

The Study of the Process of Transformation from Ivory to Wood Carving in Jaipur, Rajasthan and its effect on the Craftsmen

Sudipa Saha¹ and Dr. Sutapa Choudhury²

Abstract : *Rajasthan, the western most state in India is a repertoire of cultural heritage. Countless examples of tangible and intangible cultural elements are scattered over its diverse territory. Among those its handicraft traditions are the most remarkable amalgamation of tangible and intangible cultural traits. Jaipur the capital of Rajasthan had a long antiquity of ivory craft dated back to seventeenth century and continuously practiced till the complete ban of ivory in 1990. However, the high demand of ivory objects in different parts of the world led to the ruthless killings of elephants, as such, the authority had to sacrifice the art for the sake of the survival of the nature's mighty creature. The craftsmen mostly belonging to Kumawat community are still struggling there to survive with some alternative raw materials of ivory like sandal wood, kadamba wood, bone and artificial ivory. The goals of this article are to assess the effects of the change on the craft and the craftsmen, to find out whether there is any continuity of the age-old traditional craftsmanship still exist even after the change of the raw material and to formulate sustainable strategies for the further development of the heritage craft with alternative raw materials.*

Keywords: Intangible cultural heritage, traditional craftsmanship, ivory carving, wood carving, sustainable development

Introduction: Rajasthan, located at the north-western part of India is one of the most colourful and culturally enriched regions of the country. Monuments like gigantic forts, palaces and temples having immense historical and archaeological significance as well as intangible cultural elements like different forms of folk dances, music and paintings are the incredible heritage of Rajasthan. The region is also the birth place of several handicraft traditions which produce beautiful decorative and utilitarian objects manifesting indigenous human knowledge, creativity and imagination. The general aridity of the weather is the reason of poor agriculture in the past which in fact gave birth to different handicraft traditions as a source of alternative income for many communities. Handicrafts are the living heritage encompassing tangible as well as intangible cultural elements in the form of objects, knowledge and values. Objects can be studied on the basis of their functional, structural and dynamic properties. Knowledge denotes technique of manufacturing and tools' usage pattern. Values can be described as how the people of that particular community can relate and identify themselves with the objects and how the craft items are acknowledged by the society for their social and economic significance. So, in short traditional handicrafts are the treasure house for knowledge seekers because of having immense historical, social, cultural and economic importance and as such need to be protected from obliteration. Therefore, UNESCO has included traditional craftsmanship as a major domain of intangible cultural heritage in the *Convention for the Safeguarding of the Intangible Cultural Heritage 2003* which is required to safeguard from the threats of "destruction, deterioration and disappearance" due to the process of "Globalization and Social transformation" and a lack of fund to protect them (UNESCO © 2020).

Now a conflict arises, when a traditional craft is using an animal product as raw material and responsible for the reason of the gradual depletion of that particular animal from the face of earth due to over exploitation. Such an example was the ivory craft of India.

India being the natural habitat for the Asian elephant had always exploited ivory for its own benefit. Ancient Indians from this subcontinent used ivory, sometimes to fulfil their aesthetic taste and creative artistic desires by making beautiful decorative art pieces, furniture and other utilitarian items and sometimes just for economic gain by exporting raw ivory. Different centres of ivory carving developed in Indian subcontinent which were showing outstanding craftsmanship such as in Odisha, Thiruvananthapuram, Delhi, Assam, Murshidabad, Sylhet, Pali, Jaipur etc. (Dwivedi 1976; Pal and Roy Burman 1961), mostly in the Medieval period under the patronage of royal families and later on, some were continued in the British period too for immense popularity of the ivory objects among the foreigners. The craftsmen were exploiting

indigenous ivory as well as imported African Ivory and not only in India but in many other countries of the world ivory trading and ivory carving were a lucrative trade for long time.

However, in India where two hundred thousand of elephants were there in the early part of the 20th century became sixteen to twenty thousand in the mid 1980s (Indian Kanon 1997) as well as in Africa there were 1.34 million elephants in 1976 but within a decade the number came down to 600 thousand only (Stiles 2004). As a result Indian Government by implementing the *Wild Life (Protection) Amendment Act 1986 (Act no. 28 of 1986)*, 1991 (*Act no. 44 of 1991*) and 2002 (*Act no. 16 of 2003*) has banned all kinds of trading of ivory Indian or imported and also prohibited making of articles from them, in addition to that possession of raw ivory or ivory art objects without an authorized certificate by a trader or a person is also a punishable offence. The honourable Supreme Court of India stated in the judgment of the case of *Indian Handicrafts Emporium And Ors vs Union Of India (Uoi) And Ors.* on 27 August, 2003 that the authority i.e. the Central Government should take physical possession of the stock of ivory and the seized ivory art works should be preserved and displayed in the Museum as they were the “cultural and religious heritage of India” (Indian Kanon 2003). In addition to this inclusion of African elephants in the Appendix I of CITES in 1989 completely banned international ivory trade in 1990 (Reifenstein, Kitschke and Ziegler 2008: 14).

