

A woman wearing a colorful sari with pink, yellow, and white patterns is sitting on the ground, working on a piece of pottery. She is in a traditional pottery kiln, surrounded by various pottery items. The background shows a man working in the background. The scene is lit with warm, golden light, suggesting a sunset or sunrise.

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CULTURAL HERITAGE OF DOKRAPARA

DEPARTMENT OF
ANTHROPOLOGY
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Forward

The department of Anthropology as part of the curriculum undertakes a fieldwork every year. This year, the fieldwork has been done in Dokrapara, an artisan village, in the district of Bardhaman. The people of this village manufacture Dokra metal craft by using quite an old technology. While the fieldwork was conducted by staying in the village for about a fortnight, the student felt it important to do an extension work to properly document the technology and social cultural life of the artisan people of the village. The department encouraged and arranged for further extension work beyond the academic curriculum and the student has well captured the nuanced detail of the life of the Dokra makers.

This report is an overview of the life of the dokra manufacturers of Dokrapara.

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Description of the Dokrapara Village

West Bengal has one of the finest source of handicrafts National and internationally. There are many varieties of arts and handicrafts found in West Bengal, which is made by different group of people. Dokrapara , situated in guskora have finest handicraft made of brass by using an old wax melting technique. Personally I live in a village so before this I was not that much worried for the stay .But I do have a problem with interacting with new people. With the excitement of the trip I was worried about how to communicate with the people to collect data. But when I reached the place, first I was surprised by the beauty of village. But when I reached the place the first I was surprised by the beauty of village. It was certainly like a filmy entry gate with statues built. There was sitting place on the middle of the small garden were everyone was sitting and chit chatting.

When we entered the small children surrounded us and started to ask about us. Surprisingly, the question were about us , not why we have came . We asked for MukulKarmakar whom we have contacted before trip .But at that time he was not there a local person came to us and asked what we need. I loved their helpfulness as pretty much we have lost in cities. The humble nature of people was very kind.

They were there to help us with food, water and a comfortable stay. More importantly on our intial visit they were quiet interactive with us .At the western end of the village, the village crematorium is located . Beside the crematorium a humble temple of goddess kali is located. We sat there and spend a lengthy conversation with MukulKarmakar . It was a calm and quire place with beautifully surrounded trees. Otherwise the village is surrounded by last green paddy fields. The village ponds are breathe taking place.

Administrative location of the village:

District: Purba Bardhaman

Block: Aushgram 1

Gram Panchayat: Dignagar 2

The village:

Dokrapara a small is the decorated by the statues (golden colour) which have a typical tribal like featured.It also contains a small lawn and a garden, which also have rooms for people who comes to visit to stay. We were staying there .This decoration is made by state government and some NGOs.



Picture 1 Village entrance, beautification was done by all three tiers of Panchayat through a variety of schemes

Dokrapara is a small settlement of karmakar caste and has about 34 huts. The village has mud houses and brick houses as well. Local people call their houses as quarters as land is owned by the samityand they have been given to stay there. The mud houses have mud floors which are supported by bricks. They have only 2 constructed roads all around village and rest which are connecting the whole village is kancha road.



Picture 2 One of the alleyways of the village

The village has of two ponds which is used for cleaning, bathing, washing, and even for perform in ritual. Government has made 5 community toilets, for better hygiene and health of local people.



Picture 3 One of the community latrines of the villages constructed by Aushgram 1 Panchayat Samiti in 2018

The village has two grocery shops where one is run by a local person named Gulikarmakar and another by Madhavkarmakar who stays at dariapur outside Dokrapara. Here people's daily food is boiled rice with any cooked vegetables and sometimes eggs, fishes and meat (chicken and mutton) are also consumed. Most of the men drink country liquor (chullu) which is fermented from rice. The utensils used by local people are similar to urban societies like oak (karhai), large and small spoon, cooking sped (khunti) etc.



Picture 4 Another alleyway of the village, note the quarter settlement at the left

The village children goes to the primary school which is about one kilometres from the settlement. The school is a two story building where children can study upto class IV. After that they are to go a higher secondary school which is about five kilometres away from the village.



Picture 5 Children playing in front of their school at Dariyapur

Village contains many sacred grooves (7), which are of MangalChandi, Kali, Shiva, radha Krishna. The big kali temple at perimeter of the village beside it they have a cremation ground on western side of the village were dead people are burnt with the help of woods.



Picture 6 one of Sacred groves at the village

Their livelihood is sustained by making dokras which they make in burning bhatias. The language of local people is a certain mixture of Hindi and oriya, locally known as maral. Here work is divided into women and men. Men are seemed to do work on bhatias and designing, while women are busy coating wax model with clays. Women are also seen to selling products to visitors. The average age of children is from 10-12 years who have started to work. The villagers have four ways to earn; first by selling products to visitors; second by selling dokras in fairs; third way to take order from traders and fourth they take orders in occasions in festivals. The prices of objects are greatly differed by their designs and needed material.



Picture 7 One of the village boundaries, this photograph is taken from the road connecting cremationground

Demographic profile of the village

Demography encompasses the study of the size, structure, and distribution of these populations, and spatial or temporal changes in them in response to birth, migration, aging, and death. As a very general science, it can analyze any kind of dynamic living population, i.e., one that changes over time or space (see population dynamics). Demographics are quantifiable characteristics of a given population.

Demographic analysis can cover whole societies or groups defined by criteria such as education, nationality, religion, and ethnicity. Educational institutions usually treat demography as a field of social sciences, though there are a number of independent demography departments¹. Based on the demographic research of the earth, earth's population up to the year 2050 and 2100 can be estimated by demographers.

