**



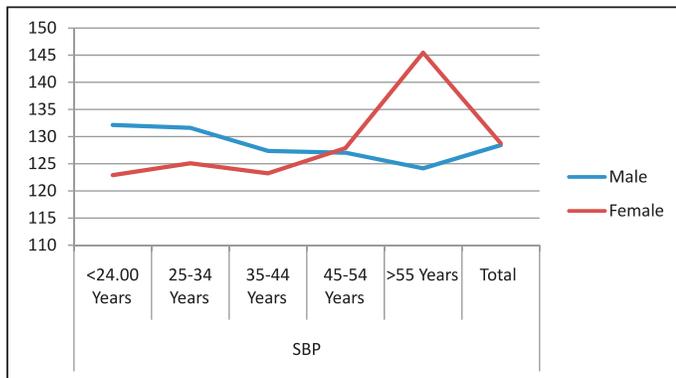
The Figure-2 shows that mean DBP of male participants were higher than female participant among *Santal*

**Table-9: Age group and Sex wise distribution of mean SBP and DBP among adults *Munda***

Category of Blood Pressure	Age Groups	Sex					
		Male			Female		
		N	Mean	SD	N	Mean	SD
SBP in (mm/Hg)	<24.00 Years	7	132.14	8.55	22	122.91	9.44
	25-34 Years	56	131.63	9.17	46	125.09	19.23
	35-44 Years	25	127.36	15.92	34	123.24	11.33
	45-54 Years	27	127.04	12.09	18	127.89	18.59
	>55 Years	33	124.15	26.52	30	145.47	35.77
	<b>Total</b>	<b>148</b>	<b>128.43</b>	<b>16.25</b>	<b>150</b>	<b>128.76</b>	<b>22.66</b>
DBP (mm/Hg)	<24.00 Years	7	84.29	5.88	22	77.00	7.77
	25-34 Years	56	86.61	10.02	46	83.30	11.13
	35-44 Years	25	82.04	9.89	34	81.82	7.34
	45-54 Years	27	83.04	9.70	18	83.11	9.98
	>55 Years	33	82.55	14.75	30	89.53	16.83
	<b>Total</b>	<b>148</b>	<b>84.17</b>	<b>11.08</b>	<b>150</b>	<b>83.27</b>	<b>11.77</b>

Observation made from the table-9 reveals that Mean SBP (mm/Hg) of *Munda* males in present study is  $128.43 \pm SD 16.25$  and that of female is  $128.76 \pm SD 22.66$ . Mean SBP among *Munda* male was higher in younger age group than older which shows there was decline trend with advancing age. Among female higher SBP value was observed among 25-34 and 45-54 age group. Average SBP of male was higher than female except >55 age group. Mean DBP (mm/Hg) of *Munda* males in the present

**Figure -3 Mean SBP among adult males and females of *Munda* community**



study is  $84.17 \pm SD 11.08$  and that of female is  $83.27 \pm SD 11.77$ . Mean diastolic blood pressure among *Munda* male was higher <24 and 25-34 age group i.e. it was higher in younger age group than older. Among female higher DBP value was observed in >55 age group. Average DBP of male is higher than female except >55 age group. Observation was made from above table that older female members of *Munda* tribal community showed higher value of both Systolic and Diastolic blood pressure.

**Figure -4 Mean DBP among adult males and females of *Munda* community**

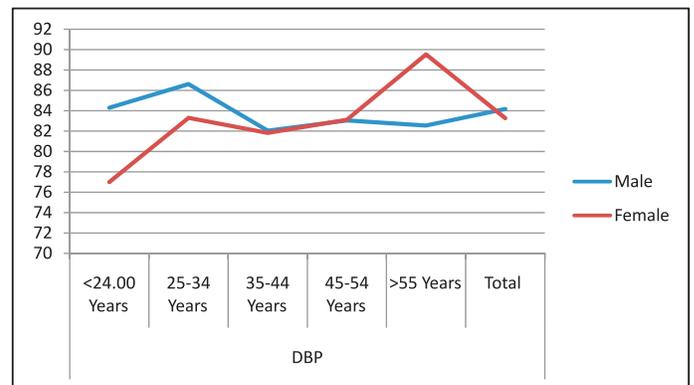


Figure-3 indicates that SBP among male participant was decreasing with advancing age where as among female SBP value was decreasing at middle age and increasing at advancing age.

**Table 10: Comparative account of prevalence of hypertension among different ethnic groups in Odisha**

Population	Place of study	Prevalence (%)		Reference
		Men	Women	
Santal	Jajpur,Odisha	28.50	11.82	Present study,2020
Munda	Jajpur,Odisha	14.20	12.00	Present study,2020
Juang	Keojhar,Odisha	6.17	3.09	Satapathy et. al,2019
Bhumij	Mayurbhanj,Odisha	10.92	10.08	Satapathy et al,2019
Bathudi	Mayurbhanj,Odisha	8.15	4.44	Satapathy et al,2019
Savar	Mayurbhanj,Odisha	3.66	6.10	Satapathy et al,2019
Santal	Keojhar,Odisha	5.20	1.30	Satapathy et al,2019
Bathudi	Keojhar,Odisha	7.60	2.56	Satapathy et al,2019
Munda	Jajpur,Odisha	23.33	15.00	Jajpur,Odisha

Santal	Mayurbhanj,Odisha	13.4	5.3	Barik etal,2018
Desia Kondh	Kandhamal,Odisha	2.72	6.80	Mohapatra & Satapathy, 2018
Amanatya	Nabarangpur,Odisha	5.0	5.0	Satapathy et al,2017
Saora	Nabarangpur,Odisha	1.66	13.33	Satapathy et al,2017
Santal	Mayurbhanj Odisha	10.7	8.4	Kshyatriya & Acharya. 2016
Bhumij	Mayurbhanj Odisha	12.9	16.4	Kshyatriya & Acharya, 2016
Bathudi	Mayurbhanj Odisha	5.0	19.0	Kshyatriya & Acharya, 2016
Bhumij	Mayurbhanj Odisha	10.9	10.1	Mohapatra et al, 2015
Bathudi	Mayurbhanj,Odisha	8.2	4.44	Mohapatra et al, 2015
Savar	Mayurbhanj,Odisha	3.6	6.1	Mohapatra et al, 2015
Santal	Keonjhar, Odisha	5.2	1.3	Mohapatra et al, 2015
Bathudi	Keonjhar, Odisha	7.7	2.6	Mohapatra et al, 2015
Munda	Jajpur, Odisha	23.3	15.0	Mohapatra et al, 2015
Savar	Mayurbhanj,Odisha	6.10	3.66	Paital,2013
Bhumij	Mayurbhanj,Odisha	10.08	10.92	Paital,2013
Tribal Groups	Odisha	53.7	48.8	NNMB Tribal Report,2009
Tribal groups	Angul, Cuttack, Khurda	24.8	13.4	Kusuma YS et al (2008) Orissa

## Discussion

Like any other communities, tribal communities in India also experiencing remarkable changes in their social, cultural, economic as well as educational sphere due to various developmental measures under taken by government, missionary and other stakeholders since independence. Gradually they are exposed to mainstream society, as a result their life style, food habits and livelihood pattern has changed under the impact of industrialization, modernization. Migration for better livelihood also plays a major role for exposing them with outer developing society. Steadily various life style disorders are entering into several tribal groups which was rare to them earlier.

Study on blood pressure draws attention by scientific fraternity as it has declared as major risk factors for developing cardiovascular disease (CVD) including ischemic heart disease, stroke, myocardial infarction, cardiac failure etc. Several recent studies highlighted that high systolic blood pressure is emerging as one of the major risk factors contributing for cardio vascular diseases (Global burden of disease study, 2017, ICMR, 2017). WHO also set target to reduce 25% relative reduction in the prevalence of raised blood pressure out of total nine targets to control non communicable disease to be attained by 2025 (WHO, 2014). Many Biological anthropologist, Epidemiologist, Public health professional and paying more attention to study the prevalence of blood pressure among

various rural, backward, marginalized and indigenous tribal communities to explore the causative factors for its increasing trend, as it was rare to them in earlier times. Many studies conducted among tribal communities are compared and presented in tabular format. Many studies referring on WHO criteria are not included for comparison with present study as it is based on JNV-VII criteria classification.

Among *Santal* 17.46 % (Male: 9.52 % Female: 7.93 %) respondents have shown Stage-1 hypertension for SBP and 10.31 % (Male: 7.67 % Female: 2.64 %) respondents exhibiting Stage-2 hypertension for SBP. Total of 22.48 % (Male: 13.49 % Female: 8.99 %) respondents have shown Stage-1 hypertension for DBP and 9.52 % (Male: 5.29 %, Female: 4.23 %) respondents exhibiting Stage-2 hypertension for DBP. Mean SBP (mm/Hg) of *Santal* males in present study is  $138.56 \pm SD 24.82$  and that of female is  $125.40 \pm SD 17.56$ . Mean SBP among *Santal* male and female show an increased tendency by advancing age, i.e. older adults have shown higher systolic blood pressure than younger one. Mean DBP (mm/Hg) of *Santal* males in the present study is  $88.08 \pm SD 14.17$  and that of female is  $82.95 \pm SD 10.23$ . There are 28.50 % males and 11.82 % female respondents exhibiting hypertensive tendency. Similarly among *Munda* 10.06 % (Male: 6.04 % Female: 4.02 %) respondents have shown Stage-1 hypertension for SBP and 6.37 % (Male: 1.00 % Female: 5.36 %) respondents exhibiting Stage-2 hypertension for SBP. Total of 14.76 % (Male: 8.05 % Female: 6.71 %) respondents have shown Stage-1 hypertension for DBP and 8.05 % (Male: 3.35 %, Female: 4.69 %) respondents exhibiting Stage-2 hypertension for DBP. Mean SBP (mm/Hg) of *Munda* males is  $128.43 \pm SD 16.25$  and that of female is  $128.76 \pm SD 22.66$ . Mean SBP among *Munda* male was higher in younger age group than older which

shows there was decline trend with advancing age. Mean DBP (mm/Hg) of *Munda* males is  $84.17 \pm SD 11.08$  and that of female is  $83.27 \pm SD 11.77$ . Among female higher DBP value was observed in >55 age group. Average DBP of male is higher than female except >55 age group. It was observed that older female members of *Munda* tribal community showed higher value of both SBP and DBP. There are 14.20 % male and 12.00 % female respondents exhibiting hypertensive tendency.

