

THE USE OF BEADS IN ORNAMENTS BY THE PEOPLES OF INDUS VALLEY CIVILIZATION, BEAD MANUFACTURING TECHNIQUES, MATERIALS AND THEIR ORIGIN

*Manik Mustafa Shar
Inam Ali Kubar*

ABSTRACT

This paper deals with craft specialization of Indus people. The people of Indus were multi-craft people, their splendid architectural manifestation and idea of town planning is evidence for recognized them as unique skilled primitive civilization of the world. In this paper I have tried to put the light over all precious and semi precious stones and other material as metals from which beads were made and were used in ornaments and utilized by the Indus people in sense of velour, beauty and as religious commodity, these beads were not only liked by women but also used by men. It was supposed that some stone beads support and courage the velour of man, and the origin of these stones beads from whom these were brought and where they were worked on. In Indus Civilization many sites are marked as manufacturing centers for the bead making from various materials.

INTRODUCTION

Indus valley civilization has remained the center of craft specialization and economic activities. In trade the people of Indus valley civilization used different forms of transitions sometimes they traded the beads which were made of precious and semi pernicious stones and also from precious metals like Gold, Silver and Copper. These beads were remained the source of revenue. These beads also played role in religious and social life of ancient people.

LITERATURE REVIEW

Various archaeologists have different opinions about these ornamental commodities. Kenoyer writes about that 'agate' a type of stone, he says that "Bead making at South Asia therefore has an extremely long and continuous, but Agate and particularly Carnelian bead making was the first craft to reveal to archeology,

carnelian is luxury variety of agate of finely banded chalcedony (Kenoyer, *et.al.*, 1991, 1994).

For Carnelian workshop Mackay says that “The most famous carnelian workshop was found in the site of Chanhui-jo-Daro in Sindh, E.J.H. Mackay came across a large amount of industrial debris from bead making activities (Mackay 1937: 1943) and other scattered evidence of bead making although not concentrated within discrete work shop area were discovered during the excavation of Mohen-jo-Daro (Mackay, 1938 and Vidale 1984).

For the source area of Lapislazuli a semiprecious stone, Kenoyer has said that “Lapislazuli” the beautiful blue rock of the Bronze Age jewelry in South Asia might obtain from Badkshan mines also probably from the mines of Chagai hills in Southern Balochistan (Kenoyer, 1991).

Durani writes for Lapislazuli “Apparently in source of 3rd millennium BC Lapis was manufactured and traded through Indus workshops, like Shortgaai site and regionalization of Rehman Dheri (Durani, 1981).

More for Lapislazuli, G.M. Shar and Flam says “Lapislazuli some flakes are found at bead makers dumps and in working areas and isolated bead are not common, no complete necklace of Lapislazuli has ever been found in Indus hoard, Lapislazuli beads were probably matched with row of tiny white steatite micro beads (Flam, *et.al.*, 1993:139).

Gold is a precious and expensive metal due to its various qualities. It has also social value. The gold is used in the making of jewelry worn by females.

METHODOLOGY

This research paper has used both primary and secondary sources of data. Various archaeological sites and museums were visited to collect data for this research. In addition, considerable number of archaeologists and scholars were interviewed.

INDUS VALLEY CIVILIZATION

Indus valley civilization is one of the great civilization of ancient world, it covers all aspects that make the civilization, Mohen-jo-Daro has remained the center of civilization around the 5000 years ago, Mohen-jo-Daro stands on long narrow strip of

land between main river bed and western Nara loop, its precise position being 27°.19 north by 68°.8 in east some 7 miles by road from Dokri railway station and 25km from Larkana city, this formidable mound contains actual area now no more than about 240 acres, firstly, Sir John Marshall excavated this site in 1922.