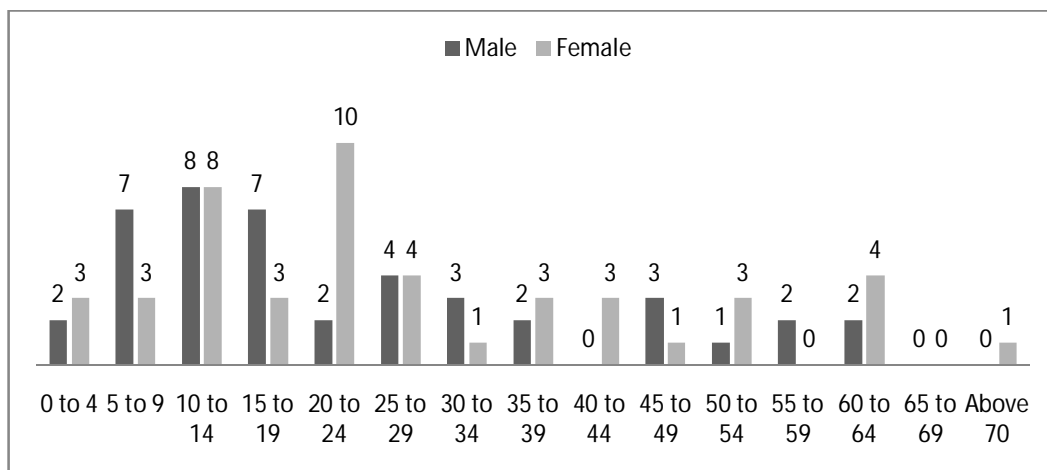
Since the village Dokrapara was considerably large, it was not possible for me as the sole person conducting the fieldwork to cover the entire village. I have collected data from a section of the village which includes a total of 19 families. Following is a representation of some of the demographic features of those families.

Age and sex wise distribution of the population:

Table 1 Age and sex wise distribution of the Population of a section of Dokrapara village

Age group	Male	Percentage	Female	Percentage	Total	Percentage
Birth to 4	2	40.00	3	60.00	5	5.56
5 to 9	7	70.00	3	30.00	10	11.11
10 to 14	8	50.00	8	50.00	16	17.78
15 to 19	7	70.00	3	30.00	10	11.11
20 to 24	2	16.67	10	83.33	12	13.33
25 to 29	4	50.00	4	50.00	8	8.89
30 to 34	3	75.00	1	25.00	4	4.44
35 to 39	2	40.00	3	60.00	5	5.56
40 to 44	0	0.00	3	100.00	3	3.33
45 to 49	3	75.00	1	25.00	4	4.44
50 to 54	1	25.00	3	75.00	4	4.44
55 to 59	2	100.00	0	0.00	2	2.22
60 to 64	2	33.33	4	66.67	6	6.67
65 to 69	0	0.00	0	0.00	0	0.00
Above 70	0	0.00	1	100.00	1	1.11
Total	43	47.78	47	52.22	90	100.00

Figure 1 Column diagram to represent the age and sex wise division of the population of a portion of Dokrapara village



Analysis of the age and sex wise distribution of population:

Table 1 displays the scenario of nine -teen families variation according to their age group and sex (male and female). In this table there are fourteen groups divided according to age and sex. The groups are-

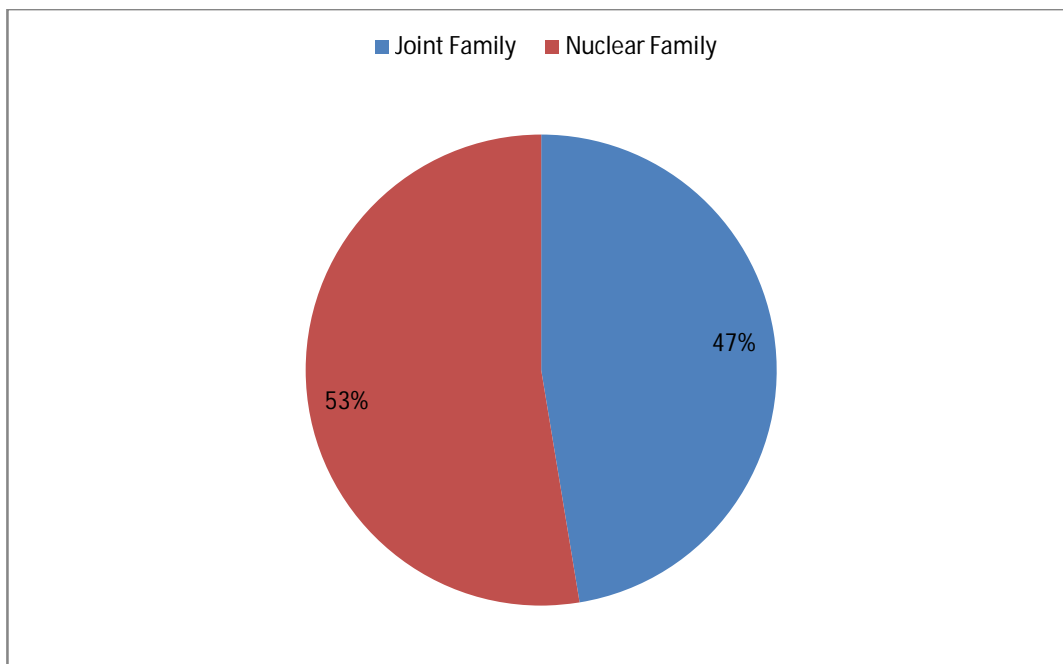
Birth to 4, 5 to 9, 10 to 14, 15 to 19, 20 to 24, 25 to 29, 30 to 34, 35 to 39, 40 to 44, 45 to 49, 50 to 54, 55 to 59, 60 to 64, 65 to 69, Above 70. The chart shows that there is a decline number male after the age of 45. Its due to the reason of their work of dokra and lack of health facilities; the harmful gases released from melting of brass causes many diseases like asthma, tuberculosis ; even lung cancer which declines their age comparing to other population. There is only 8 male alive in village while there are 16 women alive in village. From the age of 65 to 70 above, no men are alive and only one female is alive.