### Case Study-1

We visited Radaga village of Chingugipal G.P of Sukinda Block during the fieldwork. For collection of various socioeconomic data and measurement of blood pressure, we visited door to door and established good rapport with community members. We came in contact with a young man named X belong to Munda tribal group, having 9<sup>th</sup> standard literacy, aged about 34, working as a machine operator in local Feccor mines and earning Rs 15000 per month. His income was much higher as compared to other members of his community. We started collecting data in the front veranda of that person. Keeping the request, he called many individuals to participate in study and co-operated by staying for long time as that day was holiday for him. During interview with him, what we observed that he was continuously chewing Gutkha. After few hours, we asked him how much you are chewing, why you chew many times, when you started and what amount you spent for that per day etc and finally requested him to quit it for harmful effect on health. Listening my conversation with him, his wife and mother told me that, "sir convince and motivate him for quit chewing Gutkha".

He replied,

*"Today I used less due to holiday and no duty for me, but during duty time, I chew two times more. As our*

*duty is very hard and risky, we have to operate heavy machine in mines for 10 hours per day and shift wise duty particularly evening and night it is more risk for us. So in order to relieve pain, I frequently used Gutkha and I spent 60 rupees per day and apprx.1800 per month. I have addicted with Gutkha since 7 years when started working in mines”.*

He often consumes alcohol two times per week. We suggested him to gradually reduce the chewing and consumption and finally determine to quit due to its harmful effect. But he responded that, to earn, he has to work in mines as there are no other options and to cope with this hard and risky duty he is bound to take Gutkha and pan masala. We measured his blood pressure more than five times on that day and more than 30 times during my field work, his systolic value ranged all the times above 137 mm/hg and diastolic vales ranged above 89 mm/hg. It indicates that he was in transitional phase of pre-hypertension to satge-1 hypertension.

### **Case Study-2**

During the fieldwork in Gagiasahi of Kaliapani G.P., we came in contact with a lady named Y aged about 45 years belong to *Santal* community selling *handia*, the country liquor every day. We had conversation with her many times asking about their family. She narrated that as follows:

*“My husband who had served earlier for 15 years as laborer in open cast mines left job as he was affected with tuberculosis two times and joint pain and he is now unfit to work and staying at home. In order to meet the livelihood and family expenditure, I am regularly selling handia since five years”.*

But since last two years their income has gradually declined as people of their communities also prefer adulterated alcohol rather than country made handia to get them more toxicity, thrilling and

hallucination effect to get rid of tension from body pain after return from hard work. This shows how tribal people struggle for livelihood and addicted with alcohol. We have measured the blood pressure level of that *Santal* lady several times and observed that her systolic blood pressure ranged from 178-220 mm/hg and diastolic value ranged from 98-110 mm/hg. But she had never taken medical checkup. This clearly indicates that she was suffering from hypertension and due to not taking any treatment she may suffer from any cardo vascular diseases.

### **Conclusion**

Many behavioral, social and metabolic contributing factors are responsible for prevalence of hypertension among different human societies. Among tribal communities in India there is an increasing trend of hypertension was reported as there is remarkable changes occurred in life style, food habits and livelihood pattern. So there is possibility of increasing trend of any life style related changes including raised blood pressure level among tribal communities. In the present study higher prevalence among *Santal* was reported possibly attributed due to migration, acculturation, alcohol consumption, and tobacco addiction, high salt intake and adoption of modern lifestyle. Prevalence rate among *Santal* was higher than *Munda* group. As *Santal* are most developed tribal group in India, they are more acculturated and adopted modern life style rapidly which make them fall in the clutches lifestyle disease like hypertension. More study with their detailed culture might help to through light on any other factors responsible for prevalence of hypertension among studied communities.

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## ADOLESCENT SEXUAL HEALTH: KNOWLEDGE, ATTITUDE & PRACTICE AMONG JUANG(FEMALES) OF BANSPAL BLOCK OF KEONJHAR, ODISHA

Rupashree Behera<sup>1</sup>, Kanhu Charan Satapathy<sup>2</sup> & Prasanna Kumanr Patra<sup>3</sup>

### Abstract:

**Background:** Adolescence is the second decade of life. They are no longer children yet no adults. This is a period of transition from childhood to adulthood. According to WHO, Adolescence is the age period from 10 till 19 years. It is also called puberty period. The children from the poor scheduled tribes are not being sent school. Besides education, health problems in adolescents are major factor because of limited health care facilities and lack of education. The main aim of the present study is to understand adolescent sexual health, knowledge, behaviour and practice of Juang adolescent girls from Kudiposa Panchayat of Banspal block of Keonjhar district of Odisha.

**Methodology:** Juang, one of the 13 primitive tribe of Odisha, residing in Keonjhar district of Odisha having maximum concentration in this district and some are scattered in Dhenkanal district. We had planned to study about the Juang tribal group of Kundhei Panchayat of Baanspal block of Keonjhar district of Odisha. 75 adolescent girls were taken by stratified sampling method. And then data were collected by interview method.

**Results:** About 53.52% adolescent girls are not going to school. Most of girls do not know about menstrual hygienic. 33.8% of adolescent girls knew about menstruation from friends and 28.4% from mothers. About 87.8% girls do not know whether a girl can become pregnant before menarche or not. About 57.2% of adolescent girls do not have any knowledge about HIV/AIDS.

**Conclusion:** The school going girls have better knowledge about sexual reproductive health than other girls because education influences a lot about their social behaviour and enhance knowledge about sexual health. Counselling of adolescent girls and their mothers on sexual hygiene should be done by ANM/ASHA/HWF.

### Introduction

The term Adolescence is derived from the Latin word "Adolescent", meaning to grow to mature. It is a transitional stage of physical and psychological development that generally occurs during the period from puberty to legal adulthood. According to WHO,

Adolescence is the age period from 10 till 19 years. It is also called puberty period. In this period rapid and maximum physical-physiological, psychological-emotional and spiritual changes takes places. It is widely accepted that adolescents are

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misunderstood. One problem is that it is hard to characterize: the concept of puberty does not capture the decade or more of transformative physical, neural, cognitive and socio-emotional growth that a young person goes through. Another is that science, medicine and policy have often focused on childhood and adulthood as the most important phases of human development, glossing over the years in between. Young and growing children have poor knowledge and lack of awareness about physical and psychological changes that occurs during adolescence.

In view of various problems of adolescents, Government of India launched its first comprehensive programme for adolescents, 'Rashtriya Kishor Swasthya Karyakram', during January 2014 which has a sharp focus on adolescents' sexual health. This programme intends to ensure holistic development of the adolescent population. This programme defines adolescent group as 10 to 19 years age group, which would target their nutrition, reproductive health, and substance abuse, among other issues.

There are 1.2 billion adolescents in the world, 85% of them live in developing countries like India. In India adolescents are over 21.4% of the population. According to NFHS-4 48% of rural women use a hygienic method of menstrual protection, compared with 78% if urban women. According to the data from the NFHS-4, overall use of sanitary napkins in Odisha is 33.5% and only 42.8% of rural women between the age of 15 and 24 years use proper hygienic methods of protection during menstruation. Women with 12 or more years of schooling are more than four times as likely to be using a hygienic method as women with no schooling (81% versus 20%). The median age at first birth among women age 25-49 in India is 21.0 years. Teenage pregnancy is high in rural areas. The

level of teenage pregnancy decreases with an increasing level of schooling.

The tribal population constitutes 8.6% of the nation's total population, over 104 million people according to the 2011 census. The tribal population in Odisha constitutes 22.8% of the total tribal population. Thus, it occupies 2<sup>nd</sup> place in term of tribal population in the country.

The Juangs are one of 13 primitive tribe of Odisha. The present study makes an assessment of adolescent sexual health, knowledge, behaviour and practice of Juang adolescent girls from Kudiposa panchayat of Banspal block of Keonjhar district of Odisha.

### **Objectives:**

A modest attempt has been made in the present work to study Juang girls' knowledge about puberty, menstruation hygiene and their education on reproductive health.

### **Methods**

The adolescent girls' sexual behavioural status of Juang particular vulnerable tribal group residing in Keonjhar district of Odisha having its maximum concentration was studied extensively. In the present study Kudiposa Panchayat Banspal block of Keonjhar district had been selected randomly as the study area. Moreover, majority of Juang tribal people residing in this area. We had taken villages of this panchayat namely Kundhei, Ghungi, Tala Kansa and Toranipani. Besides these villages the Juang adolescent girls from girls' hostel of Kundhei high school also taken as subject in the present study. Study was conducted for 1 month from 16 January 2020 to 16 February 2020. Pre-designed pre-tested semi structured schedule applied on the subjects. Total 74 adolescent girls have been taken in the present study by using systematic random sampling method. All the girls' age of 10-19 years was selected

including married subjects. Descriptive statistical analysis was carried out to explore the distribution of several categorical and quantitative variables.

### Results & Discussion

Out of 74 study subjects' majority 41 (55.41%) were from middle adolescent age i.e. 14-16 years old

followed by 18 (24.32%) from late adolescents age group (15-19 years old) and 15 (20.27%) from early adolescents age group (10-13 years old). All the subjects are from nuclear family because in Juang community usually after marriage the couples live separately due to their small house. Majority of the parents were illiterate.

**Table 1: Literacy status of respondents**

Literacy Rate		No. of respondents	%
Literate	Continuing	33	95.94
	Drop out	38	
Non-literate		3	4.06
Total	74	100	

From the above Table 1, it observed that 95.94 percent adolescent girls are literate and 4.06 percent are non-literate and the drop-out status among the respondents is maximum, which is 53.52 percent.

**Table 2: Marital status of the respondents**

Age Group	Unmarried (%)	Married (%)	Total (%)
Early Adolescence	15(20.3)	0(0.0)	15(20.3)
Middle Adolescence	40(54.1)	1(1.4)	41(55.4)
Late Adolescence	16(21.6)	2(2.7)	18(24.3)
Total	71(95.9)	3(4.1)	74(100.0)

From the above Table 2 it reveals that Maximum girls taken as respondents are unmarried which is 95.9 Percent.