FIGURE: 1
EXCAVATED RUINS OF MOHEN-JO-DARO, PAKISTAN



Source: www.google.com.pk

In 1920s and in subsequent years the excavations conducted at Indus valley sites of Mohen-jo-Daro and Harrapa established that civilization possessing a high standard of art and craftsmanship and a well developed system of pictographic writing. Detailed studies indicate that the Harrapa, Mohen-jo-Daro cultures were contemporary in part with the early dynastic Sumerian civilization. In antiquity the Indus valley resembled the Mesopotamia, Susana and Egypt, in being an alluvial plain civilization the Indus valley was watered jointly by Indus river and five tributaries in Punjab, but in area the Indus valley civilization was more extensive than civilization of Tigris and Euphrates valley, the Karen valley in the south west of Khuzestan in Iran and even Nile valley that is roughly 1000 miles in length from north to south and more than 300 miles broad.

The economy of Harrapa and Mohen-jo-Daro was based up on the fertile valley of Indus basin and easy means of communication and transportation which these rivers afforded. Agriculture was the main occupation of people of region, the archaeological evidence show that wheat, Barely, Dates and Cotton were cultivated.

The existence of brick in the construction and the representation of seals of such animal as the tiger, Rhinoceros, Elephant , Buffalos, the surplus production and availability of easy means of communication and transport through river made it possible for the inhabitant of valley to barter the crop surplus, this barter exchange in kind enabled them to import essential raw material such as metal ,semi precious stones and other commodities from neighboring countries, the chert stone implement are mostly long flakes evidently used as knives and suitable for cutting meat and vegetables .stone vessels are comparatively rare and more commonly made of alabaster, most of vessel are thick and jasper have been discovered copper and bronze were used for making domestic utensils, implants statues and ornaments. The pottery both painted and plain are in large variety, and also having geometrical designs, stylized human, animal, bird vegetation motifs.

Who were the peoples, who lived in Mohen-jo-Daro and Harrapa, no definite answer can be given to these questions but in future we hope that after making comprehensive research will help us to find the answers, till that decay of this great civilization is still riddle.

PRESENCE OF PRECIOUS & SEMI PRECIOUS BEADS AT MOHEN-JO-DARO

Various types of precious and semi precious beads show their presence at Mohen-jo-Daro/Indus Valley Civilization .These beads are remain main commodity of their social ,cultural and economical life ,these semi precious stones are found in various forms like ,beads ,implements, seals. Here I will mention various materials of precious and semi precious stones and their origin and which type of objects were made and used in Indus.

Steatite or soap stone in the archaeology of south Asia ,commonly indicate various types of soft talcose rocks, steatite

beads found at Mohen-jo-Daro are either cutout of steatite or moulded from a paste made of grounded stone, there are no archaeological evidence which indicate that beads made of steatite paste were naturally/originally made up into blocks from which the beads were carved in the same way as they would have been from the natural stone, the natural stone are made of powder steatite that usually has white color, very rarely find a steatite beads darker green or blue steatite might have been found in territory of Pakistan in N.W.F.P at Kangara near Abbotabad and Khund near Peshawar also at Balochistan (Lihiri 1990:414, 422).

Today, the exploration of deposits of carbonate and talcos rocks for making pots, boxes, figurines, carved panels is flourishing craft in India like in Rajasthan, Utter Pardesh, Madhya Pardesh, Bihar, Orrisa, Andhera Perdesch, Karnataka, Tamil Nado and Karalla (Saraf 1982).

FIGURE: 2
ANCIENT INDUS JEWELRY



Source: www.google.com.pk

Fired steatite was an important material used in many different types of Indus jewelry. Steatite beads are found in all four necklaces in the center of this collection of jewelry from Harrapa and Mohen-jo-Daro.

Faience may be defined as ceramic made with ground quartz sintered with glassy bounding material made with alkalis and lime glazed with bright colored alkaline and lime glaze containing metal

oxide. The archaeological record of Faience production in Indus cities is still a mysterious. According to Dr.Ghulam Mustafa on the surface of Lakhen-jo-Daro Faience bead came next in popularity (Vidale, 2000) and in glaze and color were used as for beads of steatite, this manmade material the sources are not confirm because it can be manufactured with the combination of various stone elements, it is also found in Muneer site of Mohan-jo-Daro, faience made objects like bangles, inlay pieces, balls, button small figurines are found at Indus valley.

