A Current Wisdom and Heritage of Making Terracotta Horses in Konthagai Village, Sivagangai District, Tamil Nadu

S. Udayakumar[1]

1. Heritage Science and Society Programme, School of Humanities, National Institute of Advanced Studies, Bangalore, Mathikere, Bengaluru, Karnataka – 560 012, India *(Email: archaeology1987@gmail.com)*

Received: 10 July 2022; Revised: 19 October 2022; Accepted: 03 December 2022
Heritage: Journal of Multidisciplinary Studies in Archaeology 10 (2022-23): 129-147

Abstract: *The terracotta image-making is one of the oldest forms of artistic expression. Konthagai, a village in Sivagangai district, Tamil Nadu, is situated along the Vaigai River valley—one of the major cultural zones of the region. The village holds significant archaeological importance, as it is home to a burial site near the renowned Keeladi excavation site. Currently, the Tamil Nadu State Department of Archaeology is conducting excavations in Konthagai, uncovering valuable insights into the past. Konthagai is also known for its skilled artisans who create terracotta objects influenced by traditions, beliefs, ritual practices, and contemporary demands. Their distinctive terracotta horses are primarily crafted for local markets and village temples within the state. This ancient craft not only serves as a livelihood for these artisans but also reflects the evolving socio-cultural heritage of the region, incorporating both traditional elements and modern innovations. This research documents the entire process of crafting terracotta images—from clay preparation to the final production of the terracotta horse. Additionally, it examines the socio-economic conditions of the artisans, shedding light on their daily lives and the alternative occupations they pursue.*

Keywords: Terracotta Horse, Vaigai River, Konthagai, Archaeology, Clay Preparation, Tamil Nadu, Heritage

Introduction

The word *terracotta* is defined in the *Shorter Oxford English Dictionary* as "baked earth." It refers to a hard, unglazed pottery of fine quality, used to create decorative tiles, bricks, architectural embellishments, statuary, vases, and similar objects. In Tamil Nadu, southern India, each village typically has a special shrine dedicated to what are known as "village deities." These deities, some associated with specific castes and others with local clans, are not part of the mainstream Hindu pantheon but instead play central roles in local mythologies. These myths establish the conditions for order and morality within the village. The shrines, usually located on the outskirts of the village, often feature a sacred tree, in front of which stand statues of various deities, accompanied by a large horse figure—sometimes with a rider, sometimes without.

While many of these horses are now made of concrete and painted in bright colors such as yellow, blue, and white, some are still crafted from natural clay.

One such deity is Aiyanar (also spelled Ayyanaar), a god unique to the Tamil people. He is revered as a rainmaker and a bringer of prosperity to the fields, but his primary role is to patrol village borders and protect the inhabitants from harm. Depicted as swift and fierce, wielding a sword, he is believed to make his rounds at night, guarding the village and its fields. It is said that encountering him in the dark should be avoided for one's safety. However, villagers can communicate with him by placing written messages against his sword, and often, the solutions to their problems are revealed to them in dreams. Apart from the large terracotta horse, village shrines often contain numerous smaller horses—sometimes numbering in the hundreds—lining the pathways to the sacred tree. These smaller horses serve as thanksgiving offerings, placed at the shrine by priests on behalf of devotees (Jarzombek, 2009).

Study Area

Konthagai (78°11′27″E; 09°50′56″N) is located 8 km south of Madurai, with the Vaigai River flowing to its northeast. On the northern side of the village, an Iron Age habitation mound has been identified, covering an area of more than one hectare. The mound, which rises about 1 meter above the present ground level, has yielded black-and-red ware in both thin and thick varieties. To the east of the habitation mound, urn burials—locally known as *kulukkai* and *kulumai* (Rajan, 2008)—have been discovered. The artisan settlement is located approximately 500 meters south of the archaeological site at Konthagai. Currently, only two families remain engaged in the traditional craft of terracotta horse-making. Unfortunately, this ancient art form is in decline, particularly in this region, and is at risk of disappearing entirely.

