

CONTINUITY EMBEDDED IN CHANGE: TECHNOLOGICAL AND INTEGRATED ASSISTANCE TO DHOKRA METAL CASTING CRAFTSMEN IN EASTERN INDIA

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Abstract

Dhokra craftsmen, spread over Central Indian tribal belt and contiguous areas to the east, are engaged in making brass/bronze artefacts using the millennia - old lost-wax (cire per due) process of metal casting . (The name Dhokra is also applied to the process as well as the artifacts.) We have been working with Dhokra brass-craftsmen located in clusters in the Eastern Indian states of West Bengal, Jharkhand and Orissa. We have helped them with improving their technology, teaching them to use molten metal rather than metal scrap; soldering with brass rather than tin; and giving the artifact antique finish or gold finish as desired; We have also introduced them to the concept of measurement and levelling. We find that these craftsmen are quite aware of their own shortcomings and handicaps. They are willing to improve their process and skills provided this is done with empathy, in slow incremental stages and support continues till a new equilibrium state is required.

They still need better wages and larger markets. Finding buyers for Dhokra artifacts through internet by emphasizing the civilizational significance of their work will ensure decent wages for these craftsmen; permit them to give form to their creative urges within the framework of tradition; and most importantly encourage their children to continue this fascinating art and craft.

Keywords. Lost-wax (cire per due) casting; Dhokra; traditional crafts; technological change; poverty reduction.

1. INTRODUCTION

The art of making things as handed down from generation to generation constitutes traditional crafts. Traditional technologies are empirical in nature. Through trial and error they were brought to a satisfactory level of performance and then more or less frozen. This is in contrast to modern technologies which are based on explicitly stated principles of science and therefore are amenable to modifications/improvements. Traditional crafts can be discussed under three broad categories: (i) Tools required for production of wealth (e.g. agricultural and animal husbandry implements). (ii) Crafts catering to lifestyle (textiles, kitchenware, recreation, etc.) (iii) Artifacts dealing with belief system, rituals, creative urges, etc. While rural and semi-urban economy still depends on the crafts of the first category, modern age assigns great value and price to economically non-essential 'heritage' crafts. While trad-techs quite obviously served their purpose in earlier times, they need to be re-evaluated in the present-day context of economy, resource utilization, eco-friendliness, profitability, etc.

What is the best way of adapting trad-techs to the needs of the day? Traditional technical processes are inherently stable. Any suggested change or improvement must be absorbable and non-disruptive. It must take place in small incremental steps, each step leading to the establishment of an intermediary equilibrium state. The bond of ease and comfort between a craftsman and his craft should never be broken. Rural development and trad-tech need to be viewed in their own framework. "Downsizing of modern technologies" and "upgrading rural technologies" are flawed prescriptions and concepts, because they are urban-centric. They seek to build an insensitive, unequal, unidirectional giver-recipient relationship.

The relationship between traditional craftsmen and their craft goes beyond dictates of livelihood. For the craftsmen, their craft is their identity, a matter of pride and a source of self-esteem. Any initiative that deliberately or unwittingly tends to injure this pride is bound to be counterproductive, no matter how well intended the initiative is. We must recognize the craftsmen's innate sense of worthiness, acknowledge it, respect it, and seek to enhance it. It has been said, and rightly so, that we learn from our equals, not from our superiors. Craftsmen must trust us before we can influence them. If they do not accept us socially they will reject the

solutions offered by us. If anything needs to be downsized for the sake of rural development, it is the superciliousness of repositories of modern technology.

2. DHOKRA PROCESS

Lost wax (*cire per due*) process of metal casting is an ancient technology that was once prevalent widely throughout the world. In this process, wax is first formed into an object, encased in a mould of fireproof material such as clay, and then drained out to make way for molten metal. Unlike Europe which rediscovered lost-wax during renaissance, India has maintained an unbroken tradition since at least mid-third millennium BC, with the famous Mohenjodaro bronze figurine of a dancing girl being the earliest recorded specimen from the subcontinent. In India today lost-wax figures in two geographically and culturally distinct traditions. South Indian tradition focuses on casting “sensuous and sacred”, mostly Shaivite, icons in accordance with prescriptions laid down in ancient texts. Nourished and sustained by royal patronage through the Pallava (7-9th centuries AD), Chola (10-13th), and Vijayanagara (14-16th) dynasties, it robustly survives in the small town of Swamimalai (in Tamil Nadu), which has easy access to fine clay from the nearby Kaveri (Cauvery) river. Nepal, Thailand, and many other countries have maintained similar traditions.