Agate: Agate is usually found in the form of pebbles laid in stream particularly re-deposited in alluvial beds after massive erosion of solid volcanic formation (Jerrige, Tosi: *et.al.*, 1981) Agate beads are fairly common show considerably of color making and shape, Agate is mostly used at Mohan-jo-Daro (Mackay 19:497) carnelian is luxury variety of agate finely banded chalcedony (Kenoyer, *et.al.* 1991,1994) in the upper Indus valley, agate nodules would be available in Banu basin, Gomal plain, Wazirrota and also in some district of Kashmir, agate deposited are also in Kohistan, Sindh.

In Surkotada where in 1050 beads of various material were found and 11 of them were agate, another site which has been associated with manufacture and trade of agate is Lothal in Gujrat where in two large pottery jars hundred of finished and un finished agate beads are found, The Muneer area bead makers used a opaque white to red agate whose red was most probably chanced by firing.

Carnelian: It is luxury variety of agate or finely banded chalcedony, originally olive brown, it is carefully fired within specially made terracotta container to turn it bright red by modern bead makers of manufacturing center of Khambhat, Gujrat (Kenoyer, *et.al.*, 1991, 1994).

Its blood red color is symbolically related to bravery and heroic behavior and for this reason it has been attached to warriors, carnelian plays important role in later culture of historical and medieval India. Gujrat is the important source area for carnelian (Vidale, 2000) The disk beads of stone are exceeding rare, this stone was greatly valued shown by many examples of cylindrical and barrel shape beads (Mackay19.....498) the most famous Indus carnelian workshop was found in the site of Chanhudaro

in Sindh, E.J.H. Mackay came across with large amount of industrial debris, from bead making activities including a possible kiln for firing carnelian, defective and discarded carnelian nodules, unfinished rough outs and beads raw material for drill making (Mackay 1937,1943)

Quartz:-The quartz is usually yellow ,black and transparent ,the source of quartz are in Sandak in Balochistan and also in Rajasthan .Indus valley many transparent crystal object made of quartz are found like disk beads with a bi-conical hole, both shape and material being very rare in Indus valley.

Lapislazuli: Various stone material has own color and particular usage to their imaginary idea ,lapis lazuli the beautiful blue rock of bronze age jewelry in south Asia might obtain from Badkshan mines also in southern Balochistan (Kenoyer, 1991) simple beads are visible in Indus valley including the small disk beads cylindrical beads .

Green Felsper: Miss Caton Thompson reports that she has found bead of Green Felsper in Neolithic settlement in Faum, Wolly has unearthed them in his pre float strata at Ur, this micro line Felsper appears to have been valued as material for beads in both in Egypt and Sumer from earliest times, it was also used as ornaments in early history of Mohen-jo-Daro especially as it is found in lower level of Mohen-jo-Daro (Mackay, 1938:500)

Serpentine: This bead has unique color appearance, this bead is olive green in color and first which is the part of composite bead, dark green approaching black grossular, an orange or green garnet has been recently identified through X-ray ,it seem to be the same material previously classified as serpentine on the Muneer area of Mohen-jo-Daro site .

The source of this material is china and Burma this stone appears in two jewelry hoards at Mohen-jo-Daro namely necklace found by Dikshit in long trench excavated in DKB and C area block 16 room # 12 (Marshall 1931) and another necklace belonging to a hoard recovered in HR area section 2 block 2 house viii room # 8.

After stone material ornaments, the metal has also significance due to its permanent colors and glisten. We can't exclude the stone by replacing the metal because stone is being used till today, for grinding wheat, spices, natural herbs and other

commodities the various stones has different identification according to their attributes, some has social, religious and economical significance, the metal beads are also used in Indus valley civilization so it is necessary to mention metal base objects or beads like gold, silver, bronze, shell, clay.