A Global Perspective on Terracotta Figurines: From the Paleolithic to the Early Historic Period

Since the early twentieth century, extensive and sometimes controversial scholarship has focused on some of the earliest known anthropomorphic representations—the so-called "Venus figurines" found at Upper Palaeolithic sites. These female figurines, made from various materials such as stone, ivory, and bone, exhibit diverse styles and are neither homogeneous nor solely representative of eroticism or fertility. Despite the persistent notion that they form a cohesive corpus or type, research has shown otherwise (e.g., Nelson 1990). Although Upper Palaeolithic figurines are among the earliest known examples of three-dimensional anthropomorphic representations, similar depictions occur even earlier. For instance, an intriguing figurine from Berekhat Ram (Golan Heights, Israel)—a pebble slightly shaped into what is considered a female form—may date to approximately 230,000 BP. If accurately dated, this would place the artifact in the hands of *Homo erectus* during the late Acheulian phase of the Lower Palaeolithic (Marshack 1997 and others). This is significantly earlier than the well-known figurines of the Upper Palaeolithic, which were created by early *Homo sapiens* (Clark S. R. 2016).

The efflorescence of art and symbolism from the Upper Palaeolithic through the Neolithic period in Southwest Asia has been extensively studied (e.g., Bar-Yosef 1997; Cauvin 1994, 2000; Schmandt-Besserat 1995). Many of these studies examine the proliferation of figurines during the Neolithic period, often linking them to fertility-related themes, including the fertility of crops, livestock, and human populations, which were central to Neolithic ideology. Twiss (1996) suggests that anthropomorphic and zoomorphic figurines made of stone, bone, and clay from Natufian and Neolithic sites in the Levant may have been associated with magic and shamanism during this critical transition period (Clark S. R. 2016).

A recent art historical study of terracotta figurines from the end of the first millennium BCE (Ahuja 2000) provides a useful summary of research on figurines from this later period and an overview of the limited material available from the time between the Harappan period and the Early Historic period. It is during the Early Historic period that figurine production and use saw a resurgence following the decline of the Indus Civilization. Several studies have examined figurines from post-Indus periods. Excavation reports from sites such as Pirak (Jarrige and Santoni 1979) and Sonkh (Hartel 1993) include figurine findings, while other research has focused on specific site-based figurine corpora and broader surveys.

The terracotta figurines from the Jorwe Culture site at Ahichchhatra, documented by Agrawala (1947-1948, 1985), are particularly significant, as they represent one of the few later sites where figurines were published from a systematically documented excavation. However, the interpretation of the site's stratigraphy is considered unreliable (Ahuja 2000:21). Agrawala (1936, 1941) also published articles on Early Historic terracotta figurines, though his chronology and identification of figures as later deities based on Sanskrit texts have been questioned (Ahuja 2000:21; Poster 1986). Post-Indus civilization anthropomorphic terracotta figurines from the Gandhara region (now northwestern Pakistan) have also been studied as a corpus (Khan 1994; Hinkley 2001). Similarly, Early Historic period zoomorphic terracotta figurines from several sites in the Ganga-Yamuna valley have been examined (Prakash 1985), along with primarily anthropomorphic terracotta figurines from the Gangetic Valley (Gupta 1972). Some researchers have noted similarities between female figurines from Gandhara and those from the Indus Civilization (Coomaraswamy 1928; Hinkley 2001). Simone Corbiau (1937:1) even argued that Gandhara figurines belonged to a northern extension of the Indus Civilization (Gordon 1938:85; Wheeler 1962:105).

Several catalogs of Indian museum collections (Kala 1950, 1980, 1993) focus on later terracotta figurines. However, only a few studies have attempted to explore the social contexts of these figurines (Desai 1978, 1986). Other studies on later figurines include reports on Chalcolithic Ahar Culture bull figurines found at Marmi (Misra et al. 1993), an analysis of terracotta figurines from the Early Historic period (c. third/second century BCE–third/fourth century CE) in Gujarat (Margabandhu 1981), and a study of terracotta figurines from eastern Gujarat (Bailey 1997) (Clark S. R. 2016).