**Table 3: Distribution of Age at menarche of the respondents**

Age group		Don't know	10	11	12	13	14	15	Total
Early Adolescence	N	1	0	5	5	4	0	0	15
	N% of Total	1.4%	0.0%	6.7%	6.7%	5.5%	0.0%	0.0%	20.3%
Middle Adolescence	N	6	1	11	7	9	5	2	41
	N% of Total	8.1%	1.4%	14.9%	9.5%	12.1%	6.7%	2.7%	55.4%
Late Adolescence	N	8	1	2	6	1	0	0	18
	N% of Total	10.8%	1.4%	2.7%	8.1%	1.4%	0.0%	0.0%	24.3%
Total	N	15	2	18	18	14	5	2	74
	N% of Total	30.8%	2.7%	24.3%	24.3%	19.0%	6.7%	2.7%	100%
Mean age at Menarche		12.14±1.15							
N=59									

The above Table 3 of study reveals the age at menarche among the adolescent girls of Juang communities. It was observed that maximum number of girls have attained their menarche at the age of 11 and 12 years old which is about 24.3% each. However, 20.3% did not give any response or also some told they forgot about their menarche age. The mean age at menarche among the Juang adolescent girls found at  $12.4 \pm 1.15$  years.

**Table 4: Source of info regarding Menstrual cycle**

Adolescent group		By Experiencing it	By observing others	Mother	Sister	Friends	Others	Total
Early Adolescent	Count	4	2	3	3	2	1	15
	% of Total	5.4%	2.7%	4.1%	4.1%	2.7%	1.4%	20.3%
Middle Adolescent	Count	7	14	6	7	6	1	41
	% of Total	9.5%	18.9%	8.1%	9.5%	8.1%	1.4%	55.4%
Late Adolescent	Count	3	14	0	1	0	0	18
	% of Total	4.1%	18.9%	0.0%	1.4%	0.0%	0.0%	24.3%
Total	Count	14	30	9	11	8	2	74
	% of Total	18.9%	40.5%	12.2%	14.9%	10.8%	2.7%	100.0%

From the above Table 4, it reveals that most of the girls i.e. 40.5% are getting information regarding menstrual cycle are by observing others, which is followed by experiencing themselves i.e. 18.9%.

**Table 5: Practice of Menstrual hygiene care**

Adolescent group		Pad/ Napkin	Old soft clothes	Nothing	Total
Early Adolescent	Count	14	1	0	15
	% of Total	18.9%	1.4%	0.0%	20.3%
Middle Adolescent	Count	35	5	1	41
	% of Total	47.3%	6.7%	1.4%	55.4%
Late Adolescent	Count	8	9	1	18
	% of Total	10.8%	12.2%	1.4%	24.3%
Total	Count	57	15	2	74
	% of Total	77.0%	20.3%	2.7%	100.0%

From the above Table 5, it reveals about practice of menstrual hygiene among Juang adolescent girls. Most of the girls about 77% are using pads/sanitary napkin during their menstruation whereas 20.3% of respondents are using soft clothes during their menstruation.

**Table 6: Knowledge regarding reproductive health**

Sl. No.	Response	Early Adolescent (%)	Middle Adolescent (%)	Late Adolescent (%)	Total (%)
<b>1</b>	<b>Practice on early marriage should discourage</b>				
	Yes	15 (20.3%)	40 (54.0%)	16 (21.6%)	71 (95.9%)
	No	0	1 (1.4%)	1 (1.4%)	2(2.7%)
	DNK/No Response	0	0	1(1.4%)	1(1.4%)
<b>2</b>	<b>It's alright for unmarried boys &amp; girls to have relationship</b>				
	Yes	8 (10.8%)	31(41.9%)	15(20.3%)	54 (73.0%)
	DNK/No Response	7 (9.5%)	10 (13.5%)	3 (4.0%)	20 (27.0%)
<b>3</b>	<b>Girls' should remain virgin until they marry</b>				
	Yes	0	10 (13.5%)	11 (14.8%)	21 (28.3%)
	DNK/No Response	15 (20.3%)	31 (41.9%)	7 (9.5%)	53 (71.7%)
<b>4</b>	<b>Can a girl get pregnant even she has not had her 1<sup>st</sup> period</b>				
	No	0	2 (2.7%)	7 (9.5%)	9 (12.2%)
	DNK/No Response	15 (20.3%)	39 (52.7%)	11 (14.8%)	65 (87.8%)
<b>5</b>	<b>Can a girl get pregnant on her 1<sup>st</sup> intercourse</b>				
	No	0	0	1 (1.4%)	1 (1.4%)
	DNK/No Response	15 (20.3%)	41 (55.4%)	17 (23.0%)	73 (98.6%)
<b>6</b>	<b>Does woman stop growing after she has had sexual intercourse</b>				
	No	0	0	1(1.4%)	1 (1.4%)
	DNK/No Response	15 (20.3%)	41 (55.4%)	17 (23.0%)	73 (98.6%)

Generally, clan exogamy and tribe endogamy marriage rule is followed by the Juang community. However, sometimes exceptions are also seen in the marriage rule, which is considered as Taboo.

The table of present study it illustrates knowledge and awareness regarding reproductive health among presently studied particularly vulnerable tribal group. It was observed that most

of the adolescent girls responded against the practice of early marriage and opined in favour of discourage the practice of early marriage. Although they didn't know anything about biological impact on child marriage but their view is that in childhood a girl doesn't know anything about society and marital life so she couldn't manage that life. About 73% girls responded yes about it is alright for unmarried boys and girls to have relationship however maximum of them did not responded in regard to virginity before marriage because they are didn't know anything regarding this. It was also found that love marriage

is acceptable in this tribal community but it is possible only if both bride and groom are from their community and of different clans.

Only 12.2% of girls have knowledge that a girl can't get pregnant before her menarche or 1<sup>st</sup> period. However, the early adolescent girls didn't give any response regarding this. And almost all girls didn't give any response or don't know about that whether a girl can get pregnant on her 1<sup>st</sup> intercourse or not and whether a woman stop growing after she has had sexual intercourse or not. Only 1 adolescent girl who is married responded those questions.

**Table 7: Knowledge about HIV/AIDS**

Adolescent group	Yes	No	Total
Early Adolescent (10-13 yr.)	2	13	15
	2.7%	17.6%	20.3%
Middle Adolescent (14-16 yr.)	20	21	41
	27.0%	28.4%	55.4%
Late Adolescent (17-19 yr.)	9	9	18
	12.2%	12.2%	24.3%
Total	31	43	74
	41.9%	57.2%	100.0%

From the above table 6 it reveals that most of the girls do not have any knowledge about HIV/AIDS which is about 55.4%. Although some girls hear about HIV/AIDS from school or health workers but none of them know how HIV/AIDS were spread and how it could be prevented.

**Table 8: Knowledge regarding Social behaviour**

Sl No.	Response	Early Adolescent (%)	Middle Adolescent (%)	Late Adolescent (%)	Total (%)
1	<b>Having or accessing cell phone</b>				
	Yes	1 (1.4%)	5 (6.7%)	6 (8.1%)	12 (16.2%)
	No	14 (18.9%)	36 (48.8%)	12 (16.2%)	62 (83.8%)
2	<b>Accessing internet</b>				
	Yes	0	0	1 (1.4%)	1 (1.4%)
	No	15 (20.3%)	41 (55.4%)	17 (23.0%)	73 (98.6%)

<b>3</b>	<b>It is acceptable for a son to choose his own spouse.</b>				
	<b>Agree</b>	<b>7 (9.5%)</b>	<b>33 (44.6%)</b>	<b>16 (21.6%)</b>	<b>56</b>
	<b>Disagree</b>	<b>1 (1.4%)</b>	<b>0</b>	<b>0</b>	<b>1 (1.4%)</b>
	<b>DNK</b>	<b>7 (9.5%)</b>	<b>8 (10.8%)</b>	<b>2 (2.7%)</b>	<b>17 (23.0%)</b>
<b>4</b>	<b>It is acceptable for a daughter to choose his own spouse.</b>				
	<b>Agree</b>	<b>7 (9.5%)</b>	<b>33 (44.6%)</b>	<b>16 (21.6%)</b>	<b>56 (75.7%)</b>
	<b>Disagree</b>	<b>1 (1.4%)</b>	<b>0</b>	<b>0</b>	<b>1 (1.4%)</b>
	<b>DNK</b>	<b>7 (9.5%)</b>	<b>8 (10.8%)</b>	<b>2 (2.7%)</b>	<b>17 (22.9%)</b>
<b>5</b>	<b>Dowry is a social norm and it should continue.</b>				
	<b>Agree</b>	<b>4 (5.4%)</b>	<b>14 (18.9%)</b>	<b>11 (14.8%)</b>	<b>29 (39.2%)</b>
	<b>Disagree</b>	<b>8 (10.8%)</b>	<b>24 (32.4%)</b>	<b>6 (8.1%)</b>	<b>38 (51.3%)</b>
	<b>DNK</b>	<b>3 (4.1%)</b>	<b>3 (4.1%)</b>	<b>1 (1.4%)</b>	<b>7 (9.5%)</b>
<b>6</b>	<b>A Male child is preferable than female child.</b>				
	<b>Agree</b>	<b>1 (1.4%)</b>	<b>2 (2.7%)</b>	<b>0</b>	<b>3 (4.1%)</b>
	<b>Disagree</b>	<b>14 (18.9)</b>	<b>39 (52.7%)</b>	<b>17 (23.0%)</b>	<b>70 (94.6%)</b>
	<b>DNK</b>	<b>0</b>	<b>0</b>	<b>1 (1.4%)</b>	<b>1 (1.4%)</b>

The above table 8 illustrates Social communication and social behaviour among the study participants. It reveals that majority of adolescent girls don't have or access own cell phone, which implies poor knowledge about social media or any other communication medium. Although a few girls have mobile phone but almost all of them do not access internet.

However, majority of girls agreed in regard to choosing their own spouse. About 51.3% girls disagreed about continuing dowry system however, 39.2 % girls agreed in this matter. About 94.6% girls do not believe on preference of male child. They think it may be boy or girl it won't impact on them.

#### **Common practices during menstruation:**

In Juang community, the girls or women do not have any special rites during menarche or 1<sup>st</sup> period. They follow rules like other menstruation periods.