Gold: Due to glaring quality gold has charming permanent color; in Mohen-jo-Daro gold beads are rarely found save with other jewelry in well preserved hoards. Being precious metal great care was evidently taken of it (Mackay 1938:501)

Gold might have been available in mountain valley of upper Indus basin in Chitral, Ladakh, Kashmir and in N.W.F.P. (now Khyber Pakhtunkhwa) as well as in Afghanistan (Allchin, 1962), Lahri also reports of alluvial gold from Attock Rawalpindi and Jehlum district of Pakistan, the ornaments which were made from gold were the disk beads, barrel shape, micro beads, Pendant, Tubular beads, Finger and toe rings, ear rings were made, silver being low magnitude after gold it is also counted low cast metal, silver mines exploited in the 2nd millennium B.C. are reported in Aravali range (Craddock and Freestone 1985).

Necklace from Mohen-jo-Daro made from gold, agate, jasper, steatite and green stone (lizardite or grossular garnet). The gold beads are hollow and the pendant agate and jasper beads are attached with thick gold wire. Steatite beads with gold caps serve to separate each of the pendant beads. This necklace fragment is only half of the original ornament which was divided between India and Pakistan in 1947.

Hoard No. 1, found in a silver vessel in DK Area, Room 2, eastern end of Block 16, Section B and C.

Material: gold, green stone (lizardite or grossular garnet, originally reported as jade) **Dimensions:** green stone beads: 2.0 cm length, 1.0 cm dia., gold beads 0.44 cm length, 1.0 cm dia.

Mohen-jo-Daro DK 1541, Mohen-Jo-Daro Museum, MM1367 Marshall 1931: pl. CXLVIII, A 6.

Copper, Bronze: Copper and Bronze were frequently used in the manufacturing of beads, spacers and terminals, three region most likely to have supplied the Indus basin with copper are Balochistan and Afghanistan to the west and Aravalis to the east and Oman across the Gulf to the west (Kenoyer, Miller, 1996) the second major source of copper is the east, the Aravalli range in

Rajasthan rich in copper, Lead and Zinc (Agrawal, 1984). Spacers, terminals short barrel or globular with hole through them are found.

Terracotta (Pottery bead): Terracotta were made of clay locally found with surroundings of Indus, the pottery beads were commonly worn by the poor peoples, we know from the evidence of broken bead that these beads were some time glazed and it is suspected that bead also has pottery base as quite possible that some of ornaments beads designed faience, may actual fact have cores of pottery (Mackay 1938:497).

Shell: Shell is also possessing different look due to whitish material color, shell were affordable for middle class peoples in Indus valley civilization because various types of shell are being used for manufacturing of shell ornaments .curiously only one bead of mother pearl is known and this has been so worn by string on which it was threaded, that one side of it was nearly served .The shell used for other bead was kind from which inlay and other article were ordinary made (Mackay, 1938:497).

Shell production have been the subject of detailed studies and reports by J.M.Kenoyer, one of the most important shell exploited in Indus world was *Turbinilla pyrum*, later the famous Indian sank or sacred conch shell which is globose massive and extremely hard white and attractive like Porcelains, shell contains variety like *Turbinilla Pyrum*, *Chicoreus*, *Ramosus*, *Lambis*, *Truncola sebal*, *Fasciolaria*, *Trapezium* (Vidale, 2000).

Other shell to be mention belong to the conusgens from conus the craft people of Indus traditionally used to manufacture beads and pendants already in Neolithic times these shell together with *Spondylus* and *Turbinilla* represent the earliest article traded across long distance by agricultural communities of the Indus basin, Although conus shell apparently were not particularly popular in the Indus cities in third millennium B.C.

Shell working at Mohen-jo-Daro and more general picture of Indus marine shell production has been the subject of detailed studies and reports by J.M.Kenoyer (1983, 1984a, 1984b, 1985).