Terracotta Horses of Tamil Nadu

In Tamil Nadu, southern India, each village typically has a special shrine dedicated to what are known as "village deities." These shrines are usually located on the outskirts of the village and feature a sacred tree at their core. In front of the tree stand statues of various deities, along with a large terracotta horse. In addition to this primary figure, the shrine pathways are lined with numerous smaller horses—sometimes numbering in the hundreds—offered as thanksgiving tributes by priests on behalf of devotees (Mark Jarzombek 2009).

Clay objects are produced throughout Tamil Nadu, forming an essential part of the region's artistic and cultural heritage. Traditionally, the entrance to each Tamil Nadu village is guarded by an enormous terracotta horse, representing the mount of Ayyanaar, a guardian deity. Ayyanaar is depicted with a prominent mustache, large teeth, and wide-open eyes, constantly watching over the village. He stands at the entrance, surrounded by his horse and his commanders or warriors. Ayyanaar figures, including the terracotta horses, vary in height from less than a meter to over six meters. The oldest known Ayyanaar figures and terracotta horses are found in Salem district. The largest terracotta horses are produced in Salem and Pudukottai districts, while smaller terracotta figures—both human and animal—are made throughout Tamil Nadu. Given the time required for the traditional firing process, the use of molds is becoming more common to expedite production. Notable village sanctuaries featuring Ayyanaar figures include Chettampatti and Nallur (Tiruchirapalli district), Tirripuyana (Madurai district), Konthavai (Sivagangai district), and Vadugapalayam (Coimbatore district) (https://asiainch.org/craft/clay-terracotta-of-tamil-nadu/).

Aims and Objectives of the Research

This research aims to understand how the contemporary circulation of old objects and traditional crafts in the Indian context contributes to heritage, cultural identity, and the perception of the past as a culturally embedded phenomenon rather than a universal feature. The primary focus is to examine the significance of terracotta horse-making techniques in Konthagai village. This study documents each stage of the terracotta horse-making process and explores its distribution and trade in and around the Madurai and Sivagangai districts. Additionally, this research addresses key questions, including: Was production specialized? How intensive was production? What was the social identity of the artisans?

Methodology

The explicit goal of ethnoarchaeology is to provide ethnographic data and interpretations that are directly relevant to archaeological analysis and model-building (cf. Donnan and Clewlow, 1974; Kramer, 1979, p.4, 1985; Schiffer, 1987, pp.229-230; Schwarz, 1978, p.7; Cl. Costin, 2000, p.377). Archaeologists have long used ethnographic data to interpret and explain findings in the archaeological record. In recent years, as archaeology has become more theoretically oriented, researchers have made conscious efforts to develop systematic models for the use of ethnographic

analogy (Stiles, 1977). Ethnographic fieldwork, which involves the systematic study and description of a contemporary culture, plays a crucial role in this research. The term "ethnography" has historically been used interchangeably with "ethnology"; however, while ethnology focuses on cross-cultural comparisons, ethnography is primarily concerned with in-depth studies of single cultures. Ethnographic fieldwork, in combination with ethno-metallurgical studies, has been employed by past researchers to understand the material culture of southern India and to establish meaningful links between artifacts, production methods, and object histories (Srinivasan, 2016).

This research makes an original attempt to study terracotta horse-making in Konthagai village, examining its multiple meanings—ritual, functional, and artistic. It also explores the craftsmanship behind these creations, the surviving skills of local artisans, and their connections to local temples. The research relies primarily on fieldwork, including surveys, interviews, and documentation of terracotta horse-making techniques. Data collection methods are rooted in ethnography, emphasizing direct observation. The majority of data will be gathered through fieldwork in the study area, including documentation of craft workshops. Whenever possible, interviews and interactions will be recorded and transcribed using a handheld digital audio recorder, always with the respondent's consent.