Due to those rules and regulations craftsmen were impelled to shift into some alternative materials of ivory to continue their craft profession. Jaipur was an important ivory carving centre in the western part of the country in the last century and where a considerable number of ivory craftsmen or their descendants are still struggling on alternative raw materials to produce beautiful traditional art pieces by following old technique and designs.

The major goal of this study is to reveal and understand how the change in the raw material affect the ivory craft overall and how the craftsmen are still struggling to survive the adverse situation and also to formulate fruitful strategies for the sustainable development of the craft. The history of the ivory carving industry is documented and analyzed from different published sources to understand the historical, economic and social values of the ivory objects as well as the functional and structural properties of the ivory articles along with the technique, tools and designs. The present day situation is studied by following the qualitative and quantitative methods to understand the effect of the changes into their socio-economic life and their present-day problems.

The history of ivory carving: its growth and decline in Jaipur: The earliest evidence of ivory work is found at Amber palace in Jaipur where walls are paneled with sandal

wood inlaid with ivory and doors which also show ivory inlay work dated to 1630 AD (Watts and Brown 1903:179; Pal and Roy Burman 1961:62). Ivory objects from the Jeypore School of Art mentioned in the Official Report of the Calcutta International Exhibition (1985) were ivory handled silver dagger, ivory priming horn, ivory finger ring, ivory snake, ivory kite, man with a bottle made on ivory. Other important centres of ivory carving in Rajasthan mentioned in the Catalogue of Delhi Art Exhibition (Watts and Brown 1903: 178-180) were Bikaner, Udaipur and Pali a small town in Jodhpur. Pal in his book *Handicrafts of Rajasthan* (1984) mentioned that Bharatpur, Jaipur and Udaipur were the important ivory carving centres of Rajasthan. Various art objects were manufactured such as decorative items like images of Gods and Goddesses, secular human figurines, animal and birds, contemporary and folk life scenes; utilitarian items like bangles, boxes, chessmen, combs, paper cutters, dagger belts and so on. He also stated that Jaipur became an important centre during the reign of Maharaja Man Singh in the late 19th century who patronized the art very much. He arranged to give training to the craftsmen by the master craftsmen of Delhi. Jaipur was famous for making bangles, chessmen sets, paper knives, hukka bases, jewelry items, figures of animals and birds, fish shaped surmadani, boxes and lamps with intricate jali designs etc. Another specialty of Jaipur was ivory mats and fans made with thin ivory strips introduced in the 17th century probably from Bharatpur. A survey report published by All India Handicrafts Board on the Ivory Carving Industry of Jaipur (1965) gave detail information about the industry. The survey was conducted in 1960. According to the report the industry flourished during and after the World War II when foreign troops stationed in India. After the end of the war during early 50s many rich businessmen see possibilities in this craft so had become interested to invest. The industry provided employment to 235 workers. Most of the workers were working under the dealers on wage rate basis and only a small portion of self-employed artisans purchased raw material from market and supplied the finished product to the dealers and exporters. The wage rate for the workers varied from INR 1.50 to INR 8 per day according to their skill. Power-driven motors were used at that time also along with hand tools. The finished items included articles like statues, animal figures, chess-sets, table lamps, elephant bridges, lion capitol, cock-tail pin, paper cutters and so on. At that time marketing of a large part of the production was conducted by the dealers and dealers cum exporters of Jaipur and outside like Delhi, Bombay, Benaras and Calcutta; a small part by the Rajasthan Government Handicrafts Emporium and even a smaller part by the co-operative societies and small-scale self-employed artisans. The artisans used their traditional designs to make items as well as the dealers also provided designs according to their requirements.

During 80s Martin and Vigne (1989: 16) mentioned in their article that Jaipur had

the largest number of craftsmen around 760, half of whom specialized in miniature paintings on ivory plate. Since 1960s the number of painters increased as it was very popular in foreign countries. Another specialty was elephant making industry which was no longer an important export item as it lost its popularity and replaced by the production of Chinese man. Another tradition of Jaipur was to make antique ivory items by treating them artificially.