During menstruation they neither go to temple nor perform any sacred rites. Usually, they did cook, went to field for work during menstruation. Majority of girls said menstruation occurs for 3-5 days. Association between menstrual hygiene and girl's education is statistically significant. Because it was observed that the girls who are going to school have better hygienic in compare to those drop out or illiterate girls. Majority subjects had illiterate mothers. So, those girls who don't went to school follow their mother like social customs, hygienic conditions etc. However, now-a-days few girls in village using pads by buying pads at subsidised rate of Rs. 6 for six napkins through ASHA workers under Khushi Scheme.

#### **Conclusion:**

The school going girls have a better knowledge about sexual reproductive health than the other girls

because education influences a lot about their social behaviours and enhance knowledge about sexual health. Educational awareness and literacy in this adolescent group is in very poor condition, but higher - secondary education should encourage more to decrease drop-out rate. Drop-outs' main reason is poor-economic condition and family-health miserable condition.

Late adolescents have more sex-reproductive health knowledge than other group due to more expose in communication field and more experience in society. Middle adolescents perform more positive responsive behaviours than others, it may because of more educational and academic concern than others, age, education, and resource of facility to communication play an important positive role in adolescents and their sex-reproductive-health knowledge and awareness.

Counselling of adolescent and their mothers on sexual hygiene should be done by AWW/HWF. But it can fruitful if only the adolescent girls will participate in those counselling programs. According to AWW or health workers most of the girls do not attend any program organize by them because girls and their parents think it is a waste of time to attend those programs and during that period girls should engage in household activities or other labour works. Thus, local tribal girls should be trained by health functionaries so that they impart health education to their peer group on different aspect of menstrual and personal hygiene and sexual practices.

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**BANDHA DESIGN AND MOTIFS OF BHULIYA WEAVERS OF BARPALI HANDLOOM  
CLUSTER OF BARGARH DISTRICT, ODISHA**Aisurya Rajalaxmi Dhir Samanta<sup>1</sup> & Upali Aparajita<sup>2</sup>**Abstract:**

Handlooms have remained not only one of the important options of livelihood but have also been the saviors of the various traditional skills that have been inherited by the weaver over generations. One of the unique processes in handloom weaving is the 'ikat' style of weaving. Ikat is a tie-die process on both the warp and weft according to the designer's needs and then weaving the yarns to achieve the design. When only warp or weft is tie and dyed, it is called 'single ikat', whereas when both warp and weft are tie-dyed, it is called double ikat. Odisha ikat is known as 'Bandhakala' done mainly by Bhuliya and Kosta weavers of western Odisha. Ikat or Bandha sarees are distinguished and characterized by its design, fiber content, colour, motifs and graceful look. The motifs used in ikat sarees are striking and exquisite, reflecting their surrounding nature and local culture. Floral pattern, geometrical pattern, small flower, human figure, conch shell, wheel, animal and bird depictions, etc. are used in these sarees. Motifs are weaved in Bandha saree are very delicate and intricate as these are arranged by tying the yarn according to the desired pattern.

**Key words:** *Handloom, Textile cluster, Bhuliya weaver, Bandhakala Design, Motif*

**Introduction**

The Indian textile industry is one of the largest in the world with a large unmatched raw material base and manufacturing strength across the value chain. It is the 2nd largest producer of MMF Fiber after China. India is the 6th largest exporter of Textiles & Apparel in the world. India's textiles and clothing industry is one of the mainstays of the national economy. The share of textile and apparel (T&A) including handicrafts in India's total exports stands at a significant 11.8% in 2019- 20. India has a share of 5% of the global trade in textiles and apparel. The uniqueness of the industry lies in its

strength both in the hand-woven sector as well as in the capital intensive mill sector. The mill sector is the second largest in the world. Traditional sectors like handloom, handicrafts and small scale powerloom units are the biggest source of employment for millions of people in rural and semi urban area. It provides direct employment of over 45 million people and source of livelihood for over 100 million people indirectly, including a large number of women and rural population. The sector has perfect alignment with Government's key initiatives of Make in India, Skill India, Women Empowerment and Rural Youth Employment<sup>15</sup>.

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The handloom industry in India had attained a very high degree of excellence even centuries before the mechanized loom was invented to produce cloth. As the largest cottage industry in India, it occupies a place of prominence in the economy of the country. Nearly 1/5th of the total requirement of cloth in the country is provided by this sector, catering to all segments of the markets. The Indian handloom industry has been popular the world over for its workmanship. Their fineness was compared to that of the spider's web by Marco Polo. The Masulipatnam hand-printed textiles were so perfectly coloured that it was sometimes difficult to distinguish them from the finest embroidery. India was a producer of cotton, silk and woollen fabrics for costumes. The creative urge of the people found expression in myriad forms of aesthetic textiles. India's handloom textiles were well-known for their colourful weaving, precise details, and unique character and design, workmanship, motif and colour combinations.

Handloom textiles are a part of the cultural heritage of India from time immemorial. History shows that hand-weaving has been in existence in India for over five thousand eight hundred years as the people of Mohenjo-Daro knew how to grow cotton, spin and weave. These early inhabitants of the Indus Valley made garments of dyed and patterned cotton, as is evident from the discovery, during the excavation of the ancient Harappan sites, of a fragment of madder dyed cotton woven in a coarse plain weave. The archaeologists also found terracotta spindle whorls. These important revelations from the ancient site confirmed knowledge of spinning and weaving and the magical process of "Manjistha" or madder dyeing. It was a discovery of the utmost importance because these finds were the first signs of the use of cotton and dyed garments in the Indian subcontinent. In the Vedas and Puranas, there are innumerable

references to the exquisite qualities and wide -range of fabrics worn by the Gods, Kings and the people at large. Each God and Goddess is described to be clad in a certain particular type of fabric, i.e., Lord Krishna in yellow colour, Goddess Kali in red blood dress and so on. Buddhist literature has many references to the magnificent cotton spinners and weavers of Kashi. The fabric was so finely woven that oil could not penetrate the cloth. Spinning was the work of women. Cotton cloths were washed, calendared, starched and perfumed. A cotton cloth from Kashi was used to wrap the body of the Chakravarti, the Emperor. It was also used on the body of the Buddha when he attained Nirvana, eternal rest. Cotton muslins forms India were highly prized in Babylon. They were referred to as Sindhu, indicating their origin in the Valley of the Indus. Roman emperors paid fabulous prices for the treasured Indian cottons, which came to be known as 'woven winds'. Hundreds of years later, in Moghul India, these wondrous cottons, the MulMul Khas, were given poetic names: Abrawan (running water) or Shubnam (morning dew). They were said to become invisible when wet and stretched on grass. Silk cloth was also widely used. The word 'Vichitra Patolka' is mentioned in the beginning of this era in Buddhist texts to indicate tie- dyed patterned multi-coloured silks akin to the Patolas of Gujarat. There is also mention of scarlet flowered silks being worn by the highborn women of Madurai in South India.

### **Ikat design using the tie and dye process of weaving**

Design is a manifestation of cultural horizons and attainments. Diversity in geographical terrain has been accompanied by an equal variation in cultural patterns. Costume can be taken as a cultural artifact and its wide range has given full play to ingenuity in the mode of ornamentation. However, the degree of variation within a given locale has tended to be limited by set mores by which social life within the community has been regulated. There

has been considerable multiplicity in the choice of fabrics available. These have included wool, silk, bast fibers such as linen, hemp, and jute, and cotton<sup>13</sup>. It is within the range of cotton that the Indian genius has best expressed itself as it does not have the property of reflection of light, nor does it have the pleasing texture of wool. Patterning on cotton can best be achieved by variation in colour rather than texture. However, superfine muslins, particularly those in the jamdani category, provide the exceptions to this<sup>12</sup>. The earliest patterning of cotton fabrics were accompanied through methods such as ikat, plangi, and kalamkari. The term Ikat is a Malayan word and introduced into the European language by Rouffaen comes from the word "Magnikat" which means to bind, knot or wind around<sup>16</sup>. Etymologically Ikat can be the nouns: cord, thread, knot, or bundle, as well as the verbs "to tie" or "to bind" depending on the context in which it is used. It has a direct etymological relation to Japanese "Kasuri" and also to various Indonesian languages. In India it is in existence from the 4th century BC in the form of "Patalika" or "potola" as written by Dr. Moti Chandra<sup>9</sup>.

The basic feature of the tie and dye technique is to produce design on fabric by ordinarily plain interlacement of warp and weft which are already dyed in different colours according to the need of the design. The yarn in the warp and weft is dyed in different colours at different places. This is done by tying the place tightly by thread, thick leaf or rubber strip where no dyeing is required and dipping the yarn in dye bath, as in the usual process in hand dyeing, bringing in colour to the portion that is not tied. The process may be repeated by tying the dyed portion and opening full or part as necessary of the previously tied portion and then dyeing the yarn bringing in another colour on the yarn at places where required as per design. This process may be repeated multiple times to produce elaborate, multicolored patterns. When the dyeing is finished

all the bindings are removed and the yarns are woven into cloth. In other resist-dyeing techniques such as tie-dye and batik, the resist is applied to the woven cloth, whereas in ikat the resist is applied to the yarns before they are woven into cloth. Because the surface design is created in the yarns rather than on the finished cloth, in ikat both fabric faces are patterned.

A characteristic feature of ikat textiles is an apparent "blurriness" to the design which is a result of the extreme difficulty the weaver has lining up the dyed yarns so that the pattern comes out perfectly in the finished cloth. The blurriness can be reduced by using finer yarns or by the skill of the weaver. Ikats with little blurriness, multiple colours and complicated motifs are more difficult to create and hence more expensive. The process of tie and dye may be repeated to bring in more colours on to the yarn at different places. If both warp and weft are resist dyed, the resultant weave is double ikat as adopted in patola woven in Patan, Gujarat. If either the warp or the weft alone is resist dyed, the weave is termed single ikat. Representative samples may be found in Andhra Pradesh and Odisha. When the woven fabric is resisted through of process of knotting and stitching it is called plangi. The equivalent vernacular term in India is bandhani which is found in Gujarat and Rajasthan, as also the chungadi found in Madura, Tamil Nadu. When cotton fabrics were dyed patterned by selective painting or stamping mordant and resist, painted textiles were called kalamkari, while stamped one called chit<sup>13</sup>. Besides India, ikat is produced in many countries like Central Asia, Southeast Asia, Japan, Africa, and Latin America. It is known as flame weaving in Germany, Italy and Sweden, but as Flam'e or Cbin'e in French. Similarly it is known as Tala-de-lenguas in Spain and Pidan at Thailand and southern Vietnam<sup>3</sup>. It is well known in New Zealand under a special name called Grass skirts<sup>7</sup>. There are 8 main methods of development of ikat materials which is given in Table-1.