Techniques for Making Terracotta Horses in Konthagai

This section provides a detailed account of the methods used to create terracotta horse figurines, from raw material selection to the final product. The documentation of this craft was conducted over five phases of ethnographic fieldwork across different weather conditions in the study area.

Raw Materials: The primary raw material for crafting terracotta horses in Konthagai is clay, which is readily available in the region. Potters, known locally as "Kusavan," source clay from neighboring areas, including Madurai, Sivagangai, and Manamadurai. Artisans from Konthagai primarily obtain their clay from Konthagai Kamai (a local water pond). This clay is naturally fine and has fewer impurities, often mixed with aquatic plants. Clay is collected in bulk—typically ranging from 500 to 800 kilograms—using small tempo vans to transport it from Konthagai Kamai to the artisans' homes. The clay is stored in an open space, but during the rainy season, it is kept indoors or covered with plastic sheets to prevent moisture damage. Before use, the clay is mixed with riverbed sand and finely chopped rice straw, which acts as a binding material. This mixture ensures the durability of the terracotta craft (Figure 1).

Tools: Artisans in Konthagai use simple tools, primarily wooden sticks, to shape and decorate the terracotta horses. These sticks, which measure between 12 cm and 15 cm in length, are the primary instruments for carving motifs. Each craftsman has their own set of tools, customized for intricate detailing (Figure 2). No specialized tools are used beyond these basic wooden implements.

Figure 1: a) Chopping the rice straw; b) mixing the clay with rice straw

In the local language, the wooden mallet is called Marattattu**.** This tool is made of hardwood but is lightweight. It is primarily used for enlarging and smoothing the terracotta horse. Additionally, it helps taper the outer wall when joining the upper and lower parts of the terracotta horse. The wooden mallet consists of two parts: Handle and Body. Another essential tool is the handle stone anvil, known as Kal **i**n the local language. It is a small stone anvil with a working surface diameter ranging from 5 cm to 7 cm. The wooden mallet and handle stone anvil are used together to enlarge the object. While shaping, the handle stone anvil is always applied to the inner surface of the object, while the wooden mallet works on the outer surface (Figure 3).

Process of Making a Terracotta Horse

The complete process of making a terracotta horse involves several intricate steps. It begins with material preparation, followed by mixing and conditioning the clay to achieve the desired consistency. The head, body, and legs of the terracotta horse are crafted separately by hand. Once these individual components are shaped, the legs are carefully attached to the body to ensure stability and proportion. The assembled figure is then fired to harden the clay, enhancing its durability. The final product showcases the artisan's craftsmanship and skill.

Preparation of Materials: The preparation of materials starts with removing dust particles and small stones from the clay to refine it for terracotta horse-making. The clay from Konthagai Kamai (water pond) is generally of high quality, requiring minimal refinement. To purify the clay, artisans break it into smaller lumps or soak it in water. This process helps achieve a finer, powder-like texture. Sand particles and other impurities are manually removed to ensure a smooth clay mixture (Figure 4).

Mixing the Clay / Clay Preparation: Mixing the clay with other raw materials is a crucial step, as the quality of mixing directly affects the final product. Properly blended clay ensures a stronger and more durable terracotta horse. For smaller quantities, artisans mix the clay by hand, while for larger quantities, they use their legs to knead it more efficiently. The mixing process typically takes 3 to 4 hours, though, depending on the number of artisans involved, it can sometimes be completed within 2 to 3 hours (Figure 5).

Figure 2: Wooden stick used for working in a terracotta horse

Figure 3: a) Wooden mallet, and b) stone anvil (Kal)


Figure 4: Konthagai Kamai (water pond)

Handcrafting the Head of the Terracotta Horse: After preparing the clay, the artisan begins crafting the horse's head. The first step involves shaping an elongated cylindrical structure in clay, which forms the neck. This neck portion is left to dry for approximately two hours. Once dry, the artisan starts shaping the horse's face, beginning with the mouth and gradually forming the complete facial structure. The artisan relies solely on their fingers and a small wooden stick for detailing. The neck and face parts are joined while the face is still wet to ensure proper adhesion. To support the structure during assembly, the neck is placed in front of an elongated wooden plate, which helps balance both parts. The necessary anatomical details and decorative elements are then added according to local beliefs (Figure 6).