A survey was conducted by Traffic India in 2001 and published an online report in 2003. The study revealed that after ten years of ban hundreds of carvers were still involved in ivory carving in India and Jaipur was one of the most active areas of illegal ivory carving. Approximately 120 artisans were still carving on ivory in Jaipur specially making miniature paintings.

Present condition of the carvers: In Jaipur, artisans are presently carving on different kinds of wood, artificial ivory as well as on camel and buffalo bone. Only the families of ivory craftsmen were chosen for interview and those who learnt from ivory workers. As such the following four regions were surveyed namely, Jothwara Industrial area, Niwaru village, Ninder village and at the Kalyan Ji ka rasta in the city of Jaipur of the Jaipur district. These areas are the residences of ivory craftsmen. Total 22 families consisting of 39 artisans were interviewed. Very few female artisans are found to assist their husbands in carving. Here as shown in the table no. 1 that the numbers of young and middle-aged artisans are almost same and only three artisans are above the age of sixty. In Jaipur the craft was practiced by *Kumawats* who were previously temple mansions by profession. Now in the present research except for one Jath all other artisans belong to *Kumawats* community. Regarding education it is found that 12.8 percent artisans are unlettered, while 74.4 percent have left education after matriculation and only 5 percent are graduates.

Table 1: Age and Sex wise distribution of the Artisans of Jaipur

Age Groups	M	%	F	%	Total	%
14 to 30	15	38.5	3	7.7	18	46.2
31 to 60	17	43.6	1	2.6	18	46.2
61 to 80	3	7.7	0	0	3	7.7
Total	35	89.8	4	10.3	39	100

Young generation perception towards the craft as profession: It is found that 37.9 percent offspring of the artisans have chosen craft profession while 24.1 percent of them prefer other kind of jobs and 37.9 percent are still students. Most of them said as they are not highly educated that's why they continue their hereditary profession.

Training: This craft is very difficult to learn and required a long training period with maximum involvement and concentration. Knowledge of drawing and measurement is also inevitable for learning. As such training from a professional carver is very much required for a novice learner. There are different modes of training availed by the artisans. The following table no. 2 shows that most of the artisans took training from family members. Family members mean either from any elder members like father, uncle or maternal uncle from the ascending generation or elder brother or cousin from his own generation. Govt. of India has introduced a training programme for six months or one year for the interested persons by Master craftsmen i.e. national award winners at their home or at any govt. training centre in which the trainees got INR 2000 as stipend per month and the trainer INR 15000 per month as honorarium. Only a few craftsmen are found to avail training under this programme. Another important mode of training is that novices go to any workshop and take training from the owner of the workshop and other senior workers. Now-a-days the apprentice get INR 1200 per month at Jaipur. Earlier this practice generally called *Gurukul* system and the learner had to do all the household work for the Guru and in exchange Guru taught him the technique of carving. The starting age of training for most of the artisans is between 15 and 20. It is very difficult to estimate the training period required to learn carving because most of them could not remember from when or at what age they started to work professionally especially the hereditary craftsmen. However, as informed by the artisans it is found that making of images of gods and goddesses or secular human figure is very tough to learn required minimum 5 years during which one year should be given for drawing and one year to operate the tools. Those who are specialized in making of elephants said that minimum two to four years are required to learn. At first stage they learn to engrave designs on the elephant and in the second stage gradually they acquire the technique of carving the shape of the elephant.

Table 2: Modes of training availed by the artisans

Types of Training	Artisans(%)
Only Family Members	66.7
Only Master Craftsman	0

Types of Training	Artisans(%)
Only on the job training	17.9
Family Members and Master Craftsman	5.1
Family Members and On the job training	10.3

Occupation: Artisans can be categorized into four types according to their nature of earning. Wage earners mean those who bring raw material from other artisans or dealers and after carving the items, again return to them. They either work at their home or at other craftsmen's work shop and get labour charge. Self-employed denotes who purchase raw material themselves and make objects according to order given by dealer or to current market demand. Dealers who collect items from self-employed artisans and supplied those items to the exporters cum showroom owners of Jaipur, Delhi or any other states. Some of the self-employed artisans also work as dealer. They make objects at their own workshops and also purchase products from other artisans and supply to the exporters. While few of them also work as wage earners when carve on expensive items like sandal wood. It was found during field work that though there were many young artisans but most of them i.e 55% of them had some kind of alternative sources of income. Some of the craftsmen engaged themselves in some other kind of crafts for additional earning like marble craft. Some of them with small businesses or private jobs and others had agricultural income. The reasons for involving with other kind of jobs are low and irregular income compare to ivory carving and uncertain future. It was found that almost 90% of the artisans were not satisfied with the present state of affairs like earning, process of selling, price of raw material and availability of raw material.