Types of families:

Table 2 Types of family in part of the Dokrapara village

	Joint Family	Percentage	Nuclear Family	Percentage	Total	Percentage
No of family	9	47.37	10	52.63	19	100

Figure 2 Pie diagram representing types of families found in parts of Dokrapara village



Analysis of the family types:

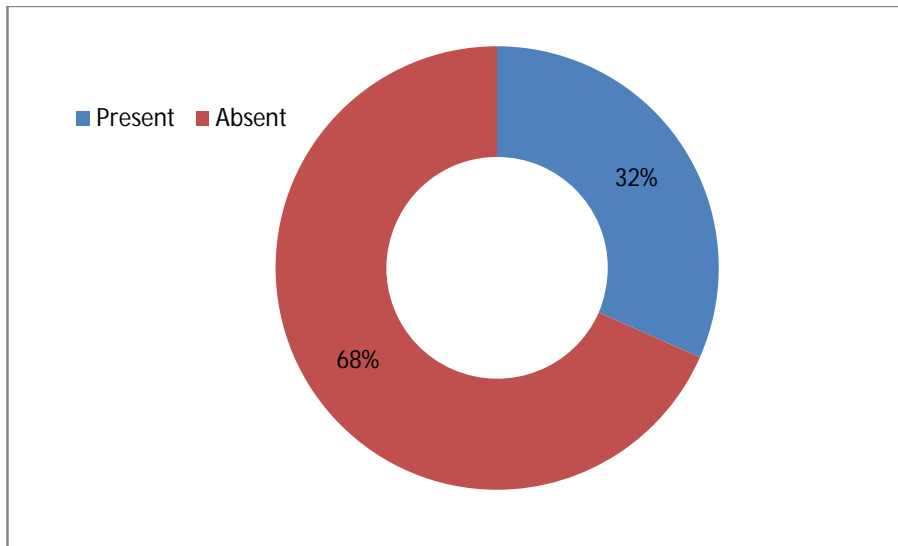
Table 2 shows the variation of family types in village dokrapara. There two types of families are found; they are- joint family and nuclear family. It is hard differentiate between the nuclear family and joint family as the houses are o clumsy and attached to each other and everybody in village is inter connected to each other; so differentiation is done basis of cooking food in same household. The table shows that the difference of joint family (47.37%) and nuclear family (53%) is very less, it due sense of unity among the villagers and common land.

Livestock of the villagers:

Table 3 Table representing the presence and absence of livestock among the families in part of Dokrapara village

	Present	Percentage	Absent	Percentage	Total	Percentage
Livestock	6	31.58	13	68.42	19	100

Figure 3 Pie chart representing the livestock owned by the families in part of the Dokrapara village



Analysis on the presence and absence of livestock:

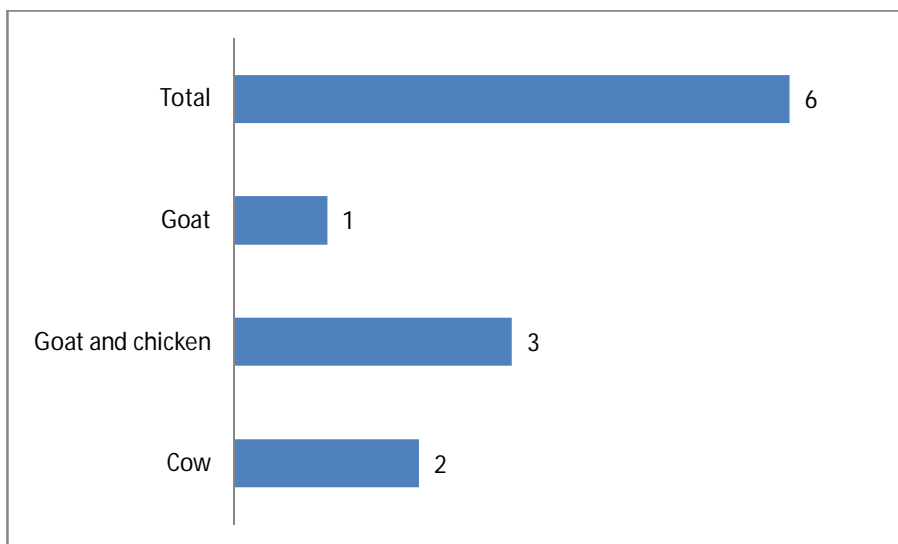
Villagers of dokrapara besides of making dokra craft, subsidies their livelihood by livestock. The product which they get from the livestock are utilised by them and further sell to earn money. The table shows the percentage of population having livestock, the data collected shows that only one-fourth of population have the livestock.

Distribution of the livestock among the families:

Table 4 Table representing the distribution of the types of livestock among the families in part of Dokrapara village

Livestock	No of families	Percentage
Cow	2	33.33
Goat and chicken	3	50.00
Goat	1	16.67
Total	6	100.00

Figure 4Bardiagram representing the distribution of the types of livestock among the families in part of Dokrapara village



Analysis of the distribution of livestock in the families

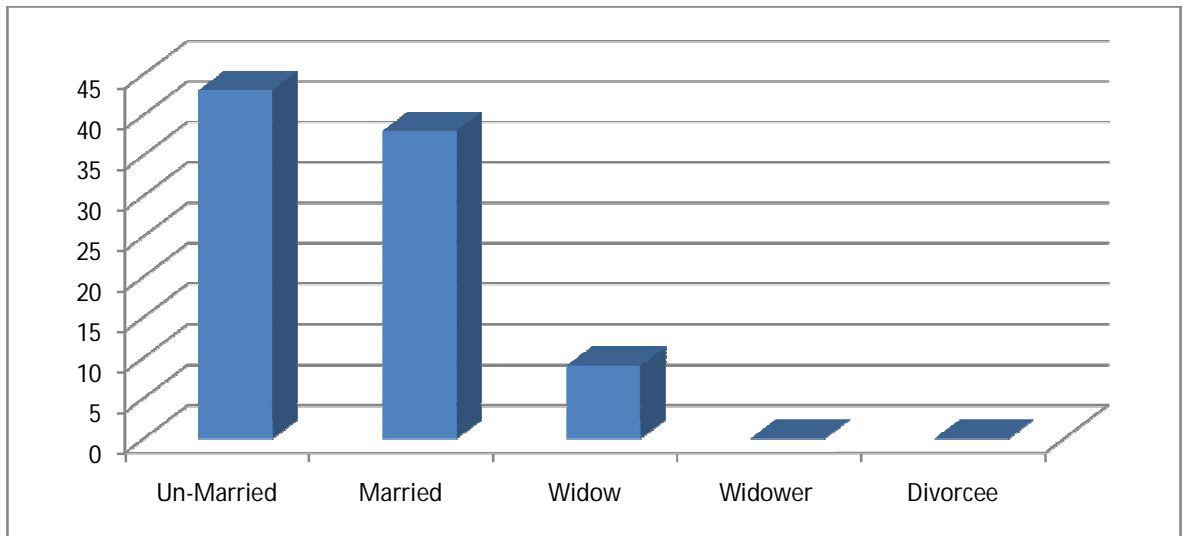
Villagers of dokrapara subsidize their by livestock like cow, goat and chicken. The table shows the percentage of different livestock among the six families (table 3) in village. Data shows that major amount of family among the six families own goat and chicken; only two families own cows and one family have goat. The four families who own goat and chicken seems that they subsidize livelihood by selling eggs and they sell goat to market purpose of meat behalf they get money and have some amount of profit. Again they buy small goat and breed them to sell in market. They two families which own cows, supposedly sell milk in market for some profit.