Handcrafting the Body of the Terracotta Horse: The body of the terracotta horse is crafted using a simple technique. The artisan shapes an elongated cylindrical clay structure with a small hole in the middle. This hole serves as a grip for lifting the horse during firing and installation. Women artisans use a wooden mallet to expand the

body's size and smooth the clay surface. The body must be properly sun-dried before further processing (Figure 7).

Figure 5: Mixing the clay/clay preparation

Handcrafting the Legs of the Terracotta Horse: The process of making the legs of the terracotta horse is simple. The artisan crafts an elongated, tube-like clay structure, typically 3 to 4 feet in height. In recent years, plastic pipes have been used as molds for shaping the legs, whereas, a decade ago, artisans used wooden blocks for this purpose. Each terracotta leg has a 2 cm diameter hole at the bottom, which is used to secure the horse to a platform, inside a temple, or in its surrounding areas (Figure 8).

Attaching the Body and Legs: To assemble the horse, the artisan constructs a frame-like structure on the floor using wooden sticks. The four elongated clay tubes, serving as the horse's legs, are placed at equal distances within the frame. The cylindrical body of the horse is then suspended above the frame, ensuring it is properly positioned atop the four legs, forming the horse's belly. It is important to note that the body of the horse is suspended to prevent its weight from overloading the legs before they have fully dried. The basic structure is assembled, and any gaps are carefully filled by hand. This step is crucial, as shaping the body and ensuring a seamless finish requires experience, creativity, and a deep understanding of the art and heritage.

Once the horse's structure has taken shape and dried slightly, it is ready for the detailed design work. However, in the case of the Konthagai terracotta horse, decorative motifs are applied only to the face, while the rest of the body remains plain and is smoothly plastered with clay.

Figure 6: Handcrafting the Head of the Terracotta Horse

Figure 7: Handcrafting the Body of the Terracotta Horse

Another key aspect to note is that the body and legs of the horse are joined together before firing, whereas the head is attached after firing (Figure 9).

Figure 8: Handcrafting the Legs of the Terracotta Horse

Drying and Firing Method: Drying is an essential part of the manufacturing process and must be carried out progressively to prevent tension, deformation, and cracking. To ensure gradual drying, the objects are handled throughout the process. The initial phase takes place in the shade, where shrinkage is most significant, followed by a possible second phase in the sun to allow complete evaporation of moisture. Large objects may be turned upside down multiple times to optimize the drying of the base. Objects with separate elements, such as handles, can be covered for a period to promote gradual drying, ensuring that the attached elements remain securely joined despite differences in moisture levels between them and the main body. The drying duration depends on factors such as the size and thickness of the object's walls, temperature, humidity, and ventilation, and it can take several days. Proper drying is a crucial prerequisite for successful firing (Roux 2019).

Figure 9: Attaching the Body and Legs

After the terracotta horse has completely dried in both the shade and the sun, the holes in the body and legs are cleaned with an old cloth. The artisan carefully inspects the entire horse for any cracks that may need repair. To ensure a smooth surface, the artisan gently rubs the horse with an old cloth. The drying process typically takes 2–3 days, but between March and May, when the village experiences high temperatures, the horse dries within just two days (Figure 10).

Firing is a crucial stage in the manufacturing process, as it imparts irreversible physicochemical properties to the objects. During this process, the clay loses its plasticity, and the final characteristics of the terracotta depend not only on the type of clay used but also on various thermal factors. These include the firing temperature, heating rate, duration of exposure to heat (soaking time), and the firing atmosphere. The following section outlines these different parameters and describes the two main firing techniques: direct firing, where the objects are in direct contact with the fuel, and indirect firing, where they are separated from the fuel (Roux 2019).