Artisans can be further divided into four categories based on the products they manufactured like those who are specialized in making Elephants, others in making images of Gods and Goddesses as well as secular human figures, some are specialized in carving stylized composite animal figures and animal cart models and artisans who are doing miniature paintings on artificial ivory. Some of the artisans who are very experienced and talented they can make elephants, images of gods and goddesses as well as secular figures.

Table 3: Occupation wise distribution of the artisans' family

Nature of occupation	HHU	%
Only Artisans	10	45.5
Other occupation craft related	4	18.1

Nature of occupation	HHU	%
Private jobs	1	4.5
Agricultural income	9	40.9
Total	22	100

Table 4: Level of job satisfaction among the artisans

	Artisans (%)
Satisfied with the state of affairs	10.3
Not Satisfied with the state of affairs	89.7
Looking up for alternative employment	23.1
Almost Left	2.6

Assets of Artisans:

Table 5: Types of assets of the artisan families

Types of Assets		HHU	%
Residential Premises	Rented		
	Kaccha		
	Semi pacca	1	04.5
	Pacca	20	90.9
Land		9	40.9
Workshop	Own	21	95.4
	Govt.	0	
	Other	2	09.1
Tools	Hand tools	6	27.3
	Machine tools	20	90.9
Vehicles	Two wheeler	17	77.3
	Four Wheeler	3	13.6
Others		3	13.6
Total		22	100.0

The table shows that almost every artisan family lives in concrete houses except one. 40.9 percent craftsmen have agricultural land as considerable numbers of them live at villages. Most of them work with family members or alone or with wage earners at their own workshops inside their houses. It is found that almost everyone uses machine tools. At Jaipur most of the families have two wheelers due to the poor transport system inside the villages. Three of them have four wheelers who are self-employed cum dealers.

Labour Charge, working time and working environment: Wage rate for plain elephants is INR 8/inch.

Wage rate for special elephants is INR 10/inch.

Per month labour charge for learner is INR 500 - 1200.

Semi-skilled craftsman wage rate is INR 100 to 200/day.

Skilled Craftsman wage rate is INR 300/day. A skilled craftsman should know each and every kind of work on a particular item and should possess the capability to innovate new patterns when required.

In case of sandal wood the workers work on the basis of wages. They charge according to the size of the objects. The wage rate is 10 to 15 % more than *Kadamba* wood. The wastages belong to the wage earner which he can sell at INR 1500/kilo.

In case of bone per day earning is INR 250.

In Jaipur at small workshops one person does not carve the whole piece. A skilled craftsman gives the shape and then semiskilled craftsman finishes the product like engraving and polishing with the guidance from the owner or the employed skilled craftsman. In big workshops of the dealers the artisans make the whole item on inch basis. They work from 7AM in the morning to 10 PM at night and earn INR500 to 600 per day. They get only one holiday per month. They also work for whole night if large quantity of production required. A workshop was visited during survey where the working environment was not healthy at all. The workshop was underground with no ventilation at all. 10 workers were continuously operating machines in small rooms producing huge quantity of wood-dust causing severe breathing problem.

In house hold units the artisans work from morning to evening. The working environment is very healthy with proper ventilation.

Artisans were complaining during the survey that the labour charge is not increasing at all. The rate was almost same for the last five years.

Raw Material: Sandal wood

Before the ban of ivory, the craftsmen had started to shift on sandal wood (*Santalum album* L.) as a substitute of ivory. At that time sandal wood was very cheap, only INR 250/ kg in 1991-92 which is equivalent to today's INR1610. Around that time in 1986 the wholesale price of imported raw ivory was INR 900/ kg which is equivalent today's INR 30,100/kg (Martin and Vigne 1989: 14). It can be easily assumed that it was not possible for the artisans to purchase such expensive raw material. At that time sandal wood had high demand in market also, but gradually due to excessive smuggling and wrong policies of State Governments the production of sandal wood had decreased from 4631 tonnes in 1971-72 (MRD 1986) to 400/ 500 tonnes in 2010-2011 (Kumar et. al. 2012: 1411). As such sandal wood has been categorized as a vulnerable species and included in the list of IUCN in 1997 (Kumar et. al. 2012, p. 1411). The rate of sandal wood was INR 10,000/kg at the raw material depot of Handicraft Development Corporation of Kerala Ltd. in 2012 and recently in 2019 Kerala Government auctioned sandal wood from Marayoor Sandal Reserve Forest Office which is considered world's best sandal wood. It was sold at the rate of Rs 17802 -18,190/Kg (The Hindu, 5th September 2019). However, the last decade of the last century was profitable for the craftsmen due to the abundance of raw material, reasonable price and high demand of sandal wood handicraft items in the foreign countries. In 2001 the terrorist attack on World Trade Centre in America exceptionally declined the tourism in India as well as the demand in foreign countries which affect the handicraft industry very severely. Many carvers specially the wage earners and small self-employed artisans left the carving profession then. Again in 2008 another blow came on the handicraft industry after the Mumbai attack. The cost of the sandal wood has been increasing day by day since the starting of this century. As a result, the price of the finished product has also increased so much that very few people can afford to buy it. Naturally craftsmen stopped working on sandal wood and started to find some alternatives that have the same look and qualities of sandal wood but available abundantly in low cost.