The second lost-wax tradition, known as Dhokra, is practised in the mineral-rich, central Indian tribal belt and the contiguous alluvial districts of West Bengal. The original home of Dhokra (name is assigned to both the craft and the community) is probably Bastar (Chhatisgarh state) from where it is believed to have spread to other areas (Jharkhand, Orissa, parts of Andhra Pradesh, West Bengal) through migrations and assimilation. Many of the observations and comments in the following are based on our work with Dhokra communities in Bikna (district Bankura) and Dariapur (district Bardhaman) both in West Bengal; Jabardah (district Dumka) in Jharkhand; and most recently Sadaibereni (district Dhenkanal) in Orissa.

Many of the communities engaged in the craft retain memories of past ethnic linkages and migrations (some of these memories may have been planted by anthropologists in recent field-study times). Quite obviously there were metalsmith communities who in course of time added Dhokra to their repertoire. Most Dhokra craftsmen in West Bengal are Mallars [pronounced Mallaar] by caste. They constitute an endogamous group called Dhokra Kamar [pronounced Kamaar]. Various Kamar groups have since been designated Karmakars, which have started intermarrying. Interestingly, while the Dhokra Kamars now marry into Ghatra Kamars (traditional makers of brass kitchen pots), the latter are not welcome into the Dhokra club. In Bikna, there are a few non-Mallars who have taken to Dhokra, but they are not fully integrated into the Mallar mainstream. In Jabardah, Dhokra work is carried out by *Jadu Patuas*, who bear Muslim names; their customers and patrons are the Santhal tribals. This is an interesting fact, because souvenir market literature flaunts Dhokra as tribal art. In Sadaibereni Dhokra craftsmen belong to the Ghantra caste groups.

Unlike the south Indian lost-wax tradition which is codified, the Dhokra tradition is fluid and informal, practised by more-or-less autonomous communities. Finer details of the process itself, motifs and themes are location-specific driven by local culture and economy. Orissa Dhokra artifacts, famous for their fineness, seems to be inspired by silver filigree work. Within the folds of broad uniformity of a technology, there resides a wide spectrum of diversity occasioned by local availabilities, requirements and sensitivities. Dhokra craft is best seen not as a monolith, but as a commonwealth of inter-related yet independent sub-traditions.

Although the Dhokra craftsmen have been leading a settled life for very many generations, their technology has remained a throwback to their nomadic times. (See below for recent technological changes.) Till our intervention during the last three years metal casting was still being done by each family setting up its own make-shift, fuel-inefficient, open furnace. While technology remained fossilized, the craft did not remain static. We can in fact distinguish between four phases of development.

Phase I is defined by the original Dhokra repertoire, which is simple and stark in keeping with the makers’ life style and philosophy. This repertoire includes lid-less measuring bowls called *Kunke* or *Pa’ila*. In Jabardah, the *Jadu Patuas* make them for their own use as well as for their Santhal clientele. Elsewhere the craftsmen make them for themselves and souvenir buyers.

Phase II came into being when the Dhokra craftsmen took to settled life and meeting the requirements of their patrons. Thus in Bengal, their work now included rather ornate icons of Hindu gods and goddesses. Interestingly, unlike their clients who worship their creator, Dhokra craftsmen in Bikna worship their own creations (horses, elephants, etc.) in addition to *Bhairon*, a form of Shiva, and a deity consistent with non-vegetarianism. In Jabardah, *Jadu Patuas* make small anklets for Santhal s’ fowls and peacocks. Small knives can be attached to these anklets for cockfight.

Phase III is characterized by two major developments that took place in years immediately after India’s independence in 1947: patronage extended by the state and the social elites; and interaction with creative sculptors like Meera Mukherjee. She successfully imbibed in her own work techniques and motifs of the Dhokra art and, once accepted as an insider, introduced the Dhokra craftsmen to new forms. It is during this phase that

the stylized Bankura horse, hitherto a preserve of the Kumbhkars (clay craftsmen), was successfully adopted for casting in metal.

Phase IV, a relatively recent phenomenon, has been thrust upon the Dhokra craftsmen by the demands of the cheap souvenir market. This phase is characterized by such “novelty” items as a Ganesh with an umbrella. Much of the work is pure kitsch; yet it is a source of income, even if meagre. Over years, purchases by government agencies have gone down. Such has been the impact of this phase that the craftsmen now describe their creations not in their own words but in the vocabulary given to them by the traders (“tribal doll”, “mother goddess”). Very often, when the traders descend on the craftsman’s village to make purchases they pay exploitatively low prices. In such cases the craftsmen seek to indirectly raise their wages by lowering craftsmanship and compromising on the quality of the inputs. Thus they may use inferior quality of metal scrap and substitute coltar for wax-mix, called dhuna. Such is the sad state of affairs that these craftsmen will happily put up with low prices, if they could get regular orders. Unfortunately, this is not the case.