**Table-1 The methods of development of ikat materials**

Method/Technology	Medium	Patterns developed
Fold resist	Fabric	Bleeding pattern
Stitch resist	Fabric	Indonesian design
Wrap resist	Fabric	Rajastani Lahari
Tie Resist	Fabric	Bandhani/Potala
Stencil resist	Fabric	Italian design
Wax resist	Fabric	Batik Design
Mordant resist	Fabric	Printed effect
Tie resist on Yarn	Yarn	Bandha or Chitick design

Source-Buhler,Fischer and Nobholz,1980,'India Tie-Dyed Fabrics',Vol.4,pp-2,

### Bandhakala of Odisha

Odisha Ikat, also known as “Bandhakala” is a geographically tagged product of Odisha since 2007. Odisha holds 4th position in India in registered GIS. Out of 14 goods, 9 textile items are registered by the Department of Textiles, Government of Odisha and Ikat fabrics are come under such registered goods <sup>2</sup>.The villages where ikat weaving is practiced in Odisha are in the Balangir, Sonapur, Bargarh, Sambalpur districts in Western Odisha, Cuttack district, Sundargarh and Kalahandi district of southern Odisha. Concentration of units in a given geographical location producing same or similar types of products and facing common opportunities and threats is called a cluster. These have been

typified as industrial, handloom, and handicraft clusters. Clusters represent the socio-economic heritage of the country where some of the towns or contiguous group of villages known for a specific product or a range of complementary products that have been in existence for decades and centuries. In a typical cluster, producers often belong to a traditional community, producing the long-established products for generations. In India there are 470 handloom clusters, out of which 240 clusters have less than 1000 looms and 230 clusters have more than 1000 looms. Out of these 230 clusters, there are 41 clusters, which have over 25,000 handlooms. There are 72 Handloom clusters in Odisha out of which 38 important clusters where ikat designs are being weaved is given in the Table-2.

**Table-2 Important ikat handloom clusters of Odisha**

Category	Name of district	Name of cluster	No. of clusters
A	Bargarh	Attabira, Bargarh, Bheden, Barpali, Bijepur, Padampur,Sohela,Bhatli	8
	Cuttack	Badamba, Tigiria, Nischita koili, Banki	4
	Sambalpur	Birmaharajpur, Sonapur, Ulunda, Binika	4
B	Bolangir	Patnagarh, Agalpur, Bangamunda	3
	Sambalpur	Rengali	1
C	Kalahandi	Junagarh	1

Source- <https://handloom.odisha.gov.in/handloomtab/important-handloom-clusters/>

The Barpali cluster is located in the western part of Orissa and comprises of three villages of Barpali and one village of Bijepur block of Bargarh district. This cluster consists of about 215 looms in Barpali town, 288 looms in Bandhpalli village, 180 looms in Baghbadi village of Barpali Block; and about 192 looms in Jalpali village of Bijepur block. While Barpali is situated 21 kilometres from the district headquarter Bargarh, Bandhpali, Baghbadi and Jalpali are 7km, 9 km and 9 km respectively from Barpali town. The entire Barpali Block of Bargarh district has an area of 282 sq. kms. and 18 Gram Panchayats .It has 1894 looms spread over 54 villages. However 3 villages of the block namely – Barpali, Bandhpali and Baghbadi have nearly 36% of the total looms. Nearby villages of Jalpali of Bijepur block has another 192 looms. Thus these four villages have been taken to constitute a cluster. With a total population of approximately 20,000 in the chosen 4 locations, it is estimated that approximately 24% of the this population is dependent on handloom weaving and allied activities such as raw material selling, trading, tie & dyeing, etc<sup>4</sup>. In Odisha, Bandha is done by tying and dyeing the yarn either in warp or weft or both which is much more intricate than simple handloom weaving historically, it is the Bhuliya and Kosta weavers of western districts and Gaudia and Asani pataras and Sarakas (Budhists) of coastal districts who are highly skilled Bandha weavers in Odisha <sup>9</sup>.

The history of Bhuliya community is attached to the legend of Ramai Dev, first Rajput King of Patnagarh and warrior king of Odisha. According to their own legend Ramai Dev was the son of Ashabati, who was supposed to be a Rajput queen of Rajasthan. When Rajputs were defeated by Mughal, many Rajput queen sacrificed themselves in Jouhar. But at that time queen Ashabati was pregnant. She ran away and took shelter in Patnagarh. The

community which helped her during this time was Hul community who were engaged in weaving. When Ramai Dev was establishing his kingdom in the Western part of Odisha (currently the undivided Sambalpur region), he searched for the weaver community who helped his mother and helped them to settle in Patnagarh. Later two brothers of the same family divided the kingdom, the elder remained in Patnagarh while the younger one, Ramai Dev established a new capital Sambalpur named after Goddess Samalei. After taking a number of Bhuliya families he established them near his fort. There after the Bhuliya started establishing themselves in western Odisha <sup>6</sup>.

However a couple of stories are also found to be related with the emergence of the term Bhulyia. The first being the belief that the same was derived from the term “Hul”, a community in Rajasthan who accompanied Queen Ashabati, mother of king Ramai Dev to fled away from Rajasthan to Patnagarh. It is also told that they originally migrated from Rajasthan and were responsible for introducing tie and die art to Odisha fabric. All Bhuliyas bear the surname of „Meher which seems derived from „Mihir meaning Surya or Sun since they were follower of Suryavanshis. Whether their legend of origin is true or not it is found that they have certain similarities with Rajput of Rajasthan, like worshipping sword which is normally not found among the communities of Odisha. Surprisingly it is also found that the tie and die technique used in weaving by the Bhuliyas is also somewhere similar to the technique of Patola art in Rajasthan<sup>7</sup>.

The core stakeholders of the cluster are the weavers, master weavers and the National/ State Awardees. The Barpali cluster predominantly consists of the Bhuliya ,Kosta and Kuli weaving communities which figures around 60%,30% and 10% respectively of the total population in the

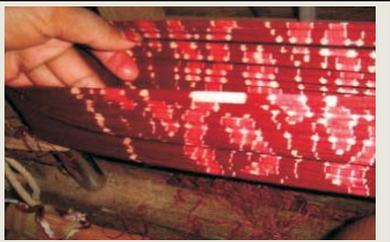
cluster. The weavers of Barpali cluster can be classified into two types, entrepreneur weavers who buy their own raw material, weave the fabric, and then sell the same at local market or through traders etc. and contractual weavers who are attached to the master weavers with a low risk and a seemingly low to moderate exploitation by the master weavers in terms of low wages. The master weavers of Barpali cluster belong to the Bhuliya caste, undertaking the responsibility of buying and supplying the raw materials, providing designs to weave and paying wages for the finishing products to the contractual weavers supply the finished products either in the markets or to the master weavers for sale. Some of the master weavers have excelled in the craft and have been recognized by the State/ Central government. Some of the Bhuliya master weavers have been recipient of national and state awards for handlooms designs.

### The weaving process of Bandha sarees of Barpali

The resist tying and dyeing of yarn is the most versatile methods of producing diversified designs in these technique individual portions of the yarn( warp or weft) are made to resist the dyeing by raping or covering. It is done when the yarn is tied in bundle and 3 types of tying method are adopted. In the first case the bunch of yarn is tied with the help of only thick cotton threads to prepare the basic outlines of the design. In second case the yarn is tied with the help of special knot and cotton thick threads. In third case the tying is by polythene and cotton thick threads. The second and third types of tying covers more space for resisting than the first case of tying knots which fulfill the purpose of outline preparation. The following Table-3 gives a synoptic and pictorial sequence of the weaving process of ikat fibred both in silk and cotton.

**Table-3 Weaving process of ikat fabric ,both in cotton and silk**

1	Scouring/bleaching in case of cotton or de-gumming in case of silk yarn to remove the natural and additive impurities its absorbency during dyeing	
2	Yarn sub-grouping as per-predetermined order. It determines the fineness of design. In Odisha 02 threads are taken in a sub group for finer designs and 04 threads for bold designs.	
3	Yarn grouping as per the predetermined order it is dependent upon the size of the repeat of design. The number of threads in a group also indicates the total number of repeats to be produced.	
4	Tying to resist the yarn from dyeing as per the design pattern. It is important with respect to tension. Color bleeds into inner side if less tension and colour penetration will be uneven if more tight.	

<p>5 During dyeing the bulbs formed between two knots are ruptured manually for well penetration of color into it</p>	
<p>6 After dyeing it is thoroughly washed, squeezed and opened to free air for oxidation in case of vat color. All sorts of impurities during tying are also removed.</p>	
<p>7 Resisting, dyeing, washing and drying for number of times as per the number of colours required. This is necessary for a polychromatic effect.</p>	
<p>8 The resisting materials are untied carefully, so that parent tie-and-dye threads are not broken. Otherwise complete repeat of design will not be developed during weaving.</p>	
<p>9 Separation /unwinding of yarn from group to sub-group. From tie-and-dye groups, each sub groups are separated in first hand and contains same designed threads.</p>	
<p>10 Each sub-group contains similar pattern threads and these are separated into individual threads for use as warp or weft during weaving.</p>	
<p>11 Weaving to produce tie and dye designed fabrics. The tie-and-dye individual threads are arranged one by one as per predetermined order during weaving to have the exact motifs on the fabric.</p>	

Source- Behera, Khandual, and Luximon ,2019. "An Insight In To the Ikat Technology in India: Ancient To Modern Era"

In Barpalic cluster, the raw materials used in production are mainly the mercerized cotton yarns (2/80's to 2/120's) and dyestuffs. The weavers mainly use yarn purchased from South India through Traders / Master Weavers / N.H.D.C. Though availability of raw materials is not a problem in the cluster as the State's biggest trading of cotton yarn is carried at Baragarh, it has some eye catching issues needs immediate attention for remedies. Threads range from fine to coarse or thick variety and the design's success depends on the choice of thread used. The finest in single thread are numbered as follows—100s, 80s, 60s, 40s, 32s, 24s, 20s, 18s, 17s. The other is the mercerized thread (twisted thread made with two strands) which is more commonly used since it is stronger and easier to weave. From finest to coarser the mercerized thread is numbered as follows—2/120s, 2/100s, 2/80s, 2/60s, 2/40s. The process for preparation of yarn from hank form to make warp is called "Warping". The hank yarns are first transferred to 'Natai', a traditional winding device and then it is wound around the warping frame in relation to the length of the warp. The non-weaving members of the family mostly ladies, normally perform this activity. Next, sizing is done to strengthen the warp yarn and make little stiffer so as to withstand the beating of the reed during the weaving process. It also gives the fabric an even weaving and sound look. Sizing is done only for cotton yarn by using the residue after rice preparation called "Mud" in local language by the help of a sizing brush locally termed as "Kunchi".