Sandal wood is brownish in colour, softer than ivory and an aromatic wood. Its oily content gives a shiny look after polishing. The specific gravity of sandal wood is 0.96 (College of Forestry 2012) i.e. very high density which actually reduce the chances of breakage while carving that's why it has been used for sculpting art pieces from very earliest time in India. Its fine texture and regular grain texture (College of Forestry 2012) also helps to move the tools easily and gives a neat and clean finishing almost similar to ivory. Almost 90 percent of natural Indian sandal wood is found at the forests of the south Indian states like Karnataka, Tamilnadu and Kerala. In addition to those states sandal wood in very low quantity are also available in Andhra Pradesh, Madhya

Pradesh, Maharashtra, Orissa and Uttar Pradesh (Rai 1990: 66). Few years back large scale cultivation started in different states like Gujarat, Maharastra, Andhra Pradesh, Rajasthan apart from Karnataka, Tamilnadu and Kerala (Kumar et.al 2012:1415). Minimum twenty years are required to harvest the tree, so the results are still waiting far away.

According to the craftsmen sandal wood has some demerits also. It has a tendency to develop crack even after seasoning for many days. So, if the finished product develops a crack the dealer or showroom owner returns the article to the craftsman and unlike ivory it becomes a total waste for him. If ivory object developed a crack the craftsman used to treat it with colour or tea liquor or coffee or henna and gave it an antique look and sold it even in higher price. Jaipur had a practice to make antique ivory items with artificial methods (Martin and Vigne 1989: 16). However, presently if the artisans get order for carving sandal wood item, the raw material is provided by the dealer and they work on wage. They do not take the risk to purchase the raw material.

Kadamba wood

Now-a-days the craftsmen are working on *Kadamba* wood (*Neolamarckia cadamba*) and in a smaller extent on *Haldu* (*Haldina cordifolia*). *Kadamba* is off-white or light brownish in colour whereas *Haldu* is yellowish in colour. The specific gravity of *Kadamba* is 0.41 to 0.53 (Simpson and Hidayat 1994:11, 15) as such delicate or minute carving is quite difficult to execute. It is a very soft wood that's why mainly used in pencil making industry. Due to the softness carving can be done smoothly and quickly mainly with the help of the power operated tools and the finishing is neat and clean. The wood is fine textured with a regular grain structure and it air dries rapidly. After cutting it gives a good surface. The tree is tall with a canopy style structure so long sized logs are available (Keating and Fundter 2017). The price is INR 80-100/kg. The cost of *Haldu* is a little cheaper than *Kadam*. The cost depends on the size of the log. According to the craftsmen previously it was available abundantly in Jaipur and the price was very low but now good seasoned wood are not easily available specially in the rainy season. Raw material rate fluctuates with the demand in the market.

Bone

Bone is also used as alternative of ivory for making small sized objects as there is a size limitation for bones. Mostly camel and buffalo bones are used. Large sized utilitarian items are also made from bone by joining small pieces. Most of the artisans do not want to work with bone as it releases terrible smell and not possible to work at home.

Those who work on bone have separate workshop detached from locality. The cost of raw material is INR 4/inch. Very few craftsmen carve on bone mostly because the raw material is very cheap, locally available with a steady supply and due to less competition, they get regular order from the dealer. There is not much difference in the earning than those who are working on wood. Bone is harder than ivory so very difficult to engrave even with the machine tools. Dust of the bone released while working with machine tools can cause serious breathing trouble if not proper precaution is taken.