Traditionally, the firing of pottery or small terracotta objects requires a circular kiln. However, in Konthagai village, terracotta horse figurines are fired using an open-firing method because they range in size from 2 to 5 feet and are primarily made for local temples. The firing process involves several steps. First, the artisan spreads a layer of coconut husk in a circular shape on a flat surface, creating space for approximately 10–12 terracotta horses. Around 50 kg of coconut husk is required for this step. The terracotta horses are then carefully arranged at an angle to ensure they do not touch or disturb one another.

Next, the artisan places small pieces of wood on top of the terracotta horses, avoiding heavy wood to prevent breakage, as the horses are hollow and not solid. Finally, the terracotta horses are completely covered with rice straw from all angles. The artisan then uses a wooden rod or stick to ensure the rice straw is evenly distributed before proceeding with the firing process.

Figure 10: Drying and firing of the terracotta horse

Once the rice straw has been spread evenly, the artisan sprinkles a small amount of water over it. The water is used sparingly, just enough to create moisture, allowing the artisan to control the firing process. Next, a mixture of ash and sand, collected from the waste of previous firings, is spread over the straw. Once this step is completed, the artisan ignites the fire at four corners of the setup, ensuring that the flames spread evenly in all directions.

The artisan carefully monitors the fire to prevent it from becoming too intense, ensuring that the heat distributes evenly across all parts of the terracotta horses. After 20 minutes, the artisan checks whether the objects are firing properly. The entire firing

process takes approximately four hours to complete. In each firing session, the artisan fires 8 to 10 terracotta horses, as the available firing space is limited. Managing the space efficiently is crucial, as firing more objects at once would make it difficult to control the process (Figures 11 and 12).

Figure 11: a) Carrying the terracotta horse to the open firing area, b) Coconut husk spread at the bottom of the firing setup, c) Complete arrangement of the terracotta horses for the firing process, and d) Small wooden pieces placed on top of the terracotta horses.

Final Product: Once the firing process is complete, the artisan allows the terracotta horses to cool down for approximately two hours. After cooling, the artisan inspects the horses to ensure they have been properly fired and checks for any breakage. If any pieces are broken, they are set aside separately. At this stage, the artisan also separates the body and head parts of the horses. After two days, the artisan begins the coloring process. Traditionally, red ochre is used for red, lime for white, and charcoal powder for black. Red, black, and white are the primary colors used to paint the terracotta horses. Once the painting is complete, the terracotta horse is transported to the designated temple or temple festival site. The head and body parts are assembled at the temple premises. Traditionally, artisans used lime to join these parts, but today, cement and iron wire are commonly used for fitting and plastering (Figure 13).

Figure 12: e) Placing rice straw on top of the terracotta horse, f) Arranging the rice straw over the terracotta horse, g) Sprinkling water on the terracotta horse, h) Covering the terracotta horse with ash and sand, i) Fully covered terracotta horse, j) Igniting the fire at the bottom, k) The terracotta horse being heated in an open kiln, and l} the firing process of the terracotta horse.

Figure 13: Terracotta Horse Figurine in Its Final Form

Discussion and Conclusion

Tamil Nadu has a long tradition of terracotta art dating back to the Iron Age and Early Historical period, and this tradition continues to be passed down from generation to generation. Strong archaeological evidence of terracotta images has been found at the

Keeladi archaeological site, located just 2 km from Konthagai village. Among the discoveries at Keeladi are human moulds unearthed during excavations. One such mould, used for casting human heads in metal or other materials, features intricate carvings on its inner surface. The head decoration and elongated ears are finely detailed, and the mould itself is well-fired (Sivanathan et al. 2019). A scientific study of terracotta art can provide valuable insights into the social, economic, and cultural life of the past. This article aims to document the long-standing traditional techniques and methods of making terracotta images, particularly in archaeological regions such as Keeladi, Konthagai, and Agaram.

