

Dhokra: A Traditional Craft of Rural India

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Abstract: *Indian rural secondary activities continue to depend substantially on traditional crafts and craftsmen. The Bronze Age on the Indian subcontinent began around 3300 BC. Inhabitants of the Indus Valley, the Harappans, developed new techniques in metallurgy (Dhokra). 'Dokra' is non-ferrous metal casting using the lost-wax casting technique. Now the 'Dhokra' people are settled over a vast tract in the mineral-rich central Indian tribal belt. This ethnic craft had crossed a long path and till a date it is practiced by the craftsman in ancient and tradition way. Here the paper covers the historical aspects of non ferrous metal casting technique of 'Dhokra' and identify the sight of 'Dhokra' art in recent era. This art is the living archaeological remnant of Neolithic figurine art and it also the remnant of non ferrous metallic craft of pre Iron era.*

Keywords: *Dhokra Art, Non Ferrous Metallurgical Art, Figurine Art, Areal Distribution of Dhokra Artisan*

1. INTRODUCTION

Indian rural secondary activities continue to depend substantially on traditional crafts and craftsmen. The Bronze Age on the Indian subcontinent began around 3300 BC. Inhabitants of the Indus Valley, the Harappans, developed new techniques in metallurgy (*Dhokra*). '*Dokra*' is non-ferrous metal casting using the lost-wax casting technique (D.P.Agrawal 1971).

The lost-wax technique, called *cire perdue* in French, is a metallurgical art. This art is at once one of the oldest and the most advanced metallurgical art. Apart from India it was common in ancient Egypt, Mesopotamia, China and Greece. The technique flourished in Aztecs civilization in Mexico during 14th-16th centuries AD and in the Benin kingdom in south-central Nigeria during 14th-19th centuries AD (Kochhar 2001).

1.1 Objectives

The basic objective of this paper is to cover the historical aspects of non ferrous metal casting technique of '*Dhokra*' with special reference to craft in present India. This paper covers the analytical aspect of '*Dhokra*' art as the living archaeological remnant of Neolithic figurine art.

1.2 Sources of Information

The basic information about the craft is collected by literature survey and the ground reality has been checked by village survey (Bikna Village of Bankura District). The conceptual history of *Dhokra* craft are collected by the literature survey with historical perspective.

1.3 Methodology

This paper mainly based on the Literature review. This literature has arranged in chronological order. Basic method is historical and an analytical review has been made of all geological incidents.

2. METALLURGY AND DHOKRA CRAFT

The age of metallurgy started 4000 BC with the use of Copper and bronze. The first evidence of non ferrous metallic art found in Mohenjo-daro civilization (small dancing girl). The first craft with non ferrous metal is known as '*Dhokra*'. The journey of metallurgy started with copper melting art and it is reflected in '*Dhokra*' artifacts.

The basic metallurgical science used by the ancient people as well as present ‘Dhokra’ artists is annealing method. **Annealing** is a heat processing metal melting method. Here metal is heated to a specific temperature and then allowed to cool slowly. This quick heating and slow cooling method softens the metal and it can be cut and shaped more easily.

Primarily Dhokra artists prepare a model of the art objects. This model is prepared by wax. A mould (by clay) is made of the original model or sculpture. This clay cover mould baked in sun light and after that those objects backed in kiln with high temperature. This kind of heating makes the wax melts and simultaneous wax comes out in one direction and from other molten metal is poured into the holes; it covers the place of the wax. . Finally the clay cast has to be broken to remove the metal in cold state. The shape of each implement achieved by this method is unique because the hand-made model is destroyed in each case and so the same model cannot be used repeatedly.

The finest medium for Dhokra modeling is the wax. But people of Bikan for *dhokra* crafts use Dhuna (a mixture of resin of Sal tree and mustard oil). This is almost as fine as wax but it is cheap too (Welch 1986).

3. DHOKRA AND FIGURINE ART

The artifacts (miniatures of animal, various mythical characters etc), which are prepared by the *dhokra* artists in ancient era and even today are the unique in figurine art. The copper age started its journey with anthropomorphic art. But *Dhokra* arts are neither anthropomorphic nor zoomorphic. The artifact does not always imitate the original figurine of animals. Some imagination has been added in this figurine art of *Dhokra*. Here (especially in West Bengal) this art depicts the figures of human being as well as animals and birds. The *Dhokra* craftsmen often work with brass (copper + zinc) or bronze (copper + tin). If the tin content is high, the alloy is called bell metal. The *Dhokra* is the unique figurine art. Here figure are very slender in nature.