Marital status of the villagers:

Table 5 Table representing marital status of the villagers of a part of Dokrapara village

	Un-Married	Percentage	Married	Percentage	Widow	Percentage	Widower	Percentage	Divorcee	Percentage	Total	Percentage
No of individuals	43	47.78	38	34.2	9	8.1	0	0	0	0	90	100

Figure 5 Column representing marital status of villagers of a part of Dokrapara village



Analysis of the marital status of the villagers-

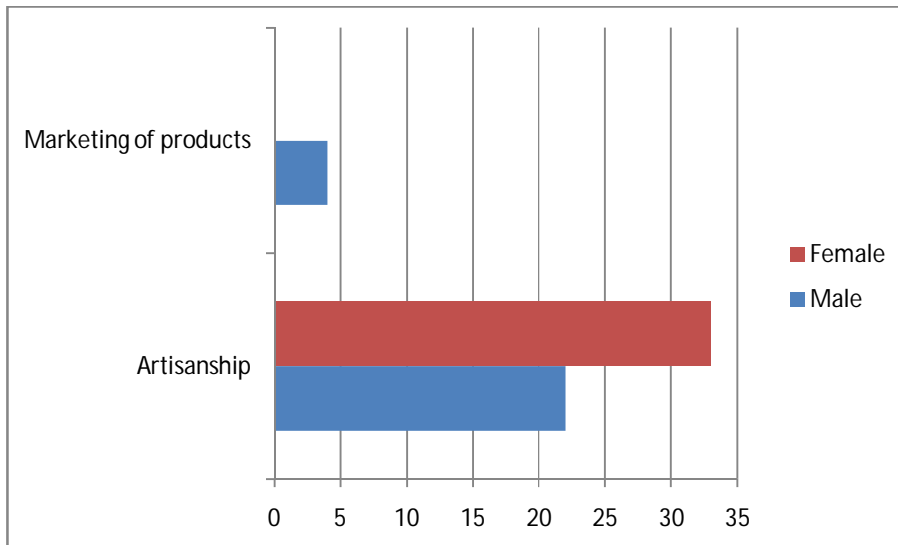
The table categorizes the population in the basis of their marital status; the population is grouped into un-married, married, widow, widower and divorce. The data shows that the 38% of population in married, no widower or divorce is present in village. Due to the work of melting brass to make dokra, and the work is done by the male population of village. The male are exposed to the harmful gases which causes them critical diseases like tuberculosis and even lung cancer, reduces their mortality age.

Primary occupation of the villagers:

Table 6 Table representing the primary occupation of the part of Dokrapara village (only cash earning category is included)

Category	Primary Occupation			
	Artianship	Percentage	Marketing of products	Percentage
Male	22	40	4	100
Female	33	60	0	0
Total	55	100	4	100

Figure 6Bardiagram representing the primary occupation of a portion of the village Dokrapara (Only cash earning category is included)



Analysis of the primary occupational status of the villagers:

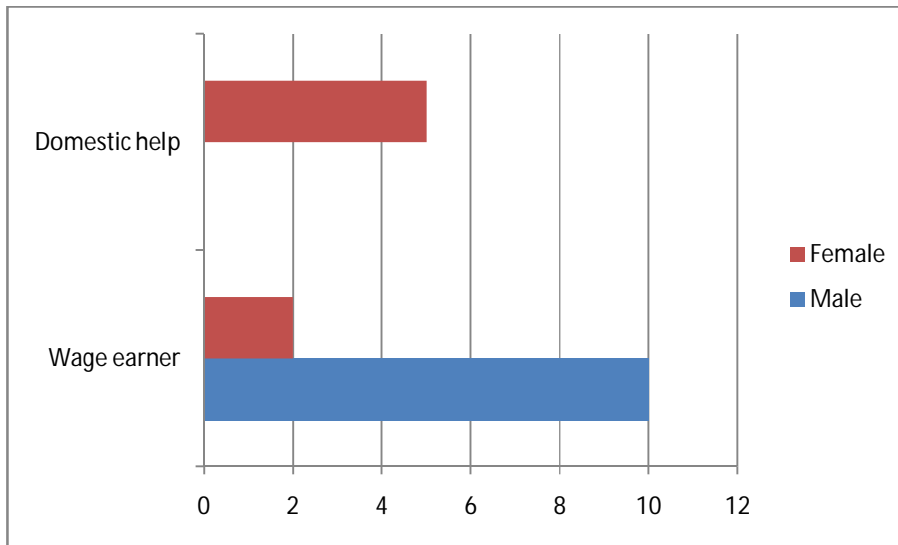
The table shows the primary occupation of males and females of villagers. The data shows that main population of the village (males and females) primary occupation is artisanship and only four people are in marketing of dokra. Among the artisan, females (60%) have equal role as male (40%) in dokra. In making of dokra females are associated in designing the product or dokra and doing the coating before going into the hearth. Females are not allowed to do hearth work as it is risky so males do that. Males are also associated in polishing the dokra. No female are associated in marketing but when visitors come to village they sell products to them.