The next stage is the process of colouring or dyeing. In olden times, natural colours were produced from various flowers, roots and barks of trees and plants and were therefore limited in range. Amongst these, yellow, red, maroon, black and white were more prevalent and categorized as traditional

vegetable dyes. Yellow is derived from turmeric, maroon from aachi tree's bark, and red from jhampada flower seeds. But in recent times new chemical colours are being used. The chemical colour's resilience, durability and wide variety has led to its demand. There are two components required to make chemical colours hydrosulphate and caustic soda. These two are mixed with the colours to make them permanent. In this process various shades of green, blue, purple, yellow and pink can be prepared. Other types of colours are produced with the chemical naphthal, such as maroon, black, red and yellow. Before the yarn is tied as per the design, the white yarn is straightened by the help of a wooden frame locally called "Kamada". Prior to this, the yarn is warped according to the desired length. The ends are set separately in portions known as Ganthis (group of threads). Now the Ganthis are tied as per the design and whole of the tied/untied yarns known as "Chhanda" are dipped into the colour bath. The colour thus penetrates into the untied portion. Subsequently the coloured portions are tied and the previously tied portions are untied to dye with a different colour, as the design requires. Such process of tying & dyeing is repeated till the Chhanda gets its Bandha design. After dyeing is completed, the Chhanda is completely dried, all tied portions are untied and straightened to make it ready for weaving.

These yarns are then placed against a wooden frame locally termed phani. The process of preparing vertical yarn or warp, locally called tani from raw unrefined hank is called 'warping'. The hank yarn is first transferred to a traditional winding device and then wound around the warping frame according to the length of the warp. Usually the width of the saree is 48 inches and bedcovers range from 48 to 54, 60, 72 and 90 inches width. The frame is always made two inches more in width than the

product since during weaving the cloth's width shortens by two inches. The frame is prepared according to the thickness of the thread—coarser thread requiring a broader frame. Two threads passing through each eye of the reed is called kari; 60 threads or karis make a punja or a cluster. According to the thread's thickness and the width of the phani, the clusters can also be adjusted—lessened or increased. For a saree, first the 2/100s mercerized yarn is sized and bunched into the warp. For a 4 inches width saree, a frame of 50 inches is created. For 2/120s thread warp, ordinarily 36 karis are taken. And, for the entire width of the wooden frame, 30 clusters of karis are used. Similarly, for 2/100s no. thread, 28 clusters and for 2/80s no. thread, 23 clusters can be used. The coarser the thread, the smaller the number of clusters made, so that during the dye process colour can seep in properly into the clusters. For the weft or buna also a similar process is carried out although the weft's density in clusters is mostly kept slightly thicker than the warp, because during weaving the weft thread gathers closer together than the warp. While 2/120 no. thread per inch needs 40 karis, 2/100 no. thread per inch needs 36 karis and 2/80 no. thread needs 32 karis. Hence, when transferring a design from the drawing to the bandha or the threads, one has to be very careful about the kind of thread selected and

its density during weaving. For an intricately designed saree, ordinarily 2/120 no. thread is used, which during weaving translates to about 40 karis per inch. Keeping this calculation in mind, the drawn design is then proportionately multiplied in inches and transferred to the threads.

### Ikat sarees and its motifs in Barpali cluster

A saree is a traditional female garment consisting of a strip of unstitched clothing ranging from four to nine meters in length that is draped over the body in various styles. Sarees are distinguished and characterized by its design, fiber content, colour, motifs and graceful look. In Barpali cluster, both cotton and silk sarees are woven as it given in the Table -4. The length of cotton and silk saree is 5.5 meters, but when it is woven along with the blouse piece the length increases by 1.5 meters and now measures 6.5 meters. The width of all saree is 45 inches. Very few ikat saree are woven without borders, generally ranging from 3-6 inches in width, but in a few saree the width can go up to 8 to 10 inches. The width of ikat saree generally range from 35-42 inches. The length of the pallav of ikat saree ranges from 0.5 to 1 meter. The weight of cotton ikat sarees ranges from 500 to 800 grams, whereas the weight of silk ikat sarees ranges between 600 to 700 grams.

**Table-4. Fabric information of cotton and silk Odisha saree**

Saree Type		Yarn type (Silk or cotton)		Yarn count			Dimension of saree Length(mt)				Width(inch)			Wt of saree(g)
		Warp	Weft	Wp	wft	S	B1	B2	P	S	B1	B2	P	
1	single ikat	Cotton	Cotton	2/120 to 2/80	2/120 to 2/80	5 to 5.5	4.5 to 5	5 to 5.5	0.5 to 1	45 to 48	45	3	45	450- 600
2	double ikat	Cotton	Cotton	2/120	2/120	5.5	4.5	5.5	1	48	43 to 45	3-5	43 to 45	450-600
3	silk single ikat	Silk	Silk	20-22	20-22	5.5	4.5	5.5	1	48	43 to 45	3-5	43 to 45	650
4	silk double ikat	Silk	Silk	20-22	20-22	5.5	4.5	5.5	1	48	43-45	3-5	43 to 45	650

Source-Ikat sarrees of Odisha, Dalai and Kulloli, June, 2017, Vol.12, issue 1, AJHS, S=Saree, B1=Body, B2=Border, P= Pallav

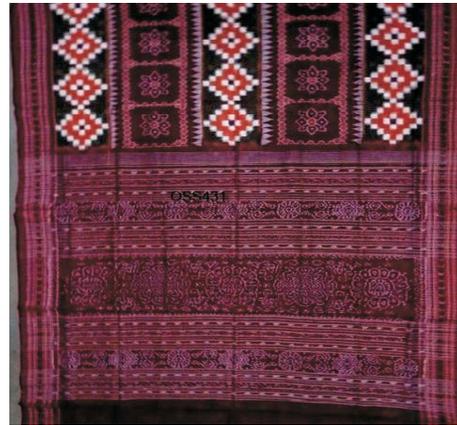
**1. Cotton Single Ikat saree:**

Saree is woven using warp ikat yarn of 2/80's, 2/100's and 2/120's yarn count. Sara bandha, Bichitrapuri, Utkalalaxmi, Tapoi, Aradhana are famous sambalpuri ikat sarees and the name is given according to designs and motifs used.



**2. Cotton double ikat saree :**

The Sakata or Passapalli saree is prepared by double ikat by calculating the space dyed yarns according to design so that the same colour is produced after interlacement of yarn during weaving. Earlier the body of the saree have three chambers which were bigger in size than that which is now woven with five chambers. Similarly, earlier it was woven without border but now it is woven with borders.



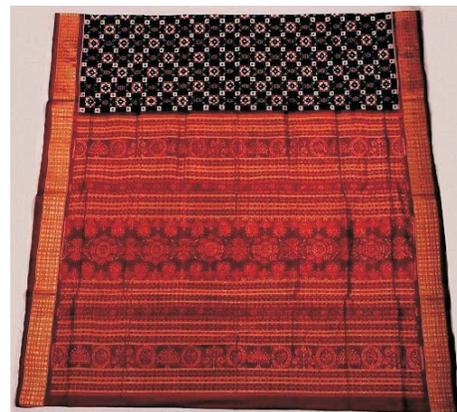
**3. Silk single ikat saree :**

Silk single Ikat saree is woven using 20-22 denier tassar silk. Sometimes in pallav cotton mix bandha is seen where 3 ply silk yarn as warp and cotton yarn as weft is used.



**4. Silk double ikat saree :**

Saree is woven with 2ply×3ply silk yarns with predetermined colour and design and the fine curvilinear ikat designs reflecting the motifs on the body of the saree. The designs are incorporated on the body of the fabric during weaving through adjustment of weft Ikat design in warp. The border and pallav design is woven with extra threads in a geometrical curvilinear pattern to have the extra prominence.



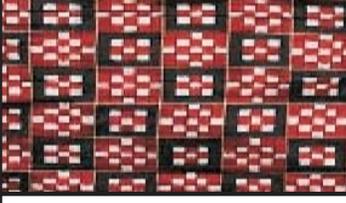
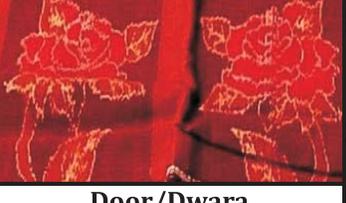
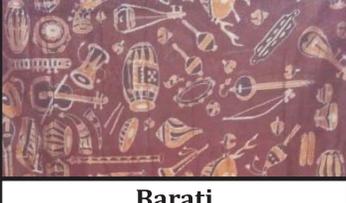
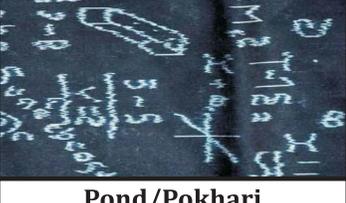
Saktapar or Passapalli sarees are traditional double ikkat sarees in which border is invariable warp tie and dye, pallu is weft tie and dye and body is in dice pattern both warp and weft tie and dye. The name Pasapalli derived from Passa or gambling game using chess board. Thus these sarees have solid and contrast colour check pattern resembling the chess board. Weaving of single ikat sarees is easier than double ikat sarees although these are very simple geometric patterns unlike the versatile pattern in single ikat. Double ikat sarees require highly skilled weavers because the warp and weft patterned yarn are to be properly set which needs skills and time consuming to weave, otherwise the solid colour design of double ikat will become blurred and distorted. The master weaver needs to first conceive of an attractive design for the fabric by using different motifs. Designs may have symbolic or ritual meaning or may have developed for export trade.