SIGNIFICANCE/USE OF STONE/METAL ORNAMENTS IN SOCIETY

No doubt that the stone craft and metal work at Indus civilization has splendid place in ancient and also in present times,

5000 years ago peoples knew the importance of stone objects, which is still today visible in form of various objects like wheat grinder, herbs grinder. And the precious stones are still in relation with Indus civilization, most of the crafts activities were held within Indus valley in rare foreign or neighboring sites ,the raw material or objects are brought/found in the Indus valley .in some cases common products were distributed throughout the state for example :from lime stone hill at Rohri and Sukkur where flint blade were made ,the technical knowledge was common at Harrapa, Mohen-jo-Daro, Lothal, Rang Pur, Kot Diji and Kali Bangan, like same Bala Kot near Lasbela Balochistan and Chanhudaro were the center of manufacturing the shell bangles .

Although there is plenty evidence that Indus merchants or caravan leaders carried trade beyond the frontier of the empire, gold was almost obtained from gold field of Karnataka (India) silver was imported from Afghanistan or Iran. The manufacturing of beads in bulk shows that the peoples of Mohen-jo-Daro were more sensitive in their craft, the precious stones were elements of prosperity in the society ,the beads were in multi dimensional use because these were also used in necklace being used by woman and at other side these beads were also occupying unique place in the religion .As it is shown on the head band of King priest at Mohen-jo-Daro it has round bead on his front side of head and these precious stones were known as valuable commodity in term of trade .The use of prayer beads is popular in many religions. Catholics identify their prayer beads as a rosary. This chaplet maybe sculpted from materials ranging from common wood or natural berries to costly metals. Other mediums used to make rosaries include precious stones and glass. In ancient times rosary beads were by and large strung on a straight thread or cord and formed to create a circle or loop. In modern times, the use of chained beads is the standard, compared to the corded ones. To further aid with counting and marking divisions of a prayer, a bigger bead divides the sets of ten beads from each other. At times the use of larger beads is substituted by using a medallion or a metal cross.

FIGURE: 3
‘PRIEST KING’ STATUE AND MOTHER GODDESS WITH NECKLACE



Source: www.google.com.pk

FIGURE: 4
SHELL BEADS FOUND AT INDUS CIVILIZATION

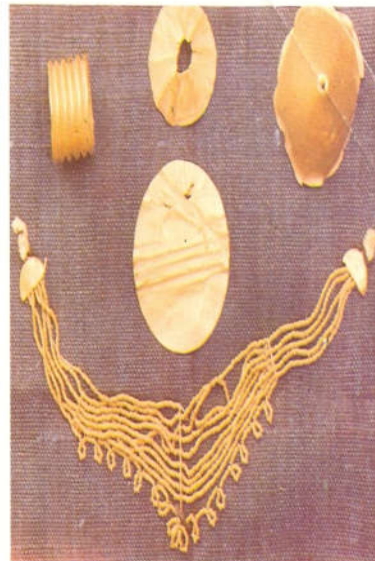


Source: www.google.com.pk

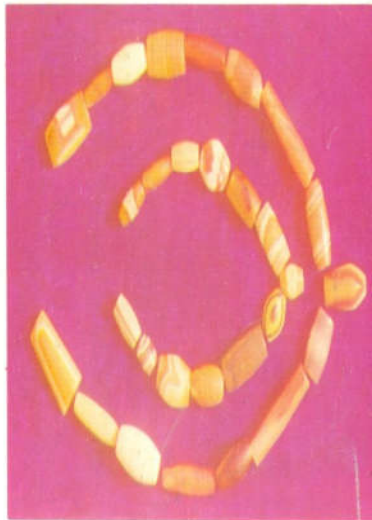
FIGURE: 5
NECKLACE AND PENDANTS MADE OF PRECIOUS STONE AND GOLD
(Found From Lothal Indus Period Site, Now Located In India)



Pl. LXIX Lothal : Gold pendants.



Pl. LXX Lothal : Rings, pendant and necklace of micro beads (gold).



Pl. LXXI-A Lothal : Carnelian beads.



Pl. LXXI-B Lothal : Beads of semi-precious stones.