Secondary occupation of the villagers:

Table 7 Table representing the secondary occupation of the part of Dokrapara Village (Only cash earning category is included)

Category	Secondary Occupation			
	Wage earner	Percentage	Domestic help	Percentage
Male	10	83.33	0	0
Female	2	16.67	5	100
Total	12	100	5	100

Figure 7Bardiagramme representing the secondary occupation of the part of Dokrapara Village (Only cash earning category is included)



Analysis of the secondary occupational status of the villagers:

Dokracraft being an seasonal work (November to January), other months in a year people of dokrapara subsides their livelihood by working as a labour in agricultural fields, factories like rice mills, oil refinery or other shops. Females also work as a maid in other houses for earning. The table shows the secondary occupation of the villagers in off season. The data displays that majorly both males (83.33%) and females (16.67%) work as labour in off season and domestic help are mainly done by the females.

Some aspects of material culture of the village

Material culture encompasses all the physical objects produced by the members of any particular culture. These objects can range from purely utilitarian to the highly esoteric. Early anthropological research primarily focused on the artifacts which are used by to earn a livelihood. Material culture today attempts to explain-

- How physical worlds sets constraints for & has a significant impact on human behavior.
- In what ways, material world is interacting with people in the everyday life (Barfield, 1997)

In our work we have tried to give a descriptive understanding of material & their usages at Dokrapara. There are two major types of artifacts used by people Dokrapara-

- Household implements and tools
- Tools & implements used in production of Dokra.

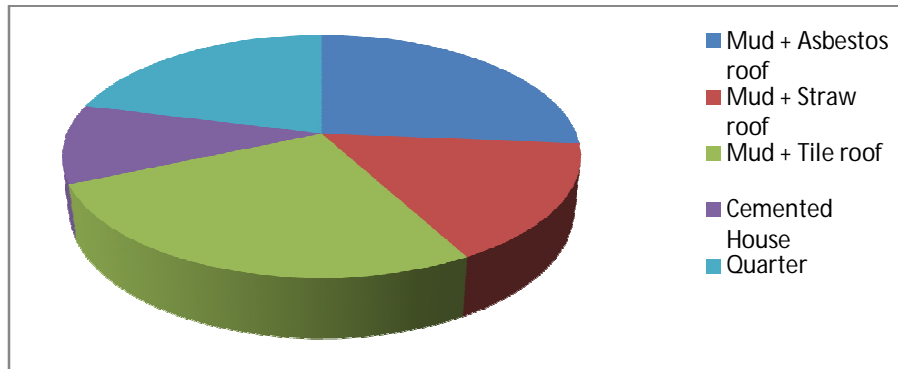
House plan

They live in a under privileged housing condition. Inter house space is very little. There is no house yard and house wall. It is very unhygienic also. Cooking place is also attached with the balcony. Out of 19 families, 3 families have mud house with straw roof. Only 5 families have asbestos, tin, and tile roof mud house. Four families have quarters which were formed at the time when Smt. Indira Gandhi was prime minister of India. Financial crisis is the main cause for maximum adopting of mud and tile roof. Out of 19 families, 15 families have single room house and 4 have double room houses. People of dokrapara live, work eat and sleep in small cluttered space. Temporary stages of space division is habitual, in the early morning the same space becomes a place of work, after few hours the same space is shared as a kitchen space; in afternoon the same space is then occupied by ladies to take rest. Due to small space they have to buy less products to store them properly nor do they have funds to purchase in advance while anticipating the order. The following table and figure represent the distribution of types of houses in the village.

Table 8 Types of houses in the village (among the domiciles in which the work has been carried out)

No.	House Type	Number of Families	Percentage
1	Mud + Asbestos Roof	5	26.31%
2	Mud + Straw Roof	3	15.78%
3	Mud + Tile	5	26.31%
4	Cemented house	2	10.52%
5	Quarter	4	21.05%
	Total	19	100%

Figure 8 Pie diagramme showing the types of houses in the village (among the domiciles in which the work has been carried out)



Construction of house

Dokra Para consists of two types of house single roof and mud house. Being an under developed and clumsy settlement, they have number of mud houses which they construct on their own.

Interviewing, MeenaKarmakar owner of a mud house (domicile no. – 15) says that they have built house on their own 20 years back. Her house has muddy floor, which is thatched by straw. The house frame is made by bamboo; walls are made of unfired bricks which are coated with mud and sand mixture. Under laying the straw, plastic covering is done, to protect it from rain. The thatching needs to be after every 2 years which costs around 500 rupees. Her house contains one bedroom, one storage room and an open veranda (The floor pattern of the house is given in Figure No.). Her house is guarded with walls made of unfired bricks and coated with mud and cow dung. The clay plastered floor is not smooth but coarse and at places like undulating as well. She has an oven made with mud and cow dung on her veranda for cooking. The walls of the houses are painted

with tur. The following table gives a rough summary of the items needed and their approximate market value for the construction of a village mud house.

Table 9 Table representing the items used and their approximate market value for the construction of a typical mud house of the village

Item	Source	Cost
Mud	From field	Nil
Cow dung	Village	Nil
Bamboo Structure	Forest	Nil
Wooden planks	Forest	Rs 3000 for sowing
Tar	Market	Rs 30 per kg

Description of material items used in the village

The people of dokrapara usually uses spatula and knife for clay modeling blade for waxing, flat sheet of wood to facilitate in preparation of thin strands of wax, hammer to break the mould after firing and a file to do the manual polishing of the artifact. They use grinders also known as Bapin machine to polish the tools.

Some aspects of the material items used by the villagers in production of Dokra

Name of the material	Hearth or Furnace (Bhanti in local language)
Description	It is an cylindrical shaped oven attached to floor. It is made of mud and bricks. The mouth of oven has big hole for heating of brass and furnishings works.
Usage-	Used in melting of brass to make Dokra.
Material by which manufactured-	The material used for making hearth is mud and brick
Price-	Nil (self made)
Durability -	5 years to 7 years
Repairing -	It is layered with mud when broken and old bricks are replaced by new bricks
<hr/>	
Name of the material-	Grinding and Polishing machine
Description -	Machine consists of a bed with a fixture to guide and hold the work piece and a power driven grinding wheel.
Usage-	It is used for polishing the dokras
Material by which manufactured-	It is made if iron blades, plastic base and motors for rotating
Price-	8000 to 10,000 /-
Durability -	10 years to 20 yeras
Repairing -	It is taken to machinery shops to replace the motors
<hr/>	
Name of the material-	Temporary Hearth (Temporary Bhanti in local language)
Description -	An rectangular shaped hearth made of bricks.
Usage-	It is made for making dokras when there is few orders to make.