Phase V, ushered by NISTADS in 2001, is defined by technological improvements accompanied by an enhanced sense of worthiness and help in marketing. Technological changes include a pucca furnace; using molten metal rather than scrap, brazing rather than tin soldering; changing the composition of the alloy; and the concept of measurement. The new furnace is smoke-free; saves fuel and metal; and permits large-sized objects to be cast. It has also transformed the casting from a family affair into a community affair. **Remarkably, creative levels have risen to match the technology available.** Not only are the craftsmen making bigger and better artifacts, they have also added new forms and motifs on their own.

3. NISTADS’ INTERVENTION

Our interaction with Dhokra craftsmen in Bikna, Dariapur, Jabardah and Sadaibereni has involved the following steps:

- (i) **Winning the craftsmen’s confidence.** This was done in Bikna by helping them get their pending payments from the government. In Dariapur, a defunct tubewell was got repaired, and a young girl suffering from TB provided with medical advice and medication. No initiative was needed in Jabardah where our reputation had preceded us. In Sadaibereni, we asked an intermediary to introduce us.
- (ii) **Respecting their expertise.** If the Dhokra craftsmen are engaged in their age-old family and caste craft, we should feel obliged to them. If they give up their craft, the loss will be human civilization’s and not theirs. We sat with them, and discussed their work. To our surprise, they were quite aware of their shortcomings and handicaps. In collaboration with them, we gave them technical upgradation, scrupulously keeping out of the art and creative part of their work about which we have nothing to teach them.
- (iii) **Social upgradation and help with marketing.** We brought Bikna and later Dariapur craftsmen, to Delhi; got their exhibition opened by a Minister; acted as their salesman; got good price for their products; took the help of government agencies, and most importantly, in the case of Bikna, negotiated terms on their behalf with exporters and export suppliers for a low-margin but steady stream of orders.

We consider our experiment to be a success on two counts. First, there is an increase in the wages of the Dhokra craftsmen in Bikna. Secondly, earlier their teenager sons were looking for petty jobs outside. That trend has been reversed. Since we have been combining authority of the state with the earnestness of a good NGO, we have been able to influence their social life also. Many families have now opened joint bank accounts; and their boys and girls are going to school (Earlier the adults would ask their sons rather than their wives for assistance.) where education is free. In Sadaibereni, we insisted that the craftsmen regularly send their children to school (where education is free and the children are already registered). In Bikna, Dariapur and Jabardah, our activities have sensitized local governments to the significance of Dhokra work and basic needs of the craftsmen. In Bikna, many craftsmen have now built their own furnaces.

Problems remain. Capital requirements of the craftsmen are still fulfilled by private moneylenders who avoid intimidating paperwork but charge interest as high as 120% p.a. .

CONCLUSIONS

Our experience with Dhokra craftsmen, engaged in making brass artifacts using the millennia-old lost wax process of metal casting, has shown that these craftsmen are more than willing to improve their technology provided this is done with sensitivity and without overwhelming them. To sum up, traditional craftsmen need help at three levels: (i) Benefit of higher social networking; (ii) Technological assistance in absorbable and maintainable upgradation; (iii) Help in marketing implying higher wages for this self-employed labour force. Of all these, the most important is the help in marketing. Most craftsmen, because of illiteracy, ignorance and lack

of social confidence, are unable to take advantage of government schemes or deal with buyers. If this generation can absorb technical improvements and adhere to Dhokra work with increased wages, the next generation will hopefully be able to demand and obtain higher prices from middlemen as well as bulk or individual buyers. Also, there is need to advertise their goods and obtain orders from across the world through internet

RECOMMENDATIONS

Traditional technology, no matter how inefficient, represents an equilibrium state for its practioners. If this state is to be disturbed through modern interventions, it should be ensured that a new equilibrium state is established. More specifically, technological assistance must be provided with sensitivity, keeping in the mind the following points

- (i) New technology must be integrated into the system. Input material must be easily available, and equipment should be repairable locally and cheaply.
- (ii) New technology must be absorbed by the craftsman. He should be able to master it; put it to new uses; and think of further improvement.
- (iii) New technology must be appreciated by the market. Earnings should improve; market should expand.
- (iv) Internet should be used to sensitize the world at large of the civilization value of this craft and for finding buyers.

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