A motif is a decorative image or design, especially a repeated one forming a pattern. It is a decorative device woven to a textile fabric. Motif is a shape which is tangible and represents a recurrent pattern in fabric weaving. The motifs used in ikat sarees are designs of various sizes and shapes which are striking and exquisite. The choice is limited to specific traditional motifs used in the ikat style- flowers, animals, birds, leaves and creepers are the

most conventional images. These designs also need to be suited for reproduction in the ikat method. The traditional motifs originated in the past out of two main contexts. Earlier these textiles were mainly offered to the local gods, or ishtadevata, to seek blessings for professional prosperity and, therefore, included primarily floral and temple ritual-oriented patterns. The Dusphuliya design seen in saree borders, for instance, represents the 10 avatars of the supreme god, i.e. Vishnu. The fish and tortoise motifs, believed to be the first avatars before the God incarnated into human forms, according to Hindu mythology, is also recurrently used in the designs. Other auspicious omens such as the conch shell (sankha), holy seed (rudraksh), etc., are used to generate positive energy for the wearer. It is said that from this religious origin, later on the ikat textile moved to more secular practices of making sarees for everyday wear. However, while in these the iconographic configuration changed to various animal motifs comparing nature to feminine beauty- such as the fish's round eyes, the lion's small waist, the deer's agility and the elephant's graceful walk- even so a larger philosophical and religious basis informed the designs to bestow sanctity and prominence to the woman's role in family and society. Table 6 lists the generally used motifs in single and double ikat sarees and wall hangings.

**Table-6. General Motifs used in single and double ikat sarees**

Deer / Harina	Lion/Singha	Horse /ghoda	Wheel/Chakra
			

<b>Lotus/Padma</b>	<b>Conch Shell / Shankha</b>	<b>Peacock/Mayura</b>	<b>Elephant/Hatee</b>
			
<b>Fish/Macha</b>	<b>Flower castle/phula gacha</b>	<b>Flower/Phula</b>	<b>Mural/Jhoti</b>
			
<b>Chess board/Passapali</b>	<b>Rudrak</b>	<b>Creeper/Dali</b>	<b>Doll/Putli</b>
			
<b>Ethnic /Adivasi</b>	<b>Working women</b>	<b>Parrot/Sua</b>	<b>Swan/Hansa</b>
			
<b>Bird/Chadhei</b>	<b>Tortoise/Kainchha</b>	<b>Rose/Golap</b>	<b>Tree/Gachha</b>
			
<b>Musical instritument</b>	<b>Mathematical</b>	<b>Door/Dwara</b>	<b>Forest/jangal</b>
			
<b>Barati</b>	<b>Pond/Pokhari</b>	<b>Holy pot/Kalasha</b>	<b>Traditional hut/Ghara</b>
			

Peacock feather/Mayura	Dancing girl/Debadasi	Temple/Deula	Geometrical
Butterfly/Prajapati	Squerell/Gunduchi musha	Mythical Nine animals/Nabagunjar	Crane/Baga
Trumpet/Mahuri	Odia alphabet	Sambalpuri Nuakhai dance	Boat/Boita
Giraffe	Tiger/Bagha	White dove	Rabbit/Thekua
Zebra	Traditional lamp	Odishi dance	Kalinga kumbha
Dali Kumbha	Poda kumbha	Ikatt Motifs represent God/Goddess in wall hangings	
		Jagannath	Laxmi
Krishna	Samaleswari	Ganesh	Budha

The designer's role is the most creative one in the production process as he/she needs to create a pattern out of limited motifs and yet juxtapose these using different colour combinations in imaginative and unique ways each time for a new saree. The designer, firstly, makes a drawing on graph paper and prepares three sets of patterns for the saree, for the border running on the two ends of the saree body, for the two and half hands long pallav and for the twelve hands long saree body. Usually the three patterns have to be very distinct from each other to create a striking effect. The intricacy and fineness of the design depends upon the following.

1. The number of threads per group.
2. The shade of the colour and its number.
3. The picks or end for repeat which is generally two, three or four picks in Odisha.
4. The absorbency of the thread in the dye solution and penetration through the thread group.
5. The number of repeats is produce at the time.
6. Two picks per group design generally contains 20 threads for bundle to be tied for resistance as dye solution circulation is better.
7. The distant between tied portion of group separate should be sufficient for proper circulation of dye solution so that sharp lining instead of curve outer lining.
8. Besides if distinct is short only the external layered threads of the tied groups are dyed leaving behind the interior threads.
9. Attention applied to the raping of threads should be even enough so that dye solution

is not allowed to pass through it to prevent colour bleeding.

10. During mating the bulkiness of cotton is increased and silk slightly decreased which should be considered during tying.



A sample design drawn on graph paper Transforming the design from graph paper to a designing frame board locally called phani

## Placement of motifs in single and double ikat sarees

Ikat sarees in Odisha are identified and sold in the market in different names based on the motifs woven on it. Each saree has its own beauty, richness and uniqueness. Few of the famous cotton ikat sarees are Tapoi, Aradhana, Sakata, Bichitrapuree, Utkalalaxmi and Sarabandha sarees. In the border of Tapoi saree, swan and doobby flower motif is used. In the body of the saree chakra, flower, creeper, and temple motifs are used whereas above the border boat, swan, flower, shankha and temples motifs along with saree .Ikat is used In the border of Aradhana saree, rudrakshya, lotus flower, elephant and horse motifs are used. Motifs like women worshipping god is woven in the body hence, the name Aradhana saree. Other motifs such as temple, creeper, flower and kumbha are also used. In the pallav of the saree, lotus flower, konark wheel along with creeper design is seen. In Bichitrapuree sarees, traditional fish and Puchuki flower ikat is created on both sides of saree above the border whereas, fish and Rudrakshya

motifs are seen in the border. Sometimes swan and creeper motifs are also used. In the pallav 13 lines of saree ikat is designed with different types of animal and birds in between the lines. In Utkalalaxmi saree, bud motifs and 8 petals flower is used in border. In the body 4, 6, 8 and 16 petals puchuki flower motifs is woven in between the chamber and empty space. In Sarabandha saree 7, 9, 11, 13 and 15 lines of ikat are used in the pallav and in between the lines lotus, elephant, lion, deer motifs of Ikat design is arranged in separate lines followed by swan, fish, and butterfly motifs. Creeper and temple motifs are placed in the beginning and end of the line. In Sakata/ Passapalli saree), Passapalli motifs are created by using double ikat yarn in the body. Two line of creeper motif is created in the border and in both side of it floral motifs are woven. In the pallav 7 or 11 lines of different motifs are woven in separate lines. In passapali saree, it was told that the border and pallav designs are decided according to the body. Types and placement of motifs in various types of Bandha sarees are shown in Table 7.

**Table-7. Types and placement of motifs in various types of single and double ikat sarees**

Saree name	Body	Border	Pallav
<b>Single Ikat</b>			
1. Bichitrapuree saree	Sakata ikat in between check line	Fish and puchuki flower, rudrakshya, swan	13 line sara ikat
2. Utkala laxmi saree	4,6,8 and 16 petal flower is seen in between chamber, lotus flower,	Flower bud, 8 petal lotus flower, rudrakshya,	Flower motifs
3. Aradhana saree saree	Worshiping lady, temple, creeper, flower	Rudrakshya motif, lotus flower, elephant, kumbha, creeper	Sakata, lotus flower, chakra, creeper
4. Tapoi saree	flower, Creeper, Chakra, temple or serrated edge	swan, rudrakshya or doobby	Sara bandha, flower, creeper, boat, temple, swan
5. Sarabandha saree	Flower, jhoti design	Flower, creeper	lotus, elephant, lion, deer, swan, fish, butterfly, ghagra, creeper, temple

6. Baghambari saree	Lotus with check effects	Checks effect in tie and dye pattern	Traditional tie and dye
7. Soudamini saree	Elementary floral motifs	Ikat stripes and bands without clearly differentiated border	Flower motif in lines
8. Patnaikpar saree	Check pattern having fish and swan design	Check pattern having fish and swan design	Motifs of fish and elephant
<b>Double ikat</b>			
1 Sakatapar or passapali	passapali motif	creeper and floral motifs	7 or 11 line of saree bandha
2 Aswini saree	Ikat checks squares in linear form on white background along with floral design	Ikat check formed by interesting ikat lines on body	Floral designs in bands
3 Kusuma saree	Two different forms of geometric dice check in square form	Extra warp border	Traditional ikat motifs like fish, deer, swan and lotus

**Source-**The magic of Odisha handlooms,1999, published by Director of Textiles Orissa

## Conclusion

Despite the supposed influence of Gujarat's patola on Odisha ikat weaving, the two are strikingly different in design. The Gujarati patolas are recognizable through their bold outlines, geometrical grid-like overall design. However, the ikat fabrics in Odisha have been worn as costume, exchanged as gifts, acquired as items of status and prestige, utilized for ceremonial and ritual purposes. They have also served as a medium of communication between members of social group, as much as between the physical and spiritual world<sup>6</sup>. The bandha weavers of Barpali living ordinary lives display extraordinary creativity in producing some of the most exquisite evolution of ikat weaving reflecting the cultural values of their society. As the primary wearer, the woman drapes over herself these rich symbolic sarees connecting her everyday world with the divine and the spiritual.

The Indumati saree depicts all the duties of the Odia housewife. Some of the other key recurrent traditional motifs include the lotus as a symbol of the universe emerging from the sun as well as goddess Lakshmi's seat, the conch representing the mystic symbol 'Om', the tortoise as incarnation of God Vishnu, the fish as a sign of evolution as well as one of the eight symbols of good luck, the coiled serpent symbolizing the unending cycle of time and the peacock for prosperity. Similarly, designs emphasizing a particular dominant motif are codified such as the hibiscus flower cloth or 'Mandara phuliya kapata', one flower design or 'Ekphulia', ten flower design or 'Dusphuliya', Flower garland or 'Boumaliya', two snakes entangled and facing each other or 'Nagabandi', stars in the sky or 'Aasman tara', etc.