Material by which manufactured-	Bricks and mud
Price-	nil
Durability -	It is once or twice used fir few orders
Repairing -	In case of brokage the old bricks are replaced by new bricks to sustain the heat.

Name of the material-	Hexo blade (Heso in local language)
Description -	It is long quite brittle contain some metallic teeth for cutting purposes.
Usage-	It is used for cutting
Material by which manufactured-	stainless steel
Price-	Rs 70 to Rs 90
Durability -	2 years to 3 years
Repairing -	When it gets blunted it is sharped with the help of polishing machine.

Name of the material-	Muchi
Description -	It is an carbon metallic bowl
Usage-	It is used to take out extra molten brass from the brass
Material by which manufactured-	carbon and iron
Price-	500 to 800 rupees
Durability -	7 to 8 years
Repairing -	It is broken or holed it is welded by another metal coating.

Name of the material-	Dabu
Description -	The tool contain a long handle with a pot like structure in the end.
Usage-	It is used to pour the extra molten metal out of the furnace.
Material by which manufactured-	iron

Price-	200 to 300 ruppes
Durability -	2 years approx
Repairing -	It is welded if it's broken.
<hr/>	
Name of the material-	Chach
Description -	It is an muddy structure in which structure of Dokra are kept for pouring the hot.
Usage-	It is used to pour the molten metal in wax structure.
Material by which manufactured-	Mud
Price-	Nil
Durability -	Its used only once
Repairing -	It can't be repaired.
<hr/>	
Name of the material-	Pincer
Description –	The tool is made of two pieces of metal with blunt concave jaws like the blades of scissors.
Usage	It is used gripping hot muchi out from furnace.
Material by which manufactured-	Iron
Price-	250 to 400 ruppes
Durability -	1.5 years to 2 years
Repairing -	It can be welded if it's broken from the joint.
<hr/>	
Name of the material-	Bell
Description -	The tool contains a metal ring which is used to hold to muchi, supporting long handle.
Usage-	The tool is used to hold hot muchi out of furnace
Material by which manufactured-	Iron
Price-	150 to 250 ruppes
Durability -	2 years approx

Repairing -	It is welded from the broken parts.
Name of the material-	Hammer
Description -	It is consists of a weighted head fixed to a long handle that is used to deliver a impact in a small area of an object.
Usage-	It is used to hammering nails and iron sheets.
Material by which manufactured-	iron and wood
Price-	100 to 200 rupees
Durability -	2 years to 5 years
Repairing -	sometimes wooden shovel gets weak so it is replaced by a new one.

Name of the material-	Spade (Kodal in local language)
Description -	It is a tool primarily for digging, comprising a blade typically stunted and less curved of shovel and long handle.
Usage-	It is used to digging
Material by which manufactured-	Iron balde and wood
Price-	100 to 200 ruppies
Durability -	1.5 years to 3 years
Repairing -	when the blade gets blunted its polished with the help of polishing machine.

Name of the material-	Sickle (kaste in local language)
Description -	The tool contains curved shaped iron pieces which consists of iron teeth attached to wooden shovel
Usage-	It is used to cutting grasses and branches.
Material by which manufactured-	iron and wood

Price-	100 to 150 ruppees
Durability -	1.5 years to 2 years
Repairing -	For sharpening it is polished.

The tangible and intangible heritage of Dokra Manufacture

The study of economy is the research on the ways in which goods and services are produced, distributed and consumed. It also tries to understand the ways in which the notion of economy, works in particular society (Firth, 1951). In our work we have primarily focused the provinsing of subsistence of the particular village.

Village Dokrapara is an artisans village ,where every family is engaged in production and distribution of dokra craft. Their production is an outcome of aged tradition of technology known as melting wax technology.

Production

We came to know the method of making famous Dokra crafts .It is long, risky and a multi-step method. This craft is made by both males and females; and they are dependent on each other.

Raw material and Prices

Dokra crafts are mainly brass, but it takes several things to make the model. The most important materials are wax, dhunno,mud(two types) and sand. They have two types of mud ; first layer is known as Nainamati(locally) and the second layer is known as Etelmati and mixture of sand (half cup soil and one cup soil). This mud is bought from water cannal. Dhunno is purchased from guskora market at price of Rs 350 per kg. The wax which is used to mould the model is known as yellow wax, which is also purchased from guskora at Rd 250 per kg .Coal and woods (collected from the nearby forest by the village women) are used to burn mould to actual brass statue from wax designs ,it is bought from local shop at Rs 1350 per quintal.



Picture 8 Village women carrying fallen leaves and dried branches to be used for setting fire in their oven and hearth



Picture 9 Evidences of soil being taken out for creation of Dokra in the village

Stage	Raw Material	Source	Distance	Price
Stage 1	Wax	Guskora	5km	Rs250/kg
	Dhunno	Guskora	5km	Rs350/kg
	Mustard Oil	Guskora	5km	Rs26/litre
Stage 2	NainaMati	Pond	200m	-
	Etel Marti	Jungle	500m	-
	Sand	Canal	2km	-
	Borax	Guskora	5km	Rs120/kg
	Brass	Guskora	5km	Rs350/kg
Stage 3	Iron wire	Local Shop	100m	Rs60/kg
	Coal	Local Shop	100m	Rs1350/quintal
	Wood	Jungle	500m	-
	Cow Dung	Village	-	-

Process of Making the Dokra

1. The first step is to melt wax and dhunno, and then cooled down to mould it.
2. After cooling of mixture of wax and dhunno, it mould to the shape and designed. They keep a piece of burning wood constantly to get the required temperature to soften the wax, so that they can give the desired shape to the wax.
3. They after the initial designs, they use the black mixture which is further cooled to a elastic coat. Sometimes tar are also used. The elastic coat is coated around wax-dhunno designed model. Such elastic coating is mostly used to get the finer designs of the craft. Some of the villagers uses black mixture and dunno interchangeably.
4. The model is covered with the first layer of mud which they get from the field. This mud is properly known as Bengali as doashmati which is balance proportion of soil and sand particles.
5. Second layer of mud is coated over its which contains etelmati and sand mixture (1:1/2). This is known as Gheria.
6. After all coats around model, chong is made where the metal is kept and a channel is made to connect the melting metal. The initial design of wax or the chanch, when heated; the wax chanch will be melted and replaced by the metal.
7. After pouring the metal, it is covered with mud and cow dung, which appears like a globulin structure.