The art of terracotta horse-making is slowly fading, making it crucial to document traditional techniques before they disappear. Through the author's fieldwork, it has been observed that only two families continue to practice this craft using traditional methods. However, due to increasing awareness of heritage conservation and archaeological excavations in Tamil Nadu, more people are becoming interested in this art form. Even scholars are keen to study the techniques involved in making terracotta horses. Despite this interest, artisans face significant challenges in sustaining their craft. Due to limited market demand and a lack of networking opportunities, most artisans prefer working for local temples during festival seasons rather than pursuing commercial avenues. They primarily create terracotta horses for temple festivals in the Madurai, Sivagangai, and Pudukottai districts.

Apart from making terracotta horses, these artisans engage in agriculture, work as laborers on coconut farms, and sometimes find employment in brick kilns. During festival periods, they also play a significant role in temple rituals, with some artisans serving as temple priests. Their priesthood is not viewed as a source of income but rather as a way to pass down rituals through generations and to honor their community and temple traditions. The artisans belong to the Vishwakarma community, which has historically played an essential role in art and craftsmanship. Many members of this community specialize in traditional South Indian Bronze Casting (Lost-wax method), wood carving, goldwork, and ironwork.

This paper serves as the first original documentation of terracotta horse-making techniques in Konthagai village. The artisans use locally sourced materials for their craft but face challenges in acquiring raw materials. Government regulations restrict the amount of clay that artisans can collect from local water ponds (Kamai) to prevent illegal clay mining. Additionally, the rising costs of materials such as coconut husk and rice straw, along with transportation and labor shortages, pose further difficulties.

To preserve and promote this traditional craft, the government should implement policies to support terracotta horse artisans by improving market opportunities. Systematic workshops and conferences for school and college students would also help raise awareness and appreciation for this art form. Through this paper, the author aims to continue working with Konthagai village artisans on various aspects, including their rituals, community development, creative thinking, and skill enhancement.

Acknowledgements

I would like to express my sincere gratitude to all the artisans of Konthagai village, as well as to Dr. Diya Mukherjee (NIAS). I extend my special thanks to Prof. Sharada Srinivasan, National Institute of Advanced Studies, IISc Campus, Bangalore.

References

Agrawal, V. S. 1936. Mathura terracottas. *Journal of the Uttar Pradesh Historical Society, 9*(2), 6–38.

Agrawal, V. S. 1941. Rajghat terracottas. *Journal of the Indian Society of Oriental Art 9*: 7–11.

Agrawal, V. S. 1985. *Terracotta figurines of Ahichchhatra (District Bareilly, U.P.).* Varanasi, India: Prithivi Prakashan. (Original work published 1947–1948 as *the terracottas of Ahichchhatra, District Bareilly, U.P.* in *Ancient India, 4*, 104–179.)

Ahuja, N. P. 2000. *Early Indian moulded terracotta: The emergence of an iconography and variations in style, circa second century BC to first century AD* (Unpublished doctoral dissertation). University of London, London.

Bailey, D. M. 1997. Terracotta figurines of eastern Gujarat. In I. Freestone & D. Gaimster (Eds.), *Pottery in the making: Ceramic traditions* (pp. 104–109). Washington, D.C.: Smithsonian Institution Press.

Bar-Yosef, O. 1997. Symbolic expressions in later prehistory of the Levant: Why are they so few? In M. Conkey, O. Soffer, D. Stratmann, & N. G. Jablonski (Eds.), *Beyond art: Pleistocene image and symbol* (pp. 161–187). San Francisco, CA: California Academy of Sciences.

Cauvin, J. 1994. *Naissance des divinités, naissance de l'agriculture: La révolution des symboles au Néolithique.* Paris, France: CNRS.

Cauvin, J. 2000. *The birth of the gods and the origins of agriculture* (T. Watkins, Trans.). Cambridge, UK: Cambridge University Press.

Clark, S. R., and J. M. Kenoyer. 2016. South Asia—Indus civilization. In T. Insoll (Ed.), *The Oxford handbook of prehistoric figurines* (pp. 607–630). Oxford: Oxford University Press.

Coomaraswamy, A. K. 1928. Archaic Indian terracottas. *IPEK: Jahrbuch für prähistorische und ethnographische Kunst, 1928*, 64–76.