Artificial Ivory

Artificial ivory is a synthetic material of ivory colour. It is harder than ivory and few carvers of Jaipur are using this material to make images or elephants. It is imported to Delhi from foreign countries like Japan and USA. This material is supplied by the exporters or dealers of Delhi. As the material is very hard so artisans preferred to work with machine tools. Tiny pieces of fibers were usually coming out from the object as waste material and floating all over in the time of operating the machine tool which caused severe breathing problem to the artisans. Articles made of this material are gaining popularity because of its similarity with the look of ivory. It's wholesale price in Delhi is approximately Rs. 800 to 1000/kg but retail price is Rs 2000/kg. It comes in sheet form of 4x6ft in size.

Continuity and development of Craftsmanship

Products: Many articles previously the craftsmen were used to carve on ivory as already mentioned in the history section, are still having high demand in the market. The most common are various kinds of elephants, like caparisoned elephants with howdah, single elephants, elephants with *jali* work, painted elephants, elephants with inlay and so on. The attires and accessories of the elephant, the howdah, the king sitting inside and the *mahut* everything are very much inspired by the miniature paintings. In addition to that animal and bird figures, images of Gods and Goddesses, lion capital etc. are also some traditional items still produced by the craftsmen on wood or artificial ivory. In addition to the traditional items some new kind of items are introduced recently like owl with *jali* work, frog, figurines of different animals standing on upon another surrounding a tree etc. Miniature paintings are also done on the plates of the artificial ivory.

Objects, those were used to make on ivory like caparisoned elephant with howdah, plain elephants, monkeys, horses, bridges of elephants, stacks of elephants, images of Gods and Goddesses specially Krishna, image of lord Buddha, Chinese man, toy cars, walking sticks with inlay work etc. are presently fashioned on bone also.

Designs: Artisans always try to bring new elements in the designs to break the monotony. While doing experimentation with designs they always consider some practical aspects like it can be done quickly. As the labour charge is very less if they spend long time in carving one item it will be a wastage of hard work. They are not much interested to improve the quality of carving like intricacy, minute detailing or elaboration but to bring some changes in the pattern or subject matter which can be engraved swiftly. The product will be unique in the market and also will be high in demand as such will fetch regular order at least for quite some time till others start to copy it. A comparative analysis of the engraved patterns on elephant from different artisans was done to understand the variations prevalent in the market. It was found during field work various kinds of motifs were used by different artisans like animals, geometrical designs, foliage, creepers and so on. The elephant is sometime holding a lion with its trunk, sometime it is holding a ball, some time the trunk is upward sometime it is downward. In case of caparisoned elephant with howdah, the structure of the howdah is different like in some cases it is round in shape, some are square shaped, while others are very much traditional such as two conical shaped roofs one little bigger in size with a triangular projection in the front same as found in the miniature paintings. The artisans are continuously trying to bring some new elements in the designs to bring changes though the spirit of the past is continuing through the same traditional product. They have brought some new perspective in the traditional images of Gods and Goddesses like images standing back to back on a pedestal, ideal for displaying on a centre table or office table.

Tools and Technique: Almost all the artisans in Jaipur are using power operated machine tools for carving. Various kind of specialized chisels are fitted in a holder and used for shaping the contour; engraving the design and drilling for *jali* work. Only the finishing touch is given by hand tools. The saws that are used for cutting ivory are different from the saws that are now used to cut wood otherwise the rest of the tools are almost same. However, the artisans fashion their tools according to their requirements. The cost for modification or repairments of the tools is INR 20 to 25 per two/three months. The cutters need to change after 5 years. The cost of the cutter is INR 500 to 700.

In case of wood carving they purchase the log according to the size of the elephants they want to make. Then they cut the pieces from the sawmill itself and bring those pieces to their work shop. Then leave them for twenty to twenty-five days for seasoning. After that they give the rough shape and again leave the products for two to three months for seasoning. After three months they finish the final carving and engraving

and supply the products to the dealers. The dealers then wrap the products with transparent plastic sheets to save them from dusts and outside moisture.

Regarding artificial ivory, as the raw material comes into sheet form so the carvers cut them according to their requirement and then join them with strong adhesive. The material is very hard so the carving is done by machine tools. After polishing the article it exactly looked like ivory, but if somebody examines it closely the hair like joining marks between the sheets are visible.

Making art pieces from bones are very laborious and painstaking. Cleaning the bones thoroughly with acids is a huge task. The inside of the bone is porous in nature, which if visible from outside looks very ugly. So, the craftsman covers the base with velvet paper or fixed the product on a wooden stand and on the top a decorative flat lid is placed to close it. The shapes of the objects are given in a stylized way according to the shape and size of the bone. In case of images the figure is carved in low relief as the diameter and the thickness of the bone is very less compare to ivory. The figure looks very flat and two dimensional.