8. Now, the gheria is put into the burning hearth locally known as bhatti, with metal facing towards the flame.

9. It takes about 2hrs, to melt metal.

10. After metal is melt , people takes it out with the help of sarasi, and turns the melted metal upside down , so that the metal is poured into the chanch taking the shape of hollow created in the case because of melted wax.

11. After, it is cooled; the gheria broken and then the metal item is polished with machine which is known as Bapin machine. Sometimes it is welded and again polished.

Process of Firing Bhatti.

1. The coal is break the coal into small pieces and then arranges it in upside of bhatti.
2. Cutting the wooden shafts into small pieces and putting it into bhatti and firing it with small pieces of cloth covered with tar.
3. After firing of coals, a second layer of small coal are layered up and air is cut off to bhatti for quicken the process.
4. Gheria is put in the bhatti with metal part facing towards fire, for quicken the melting of metal.

Marketing

After production, marketing is the main job. Profit depends on good marketing system. They generally choose exhibition and fairs for selling the products. In this case ‘Shantiniketon’, ‘Bishnupurmela’, ‘Kalapatarumela’ of Durgapur, ‘Khadi-o-hastashilpomela’ of Kolkata are important. They also go to Mumbai, Goa, Patna, Delhi, Bangalore, Hyderabad, Dhaka for product selling. Besides mela they also by whole selling. They sometimes take order from some companies and after production it is supplied to such companies or order suppliers. The price rate of smaller item to larger item varies from Rs.500 to Rs.50000 also. October to January is the main season for both production and selling. Rainy season & heavy summer are the off season in which in which production is not generally done. For export products there need a heavy packing. Packing and transport cost goes to the artisans.



Step I preparation of wax model



Step II application of mud plastering



Wax moulds before clay plastering being kept



Prasanta Karmakar is setting fire on his hearth



The fired moulds being taken out of the hearth



Village women and children are busily dismantling the mould from the metal finished product

Figure 9 step by step visual representation of Dokra Manufacturing



Picture 10 A boy is polishing the finished product



Picture 11 Villagers are displaying the products for a quick sale

Dokrapara: Problems and Prospects

In our discussion with several manufacturing family of dokra craft, we would Judd down a number of problems faced by the artisans. I consequence, this problems also seriously affect their families and communities at large. This problem ultimately limit the extend which they could earn from this old craft. Despite of the fact, that dokra craft has good market value, in several group discussion we have inquired and asked them to provide us with a list of major problems and list is as follows-

Health Hazard

Because of the wax melting technology, especially during the firework severe health consequences are noted villagers themselves.

- **Incidents of Tuberculosis**
Artisans have commonly expressed their concerns on the fact that nearly 100% of them have suffered TB for at least once or twice in their life time. In words with Prasantakaramakar “TB is almost like a cough and cold, you city people suffer from. In every house hold you will find somebody is taking DOT medicine to get a cure. Now days, people are aware and take timely measure. Earlier our fore fathers had died cough filled with blood, which we known it as TB. Even many of artisans die out of this disease. “
- **Other lung diseases**
We have seen that dokra artisans while preparing wax mould, constantly keep a piece of fire wood burning without flames. It is an essential aspect, of dokra technology to have constant supply of low heat. They need to soften the prepared wax, regularly to give desired shape. From that fire wood without flame, we would see a thick or thin smoke constantly coming out. When the entire community does the work 10-12 hours in a congested place. The entire village is filled with smoke; consequently breathing trouble and other lung related diseases including cancer is a high likelihood not only for the artisans also the entire community.
- **Muscle pain and posture related Problems**
Villagerscommonly expressed with their bodily pains which they encounter every day. Such pains in their lower back, spinal cord shoulder and in knees; resulting from their long hours of handicraft work while sitting in same position. They also report unbearable amount of pain along the lat muscles and in their forearm. It results from the fireworks which they are to perform by using hand held long and heavy sarasi. Women although report little lesser amount of pain because their work schedule of giving clay coating over the wax moulds takes lesser amount time but they took suffer from similar problems.
- **Alcohol related health problems**

Artisans in several group discussions and during our several interviews have commonly expressed that they consume alcohol, most frequently the country liquor to deal with bodily pain and to have sound sleep after hours of prolonged work. In words of Subho Karmakar who now a days works less but manages marketing and distribution of products, "it is true that alcohol intoxication is almost a way of life in village but it is also almost a way of life in village but it is also true that villagers do not limit and often drink so much, so as to lose control and damage their health condition. I can give you list of 26 artisans who have died with liver failure over a period of ten years. I along with maternal uncle Mukul Karmakar have taken initiative to remove the country liquor manufacture unit, within the village. It was difficult but I have used my administration network to do that. It has significantly reduced the alcohol related death within the village, but alcoholism is definitely a problem for us. Frankly we don't know how to deal with it."



Picture 12 A villager looks at the smoke coming out of an open hearth. Smoke such as this creates an unhealthy air condition for the villagers

Problems with water resources

The village has five tube wells in which 3 are functional. There is a submersed pump attached to the guest house constructed by the government of West Bengal. The over tank supplies water to entire village. As a result most of the people are habituated to consume the water from the over tank. Interestingly a community toilet designed to village is adjacent pump set as a result there is a chance of infiltration of the toilet

water. Villagers report that they regularly suffer from stomach aches, indigestion, and diarrhea.

For washing and cleaning they use 2 ponds which dried up by the month of December and only get refilled during monsoon. For nearly six months village depend solely on tube well and submerge. It clearly shows problem of cleanliness due to shortage of water.