Corbiau, S. 1937. New finds in the Indus Valley. *Iraq, 4*(1), 1–10.

Costin, C. L. 2000. The use of ethnoarchaeology for the archaeological study of ceramic production. *Journal of Archaeological Method and Theory, 7*(4), 377–403.

Desai, D. 1978. Social background of the ancient Indian terracottas (circa 600 BC–AD 600). In D. Chattopadhyaya (Ed.), *History and society: Essays in honour of Professor Niharranjan Ray* (pp. 143–168). Calcutta, India: Bagchi.

Desai, D. 1986. The social milieu of ancient Indian terracottas 600 BC–AD 600. In A. Poster (Ed.), *From Indian earth: 4,000 years of terracotta art* (pp. 29–42). New York: Brooklyn Museum.

Donnan, C., and C. W. Clewlow. 1974. *Ethnoarchaeology* (Monograph 4). Los Angeles, CA: UCLA Institute of Archaeology.

Gordon, D. H. 1938. The age of frontier terracottas. *Iraq, 5*(1), 85–88.

Gupta, P. L. 1972. *Gangetic Valley terracotta art.* Varanasi, India: Prithivi Prakashan.

Hartel, H. 1993. *Excavation at Sonkh: 2,500 years of a town in Mathura District.* Berlin, Germany: Dietrich Reimer Verlag.

Hinkley, M. 2001. Some terracotta figurines from the Peshawar Plain. *Ancient Pakistan, 14*, 19–33.

Jarrige, J.-F., and M. Santoni. 1979. *Fouilles de Pirak, Vol. 1.* Paris: Diffusion de Boccard.

Kala, S. C. 1950. *Terracotta figurines from Kausambi mainly in the collection of the Municipal Museum, Allahabad.* The Museum, Allahabad.

Kala, S. C. 1980. *Terracottas in the Allahabad Museum.* Delhi, India: Abhinav Publication.

Kala, S. C. 1993. *Terracottas of North India in the collection of the State Museum.* Delhi: Lucknow.

Khan, M. A. 1994. *Les figurines feminies en terre cuite du Gandhara.* Paris: UNESCO.

Kramer, C. 1979. Introduction. In *Ethnoarchaeology: Implications of ethnography for archaeology.* New York, NY: Columbia University Press.

Margabandhu, C. 1981. Early Historic Terracottas from Gujarat—A Study. In M. S. Nagaraja Rao (Ed.), *Madhu: Recent researches in Indian archaeology and art history, Shri M. N. Deshpande Festschrift* (pp. 99–112). Delhi: Agam Kala Prakashan.

Mark, J. 2009. Horse shrines in Tamil India: Reflections on modernity. *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism, 6*(1), 18–36.

Marshack, A. 2007. The Berekhat Ram figurine: A Late Acheulian carving from the Middle East. *Antiquity, 71*, 327–337.

Misra, V. N., V. S. Shinde, R. K. Mohanty and L. Pandey. 1993. Terracotta bull figurines from Marmi: A Chalcolithic settlement in Chitorgarh District, Rajasthan. *Man and Environment, 18*(2), 149–152.

Nelson, S. M. 1990. Diversity of the Upper Paleolithic "Venus" figurines and archaeological mythology. In S. M. Nelson & A. B. Kehoe (Eds.), *Powers of observation: Alternative views in archaeology* (pp. 11–22). Washington, D.C.: American Anthropological Association.

Poster, A. (Ed.). 1986. *From Indian earth: 4,000 years of terracotta art.* New York: Brooklyn Museum.

Prakesh, P. 1985. *Terracotta animal figurines in the Ganga-Yamuna Valley (600 BC to 600 AD).* Delhi, India: Agam Kala Prakashan.

Rajan, K. 2008. Situating the beginning of early historic times in Tamil Nadu: Some issues and reflections. *Social Scientist, 36*(1/2), 40–78.

Wheeler, R. E. M. 1962. *Charsada: A metropolis of the North-West Frontier.* Oxford, UK: Oxford University Press.