In earlier times, sarees were also named according to the codified designs each incorporated- Puspapabati, Mriganayani, Gajagamini, Champakamal, Bhanumati, Bharatikusuma, Kalaratna, Ratnabati, Panchkanya, Kalingasundari, etc. In most of these sarees, it is the anchal or pallu, i.e the end panel that is the most important part of the design and visually striking. Thus, the livelihood option of weavers vis-a-vis the sustainability of ikat sarees as well as their export potential poses a major challenge in the context of globalized world. Therefore, designs variation, regular supply of quality raw material, adequate marketing support, technological and design intervention with plans for product development, revamping the co-operative sector are some of the areas which need strengthening actions by the government to sustain the craft and to preserve the cultural tradition of hand weaving in these areas.

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## OBITUARY



**Professor Lakshman Kumar Mahapatra**  
(29.10.1929 to 01.06.2020)

An educationist par excellence, institution builder and a critical thinker, Prof. Lakshman Kumar Mahapatra is a world-renowned anthropologist from Odisha, who spent most of his career for the welfare of marginalized sections of the society. Professor Mahapatra has inspired generations of scholars, policymakers, activists and young minds throughout his life and work. The discipline of Anthropology in Odisha in general and the Post Graduate Department of Anthropology, Utkal University in particular became more vibrant with Prof. Mahapatra's pioneering intellectual space and outstanding contribution. His efforts not only made Anthropology as a subject more popular but also

the Department became one of the two UGC Centers for Advanced Study in Anthropology in India. He has conducted pioneering research in the country in the fields of Development Anthropology, Population Anthropology, study of "other world cultures" and South-East Asian studies. The approach of multidisciplinary research and teaching on South East Asia that he initiated at Utkal University and publication of an international journal with quality contribution by eminent scholars (first of its kind in the country) was an attempt to demonstrate that Indian Anthropologists were no less than Western scholars in studying "other world cultures". The study of Development Anthropology and

Population Anthropology in the Department of Anthropology was initiated by him that enriched the academic horizon. One of his biggest academic contributions to Utkal University has been in promoting Inter and Multi-disciplinary studies by setting up 2 multi-disciplinary research centres, i.e., the Centre for Regional Studies and the Population Research Centre.

Prof. L.K Mahapatra has been bestowed with different characters by eminent intellectuals and policy makers; such as '*a leading Indian militant Social Anthropologist and a vastly influential scholar, both in India and far beyond*', "*world-renowned scholar with feet on the ground*", "*a doyen of anthropology*", a "*cult-figure*", "*a father figure, who established teaching and research in anthropology, a newer subject in the world of higher education in Odisha*" and "*made his Department a centre of excellence and a bee-hive of activity*".

He was a brilliant student with bright career in which he stood always either 1<sup>st</sup> or 2<sup>nd</sup>. He completed his Matriculation in the state of Odisha in 1946 as a student of MKC High School, Baripada, I.A. from Utkal University in 1948 as a student of Ravenshaw College, Cuttack and BA (Honours) in Anthropology from Calcutta University in 1950. He completed his MA in Anthropology from Calcutta University in 1952 and PhD from Hamburg University in the field of "Cultural Anthropology, Sociology and Comparative Education" in 1960 with Magna-cum-Laude (Title of dissertation: A Hill Bhuiyan Village and its Region: A Socio-Economic Empirical Study). Professor L K Mahapatra also taught, mentored and guided fourteen Ph.D. scholars who became eminent social anthropologists and administrators of Odisha

He authored fifteen books such as *The Contours of Social Welfare* (1974), *Folklore of Orissa* (1979), *Development for Whom: Resettlement & Rehabilitation Policy in India*, *Tribal Development in India: Myth & Reality* (1994), *Resettlement, Impoverishment and Reconstruction in India: Development for the Deprived* (1999) etc. He also published 35 articles in international journals and 142 articles in national journals on various aspects of peoples of India as well as Southeast Asia. He has been credited for instituting "*Man in Society*" The Journal of Department of Anthropology, Utkal University in 1972.

He received many awards and academic distinctions from national and international institutions and organizations for his outstanding contribution. Mentioning important recognitions such as; UGC National Lectures, 1970-71 (Year it was instituted) and 1983-84; he was the only person from Odisha chosen for the Lectures at Universities across the country (University of Delhi, Delhi; Pandit Ravishankar Shukla University, Raipur; and Gujarat Vidyapith, Ahmedabad); First Visiting Fellow, Anthropological Survey of India, Govt of India, 1972-73; elected as a President, Anthropology and Sociology Section of the 4th India Social Science Congress, ViswaBharati University, Santiniketan, 1979; Chair, Session on "Cultural and Historical Background of Scheduled Tribes" at Seminar on Development Aspects of Tribal Areas, organized by National Committee on Development of Backward Areas of the Planning Commission, 1980; Member, UGC Visiting Committee for 6th Five Year Plan, 1980-85; Mahatma Gandhi Freedom Lecture, Williamsburg USA, 1985; National Fellow, Indian Council of Social Science Research (ICSSR). Swami Pranavananda Award

1993 for Sociology/Social Anthropology by UGC, 1993; R P Chanda Birth Centenary Memorial Medal, The Asiatic Society, Calcutta, 1994; R P Mohapatra, Memorial Award (as a social historian), Bhubaneswar, 1996; Certificate of Honour for outstanding contribution to North East Indian Studies awarded by the North East India Council for Social Science Research, Shillong, 1999; Gold Medal for Lifetime Achievement in Anthropology by the Indian Anthropological Society, 2004; Nirmal Kumar Bose Memorial Lecture, 2006 by Indira Gandhi National Centre for the Arts (IGNCA), New Delhi, 2006. He delivered the Valedictory Talk at All India Sociological Conference, Ravenshaw University, 2010; Think Odisha Leadership Award as Educationist by the Times of India, 2011, Felicitation for Lifetime Achievement, Indian National Confederation and Academy of Anthropologists (INCAA), 2015

His academic credentials demonstrate that he is the recipient of numbers of international fellowships which took him to different prestigious institutions of the world. He received the Jawaharlal Nehru Scholar, Hamburg, Germany, 1957-60; Urgent Anthropology Award for research by the Smithsonian Institution, Washington DC, 1967; Visiting Professor, Hamburg University, 1968; 1st from Odisha to be Visiting Professor in the Social Sciences in Europe; Visiting Lecturer, Amsterdam, Cologne and Heidelberg Universities, 1969; and worked as a Consultant, UNESCO, Bangkok, 1979; served as a Director, UNESCO Research Project on "Swidden Cultivation in Asia", Bangkok, 1979-80. He was also a Guest of UNESCAP Population Division, Bangkok and the East-West Population Institute, East-West Centre, University of Hawaii on "Issues of Demographic Research and Population Policies

in the third world countries", 1979. As a Member of the Permanent Council, IUAES, participated in the Inter-Congress of IUAES on "Rural Development in South Asia", Amsterdam, 1981. He worked as a Fellow, ICSSR for Research, Bali, Indonesia, 1982. As a Visiting Fellow, German Academic Exchange Service, he visited Heidelberg and Bielefeld, 1983. He also acted as Co-Chairman, Final Plenary Session on Focal theme, "Anthropology and Challenges of Development", and another session on "Urgent Anthropology", 10th International Congress of Anthropological and Ethnological Sciences, (IUAES) New Delhi, 1978. He acted as a Chairman, International Symposium on "Development and Population Displacement", 11th IUAES, Vancouver, 1983. As a Convener, Symposium on World View, Metaphilosophy and Nature at the International Conference on Man and Environment, 1983. He was also the Co-Chairman in International Symposium on "Anthropology of the Future", 11th IUAES, Vancouver, 1983.

He also gave his expertise as a Consultant, World Bank in India and the US on Rehabilitation of displaced population, 1985-88, 1995-96. He was also a Fellow of the Ford Foundation for research in South East Asia, Jakarta, 1987, 1st from Odisha to get this Fellowship. He received as the Visiting Fellow IDPAD (IMWOO-ICSSR), The Hague, Netherlands, 1988, he also acted as a Chairman, International Symposium on "Anthropology of Crisis Management", 12th IUAES, Zagreb, 1988, Member, Permanent Council of IUAES till 1988, Visiting Scholar, DAAD (German Academic Exchange Service) at the Universities of Bielefeld, Bremen, Hamburg and Munich, Germany, 1991, Chairman, International Conference on Cultural Relations between India (Kalinga) and Indonesia (Bali), Bali, 1993. He was

invited as Speaker, International Conference on Reconstruction of Livelihoods, University of Oxford, 1996 , Keynote Speaker, International Congress in Rural Sociology, Rio de Janeiro, 2000, Presented Papers at the following International Congress of Anthropological and Ethnological Sciences, 6th Congress, Paris, 1960 on “Socio-cultural change in India”; 8th Congress, Tokyo and Kyoto, 1968 on “Ritual Kinship in Orissa”; 9th Congress, Chicago, 1973; 10th Congress, New Delhi, 1978; 11th Congress, Quebec and Vancouver, 1983; 12th Congress, Zagreb, 1988; 13th Congress, Mexico City, 1993; 14th Congress, Williamsburg, 1998. Member, Commissions of IUAES (International Union of Anthropological and Ethnological Sciences affiliated to UNESCO) on Anthropology of Global Environmental Change, Anthropology in Policy and Practice, Folk Law and Legal Pluralism; and also Futurology.

He served as Joint Secretary, Tribal Research Bureau, Odisha, 1954,; 1954-55: Lecturer, Anthropology, Lucknow University; 1955: Head, Dept of Sociology, Meerut College, UP; 1955-56: Lecturer, CDTC for Tribal Areas, Ranchi, GOI; 1956-62: Lecturer, Anthropology, Gauhati University; 1962-64:Reader, Anthropology, Karnatak University, Dharwad; 1964-67: Reader, Anthropology, Utkal University, Bhubaneswar; 1967-89: Professor of Anthropology, Utkal University; 1992-94: UGC Emeritus Fellow, Anthropology Dept, Utkal University. He also served as the Vice-Chancellor of Utkal and Sambalpur Universities and Director and subsequently Chairman of the NabakrushnaChoudhury Centre for Development Studies, Bhubaneswar.

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