Source: www.google.com.pk

CONCLUSION

Bead making at Mohen-jo-Daro is much important Lothal, Kalibangan, Harrapa and Kot Diji are the remained the minor or supporting site of Indus civilization. The question of their interrelation is indispensable. They has always involved to the center to run their life and economy. The trade relation between Mesopotamia and Indus can be traced, by presence of many Indus seals in Mesopotamia, Susa (Iran) and in all supporting towns in order to understand the better and most important aspect of Indus beads technology. It is mandatory to go back to the evidence gathered by E.J.H. Mackay at Chanhru Daro as we focus on beads and their types and technology, before we go to the technology and their tools, I would like to mention very briefly about the beads. The origin of beads material is also important factor to reconstruct the ideas about the effects of that area over the Indus especially to Mohen-jo-Daro because raw material for beads were imported from various countries and their involvement in Indus civilization can't be avoided. For the beads of steatite origin remained like N.W.F.P., Kangara, Khund near Peshawar also at Balochistan, origin of Agate was Banu basin, Wazeeristan, Most exploited by Indus bead makers is region of Ratan Pur in India, Raspipla for carnelian is from the Gujrat, Jade from eastern Turkistan, Tibet and north Burma, Quartz from Sandak Balochistan, Badkshan, Afghanistan. For amazonite or green felsper is from Egypt and Sumer, Serpentine from from China or Burma, Gold was from different origin like Chitral, Ladkhn, Kashmir, N.W.F.P, Afghanistan, Attok, Rawalpindi, Jehlum, for Shells Makran is famous as these bead materials were brought from different origins and places, like this beads were ready after some process the different techniques were used to burnish body of beads, for bead making stone drills, bits, are reported from Indus site such as Banwar and Shikar Pur (Son Wane, 1992) Bead making tools are considered as connected with a local micro lithic, in particular, drills are manufactured out of vary small blade and belong to the "tapered" type of drills defined in (Kenoyer & Vidale, 1992).

Bead making at Mohen-jo-Daro is complex phenomena because bead makers at Mohen-jo-Daro were at perfection but they had left very less evidence for their work shops, it is proved that

Indus beads were manufactured in various minor Indus sites like Rahman Dehri, Shurtugai and Chanhu Daro and others.

RECOMMENDATIONS AND IMPLICATIONS

This type of research work is not ever done before, Indus civilization has great diversity in cultural context so the research work on various aspect of Indus should be encourage to explore ancient expertise of ancient people of Indus, and also the mega projects should be initiated to excavate the remaining part of Mohen-jo-Daro to make its clearer picture regarding the script and micro craft. Implication of this research paper is also much important, because archeologists has written about the town planning of Mohen-jo-Daro, their streets, covered drainage system, great bath and other aspects, then light should be put over this important and unique aspect of life of Indus people, this research work should be implemented at academic level of college and universities to raise the importance of micro craft activities of Indus people.

REFERENCES

- Vidale M., *The Archaeology of Indus Craft*. (Rome, 2000).
Allchin, B., *The Rise of Indus Civilization in India and Pakistan*. (Cambridge, 1982).
Kenoyer J.M., 'Shell Working at Mohen-jo-Daro, Pakistan', in M.Jansen & G.Urban (Eds), *Interim Reports*, Vol.1. (Aachen, 1984).
Kenoyer J.M., 'Shell Working at Mohen-jo-Daro, Pakistan'. In J. Schotman & M.Taddei (Eds), *South Asian Archaeology*. (Naples, 1984).
Mackay, E.J.H., *Further Excavation at Mohen-jo-Daro*. (New Delhi, 1938).
Marshall Sir J., *Mohen-jo-Daro and Indus Civilization*. (New Delhi, 1931).
Shar G.M. & M.Vidale, *Surface Evidence of Craft Activities at Chanhu –Daro*, March 1984 Annually Vol.45, 585-598. (Naples, 1985).
Vidale M & G.M Shar, Zahar-Muhara, 'Soapstone Cutting in Contemporary Balochistan and Sindh', *Annali*, Vol.50.1:61-78. (Naples, 1990).
-