Marketing: There are many ways of selling products in the market. Products can be sold through State or Central Government showrooms, private showrooms, handicraft fairs arranged by authorities of State or Central government and handicraft market complex like Delhi haat or can be exported to the foreign countries. Only one artisan found in the survey who was a national award winner supplied products in the Cottage Emporium, New Delhi under the Handicraft Development Commissioner of India. Rest of the self-employed artisans sold their products to the private showroom owners cum exporters of Jaipur and Delhi. The artisans who were under self-help group formed by the co-operative bank under NABARD they got the chance to sell their products through the showrooms of NABARD installed at different head branches of various banks and through stalls given at different fairs in Rajasthan and other states. The artisans complained that they could not supply at State government showroom i.e. Rajasthali because they were unable to produce huge quantity of orders at a time as such only rich dealers or middle men purchased objects from them and supplied at Rajasthali. It is needless to say that they are often deprived by the dealers. The dealers give them orders according to the current market demands. Sometimes they also provide designs or instructions to the artisans. If the demand is low or the competition is hard, they ask the artisans to improvise new designs. Some artisans complained that they created some new designs and showed the dealer for approval. The dealer asked them to wait for one or two days because he needed to discuss it with the agent of the exporter and showed the design to someone else to manufacture the product with

less labour charge. That's how they are exploiting the artisan's intellectual property. Many self-employed artisans who also work as dealers prefer to supply at Jaipur itself or Delhi. They do not get prompt payments from the exporters or rich showroom owners. Sometimes they have to wait for two to three months and requested them many times for their payments. They said if they supplied in other states then they had to go there many times for payments which actually caused them lots of troubles. Due to heavy competition many artisans are also ready to fulfil the order without taking any advance and by taking the advantage of that, dealers sometime cancelled the order which caused the artisan lots of trouble.

Sales / Demand Analysis: According to the customers elephants related items are very high in demand. Owls are popular export items for Japan. Regular order for wood items is not available. Only seasonal order is there especially in the month of September and October for the festive seasons and in the winter from January to March for the tourist seasons. Orders become very less in the rainy season. In the first decade of the present century condition of the craft was very poor due to the blast in World Trade Centre, recession, Mumbai attack etc. Presently demands are better. Most of the items are exported to USA.

A six months (1st Oct 2012 to 31st March 2013) sales analysis of the wood craft items sold from SMSM showroom under Handicrafts Development Corporation of Kerala Ltd. was conducted to understand the current market demand of the craft items, where a consignment for Jaipur items was also found. For that purpose, the bills of the customers were analyzed who purchased through credit cards. Those bills contain information regarding customer's name, residential address, product code, product name, price and quantity. Cash bills do not contain any information regarding customers that's why not considered for the present purpose of study.

Table 6: Customer analysis of the images

Products	Local	%	Institute	%	Natio- nal	%	Foreign	%	Total	%
Ganesh	3	11.1	0		1	3.7	9	33.3	13	48.1
Laughing Buddha	2	7.4	0		0		3	11.1	5	18.5
Ashoka Pillar	6	42.8	1	3.7	0		0		7	25.9
Buddha	2	7.4	0		0		0		2	7.4

Krishna	2	7.4	0		0		0		2	7.4
God	0		0		0		1	3.7	1	3.7
Figure	0		0		0		1	3.7	1	3.7
Total	15 (14)		1		1	3.7	14 (11)		31 (27)	

In case of Jaipur products foreigners were mostly attracted to *Ganesa* figures where as local customers also had a preference for *Ashoka* figure.

Table 7: Price analysis of the wood carved images

Price Range	Number	%
0 - 1000	20	60.6
1001 - 2000	6	18.2
2001 - 3000	4	12.1
3001 - 4000	0	0
4001 - 5000	3	9.1
Total	33	100

It is found that the items below INR1000 have high demands. In Jaipur elephants are made starting from 3" to 18". The price for 12" elephant is INR 6000, 10" is INR 4000 and 3" is INR 90 to 300. The cost of 8" caparisoned elephant with Howdah is INR1200. The price depends on the quality of work, if the item is heavily decorated then the price is comparatively high.

Welfare Schemes by Central and State Governments

Artisan Card and Insurance Schemes

Table 8: Artisan cards and Insurance scheme

Artisan card	Artisans	%
Availed	26	66.7
Applied	2	5.1
Planning to apply	3	7.7

Applied but could not get	4	10.3
Not interested	2	5.1
Do not know the procedure	2	5.1
Total	39	100
Insurance schemes		
Availed	6	15.4
Not Availed	33	84.6
Total	39	100

Most of the artisans have artisan card except a few as shown in the table but most of them are not acquainted with the insurance schemes of the government meant for the benefit of the artisans.