4. DHOKRA CRART AND ETHNICITY

Traditional crafts can be discussed under three distinct categories:

1. Production of wealth, and trade (agricultural and animal husbandry implements, carpentry or smithy tools etc.)
2. Lifestyle (textiles, kitchenware, pottery, recreation, etc.)
3. Belief systems, rituals, creative urges etc.

The *Dhokra* craft includes the blending of creative urges of belief system of Hinduism. The *dhokra* crafts imitate the primitive lifestyle of Indic people. This crafts (by its unique figurine art) is making a liaison between Indian civilization and figurine art. It covers the age since hunting stage, idol making art to Gandhian charka stage. The most common model of *dhokra* craft are the figures of elephants, horses, owls, tortoises and the posture of hunting. The physical appearances of those animals in *dhokra* craft are different from reality. Here the four animals are the symbols of four virtues: elephant for masculinity and wisdom, horse for motion, owl for death and prosperity and turtle for femininity.

Here the elephant figurine resembles to typical Asian Elephant species not like the African species. The presence or absence of the horse in the Indus-Sarasvati civilization is the question of controversies, especially in the context of the Aryan invasion theory. But the figures of horses, figure of owl (among birds) and among alligator tortoise are more common artifacts in *dhokra* crafts.

The Asian elephant appears in various religious traditions and mythologies in Indian subcontinent. They are treated as deities and also the symbol strength and wisdom.

Small Elephant in Dhokra Art (Asian Elephant/ Indian Species)

Figure	African Elephant	Asian Elephant
Back Shape	Saddle Shaped	Humped
Fur	Very Sparse	Sparse
Head	Low Single Dome	Double Dome
Tusks	Gently Curved Upper Tusks	Gently Curved Upper Tusks

Horse mythically stands for the motion of Indic civilization. Owls are one of the oldest species of vertebrate animal in existence (owl mythology and folk lore 2015). Because of their nocturnal activity and screeching call, black owls have been associated with bad luck and death. In Hinduism, white owl is the symbol of prosperity.

In Hindu mythology, the world is thought to rest on the backs of four elephants that stand on the shell of a turtle. According to Hinduism, tortoise carries the world on his back, upholding the Earth and the sea. One *Avatar of Vishnu* is the giant turtle 'Kurma'. The plastron symbolizes the earthly world and the carapace the heavenly world. The *Shatapatha Brahmana* identifies the world as the body of *Kurmaraja*, the "king of tortoises", with the earth its plastron, the atmosphere its body, and the vault of the heavens its carapace. The tortoise holds the elephant, on which rests the earth. The elephant is the masculine symbol and the tortoise the feminine.

5. DHOKRA ART AND GEO ARCHAEOLOGY

The *Dhokra* tract starts from northwestern Chhattisgarh and central Jharkhand states, western part of West Bengal. Those are the ancient land mass (P.K.Mukherjee 2000). Origins of *Dhokra* culture were marked by limited use of copper at the end of Stone Age. Sometimes it termed as Neolithic Chalcolithic culture (Jain 2014). There is a close association between Palaeolithic zone, Gondwana formation and recent *Dhokra* artisans' tract. The geological foundation of present *Dhokra* tract is Azoic (Archaean) formation (Wadia.D.N. 1975). This is the oldest formation with combination of Choto Nagpur Granites and Gneisses and few ultra basic rocks (Pasco.E.H 1975). But these areas (present *dhokra* tract) have crossed the Carboniferous age with the remnants of Gondwana formation. These tracts have been modified late Palaeozoic era. Form the geological point of view Carboniferous was the era of fluvial and lacustrine deposit and the Upper Carboniferous was under the glacial Climate. These Gondwana formations evolved with warm and humid condition of that era. During Tertiary (pleistocene), sedimentation on river bed and formation of quartzite, sandstone, shale and limestone come to existence (Mukherjee.PK. 2000) in *dhokra* artifacts zone. These tracts are the oldest metamorphosed rocks (made up of schist's and quartzites). Here the iron ore series (made by conglomerate, sand stone, lime stone, shale banded hematite-quartzite) are the most common out crop (Mukherjee.PK. 2000).

The western parts of the western district of Birbhum, Bankura and Midinipur and entire district of Purulia constitute the palaeolithic zone of West Bengal. This zone shows a clear succession of primary laterite preceded by bedrock, mottled clay, lateritic conglomerate and sandy deposit (D.K.Chakrabarti 2006). These alluvial tracts cover the Dharekeshwar and Damodor, Tarafeni river basins area of Burdwan, Bankura and Medinipur. These are the zones of palaeolithic culture as well as the zone of Chalcolithic culture. The recent *dhokra* artifacts zone lies in these tracts as remnants of chalcolithic figurine crafts. These geographical areas hold the remnants of non ferrous metallurgical figurine art (*dhokra*) in traditional way.

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