Problems with drainage system

Villagers thus have pucca drain near the community center but waste water is disposed to a nearby pond. As a result, the pond water is damaged. Large part of village doesn't have any drainage system therefore their waste water coming from about 3 community toilets have nowhere to go, but to accumulate within the village creating thick black fly infested muddy substances near the toilets which is during monsoon seep into villagers alleyways and even inside their homes. Thereby creating a lot of health hazard. Livestock pigs feast on them and is potential bacteria spreading vector. Most of the villagers including children roam around village without sandals exposing themselves to worms.

Problems of sanitation

A substantive no. villagers in Dariyapur practice open defecation in the nearby jungle. Diknagar No. 2 gram panchayat located just opposite to Dokrapara has canvassed to the village to open the defecation. Dokrapara have 4 community toilets built by panchayat by utilizing various funds but yet no. of villagers do practice open defecation. In words of Prasanta Karmakar, it is difficult to make villagers understand the need for utilizing toilets properly.

Education and general awareness

Artisans belonging to age group of 30-50 years are mostly uneducated; the younger kids are also having education up to on average of class 8 and becoming engaged with craft itself. Education is never a priority to any of villagers across generation. It is interesting to see that because of the extension program of integrated child development skill running within the village kids belonging to preschool group that is the age of 3-4 years are regularly attending the ICDS center.



Picture 13 In one of the public toilets a graphiti shows the canvassing to stop open defecation process

Problems with housing infrastructure

Dokrapara has a unique history of settlement. It appeared from several interviews that artisans once settled down beside the large pond at Dariyapur. They were professionally welders, most slightly coming Orissa. Later on 1950-1960, some government agencies which present generation recollect has allocated a land non-cultivable and relatively higher ground. As a result, the lands which they are settle has no private ownership but owned by the society named as Dariyapur Artisans Industrial society limited. Consequently the space allocated to them is insufficient for the present generation. As we have encountered a couple sacred grooves belonging to kali and manasha, which is located at outskirts of village, we could understand that the village has expanded since then. Villagers MukulKarmakar confirms to this facts. The lack of space and rising village population has resulted in clumsy slums. Because of lack of adequate income they could not afford a vertical extension of their house with an exception of couple of relatively well of their families; none of them has money to repair their houses. In words of PrasantaKarmakar , at monsoon amount of rain which fall outside is equal not lesser in my home. We put buckets, utensils under the holes of roof to collect water.

Roads and Connectivity

Approaching Roads which connects bolpur, asansol state highway with the village is concreted and considerably wide. The decoration along the road gives it a touristic attraction but just behind the guest house and community development center; the actual village have poor condition. Some portion of the village is concreted and the rest is earthen and becomes muddy, even if there is a little amount rainfall. It is difficult for village people to maintain the cleanliness of their home.

Access to health care system

Just opposite of village with gram panchayat there is a primary health care sub center, where people can go for sour throat and stomach problem. They have to Rs.1 to consult a MBBS doctor thrice a week and Homeopath twice a week. For any little major crisis, they rush to Guskora which also doesn't have much to offer, for which they usually go to Bardhaman medical college hospital which is about 36km from this village. Consequently, getting medical attention in serious health hazard; is difficult to attend.

Initiative from Government and NGO's.

If one comes to village, he will see lot of decorational development initiative are taken at the very entrance of village. The village has experienced several initiatives by panchayat system.



Picture 14 Me standing in front of the local panchayat office. The photo was taken on our way back from the office after data collection

a) Initiative by Ausgram (I) Panchayatsamitti in last year-

- The samitti has constructed to new community toilets in 2018-19 financial year. This are used villagers.
- It has several solar like system at the village enetrane and its boundary by utilizing fund from National Green Tribunal.
- They have planted Mexican type grass to create a lawn of enentrance of the village, for its beatification by utilizing national green tribunal and its own fund.

b) Diknagar Gram Panchayat which is just opposite to village have under taken several initiative such as follows-

- Construction of waiting shed by utilizing 14th central finance commission fund.
 - Construction of conference hall at community center by utilizing 14th central finance commission fund.
 - Repairing and painting working of the existing guest and community center.
 - Construction of 5 sculptures for beautification by utilizing 14th central finance commission fund.
 - Sculpture at main gate by utilizing 14th central finance commission fund.
 - Electrification and lightening works by utilizing 14th central finance commission fund.
 - Construction of self-help group work shed at entrance by utilizing Mahatma Gandhi National employment Generation Scheme.
 - Hedge and xchain link fencing near the entrances of dokrapara by utilizing Mahatma Gandhi National employment Generation Scheme.
 - Construction of concrete road and drain in village by utilizing Mahatma Gandhi National employment Generation Scheme.
- From the above listing it quit clear most of the development realated initiatives are restricted at entrances of dokra, which at best can attract the passer by. It can somewhat increase the customer flow but it doesn't do any substantive change to quality of artisans.

c) Initiatives by Khadi Gram unnayansangastha (KGS)

Khadi gram unnayansangastha was first agency to build any infrastructure for benefit of locality. They had released the grant for construction of community empowerment center which was single storey concrete building meant for training, visits outsiders and shelter from natural disaster. The construction activity including proper designs was undertaken jointly by Khadi gram unnayansangastha and an NGO Banglanatok dot com.

d) NGOs initiatives

Intial popularizing of dokra as told artisans in group discussion was that off by NGO- Banglanattok dot com. They arranged artisans to go to fair and festivals to display cells of dokra craft. They became one of the major platforms, to this people for marketing of product.

They bought orders and sold products to different markets around the country regularly. It results in significant different in earning pattern in each of villagers. It has also reduced the impact of middle men in the supply chain, visa-versa their earning pattern. Later on, banglanatok dot com also constructed a community toilet and impressive entrance gate of village with relent developed related initiative by state government banglanatok dot com relatively sidelined. Some of villagers felt that banglanatok dot com has changed substantive chanxces in life and they would be happy if such initiative continues. According to SubhoKarmkar, banglnatok dot com has a time bound project which has ended that is one of the reason they are not regular supply chain provider to village.

ⁱ Accessed from <https://web.archive.org/web/20150814023915/http://demographicpartitions.org/science-population-determines-population-change/> on 03.02.2020