Loan: Artisans who are registered self-help group members under Jaipur Central C-operative bank, they have got financial assistance from the bank and according to their performance their amount of getting credit facilities from bank increased. However, it was found during the survey that artisans were not very much inclined to take loans. Those who had taken it for once were not interested to avail again in spite of possessing the eligibility to take loan for second time.

Discussion and Conclusion: The origin of the ivory craft was not much known though it was clear that from 16th century onwards there were considerable evidences of ivory workmanship. From late nineteenth century the craft became popular due to the patronization of the local dynasty. From old survey reports it was evident that the craft was very much under the control of rich businessmen who worked as dealers and exporters. This tendency has been continuing since then which actually the main cause of the economic deprivation of the craftsmen. Previously the craftsmen used to get advance from the dealers along with higher wage rate. Plain elephants on ivory without any kind of special workmanship also attracted good earning. Now-a-days the artisans are not getting any advance because there is uncertainty in each and every stage of the business. The labour charge has not increased for the last five years but the price of the raw material is getting high day by day. Many skilled craftsmen left the field in the last decade due to the fluctuations in the world economy. Most of them took the profession as house painter. Now when the condition gets better new comers are joining in the field who have less skill. In many villages farmers are also carving

in the leisure time which actually decreasing the quality of work and the wage rate. All the self-employed artisans are complaining about not getting skilled wage earners. Those who have left the profession they have experienced the uncertainty of the work from 1980s onward so they are not interested any more. It is not easy to learn the carving within a year or so, minimum 4 years are required to become a skilled worker. Dealers are also taking the advantage of this adverse situation and depriving the real talented artisans who actually have the capabilities of producing quality work with new designs.

The unavailability of the raw material especially sandal wood is a bigger problem for the craft. This is the most suitable alternative of ivory for carving. Minimum INR 500,000 working capital is required to work with sandal wood but the demand is so less, no artisan is risking to invest that much amount. Sandal wood has more demand in perfume, cosmetics and pharmaceuticals industries due to its medicinal value. It is appreciated for its aroma which cannot even possible to recognize if someone buy a sandal wood statue and put it in the showcase. As such unless somebody has a special liking for sandal wood no body is interested to buy an expensive item of it. Even if the artisans want to minimize the price of an item of sandal wood, they have to reduce their profit to a great extent. As such they prefer to take small amount of loan or to invest a small amount from their savings and work on *Kadamba* wood, in which they can make a large quantity of items within short period of time and earn a living without taking high financial risk. Another problem is the fluctuation of the rate of raw material with the changing demand of the handicraft items in the market. The aspiration of the artisans is that government should fix the rate of the raw material in the market.

Regarding the continuity of the products and the designs, it is found that traditional items are still continuing with the introduction of new patterns and new styles. Along with those some new products have also appeared. The technique of carving is quite similar to ivory carving. Existing qualified artisans are continuously struggling to survive by inventing new designs.

By analyzing the overall situation, it is found during the survey that no self-employed artisans are supplying at the state government handicraft showroom. Either they are not aware of the process or not getting chance owing to their small working capital. Marketing assistance is very much required for the artisans if they want to decrease the dependency on the private dealers or exporters. So, it would be great help for them if they are allowed to supply at State run handicraft showroom even in small quantities. Rather than procuring items from rich dealers in large quantities the authority can collect items from many self-employed artisans in smaller quantities as

the department is meant for the benefit of the artisans only. Artisans are really eager to supply at the State-run Handicraft Showroom as the rate is fixed there. If they are not getting proper marketing assistance then credit facilities will not help them, it will only increase their burden. Proper training should be given to upgrade the skill of the artisan to maintain the quality of the work. Traditional artisans can also form a co-operative society and register their production under Geographical Indication of Goods (Registration and Protection) Act, 2003 and demand advance from the dealers to reduce the risk of their investments. It should be a collective effort otherwise would not be possible to implement.

The traditional ivory craftsmanship is still continuing with alternative raw materials in the place of ivory. A little collective effort from the side of the Government, traditional artisans and dealers a fruitful sustainable way can be developed to safeguard the intangible cultural heritage having great historical and religious significance.

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Bio Profile of the Authors:

¹Ph.D. Scholar

Department of Anthropology, University of Calcutta

Email: sudiparala@gmail.com

²Associate Professor

Department of Anthropology, University of Calcutta

Email: sutapamukhopadhyay.anth@gmail.com