The Late Harappan Cemetery Site of Sanauli: Evidence for Harappan Continuity

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Abstract: *The Harappan Civilization (c. 2600 – 1900 BCE) flourished for nearly 700 years, representing South Asia's earliest urban phase. This urban phase is the culmination of a long-drawn process of cultural transformations and assimilations, which started around the eighth millennium BCE, as represented by the earliest evidence at Mehrgarh. This urban phase is characterised by several representative cultural vestiges, clearly indicating continuity from the preceding regional Chalcolithic cultures and the introduction of newer elements. Scholars have identified these transformations as the regionalization phase (regional chalcolithic cultures preceding Harappan civilization), integration phase (Harappan civilization) and localization phase (late / post-urban Harappan cultures). The integration phase, which necessitated the sharing of resources from regions far and wide to cater to regional and international demand and supply, probably fuelled by ideological and administrative/political reasons, is a clear example of the representation of all hallmark Harappan elements in widely separated regions. The integration phase is followed by a deurbanised phase, known as late / post-urban Harappan culture, representing the demise of all hallmark urban features while retaining a few elements in certain parts of Gujarat and Punjab. The discoveries from the large cemetery site of Sanauli, district Baghpat, Uttar Pradesh, in 2004 and later from the excavations during 2005-06 and renewed excavations during 2018-19 represent several features indicative of the continuity of Harappan culture in its elements like disposal of dead, the orientation of burials, ceramics, ornament styles, technology and the like, which is not represented in any of the contemporary or succeeding cultures in western Uttar Pradesh. Attempts by a few to link the Sanauli cultural elements with chalcolithic culture or Ochre Coloured Pottery culture / Copper Hoard is unsubstantiated without valid evidence. This paper traces the continuity of cultural elements present at Sanauli to the Harappan culture and presents evidence to understand them more objectively.*

Keywords: Harappan Civilization, Regionalization, Integration, Localization, Cemetery, Chalcolithic, Ochre Coloured Pottery

Introduction

The cultural processes, roughly starting from around the eighth millennium BCE in the Greater Indus Region, gave rise to a state-level society that culminated with the amalgamation of several regional chalcolithic cultures into the Harappan Civilization.

The investigations spread nearly a century since its discovery in 1924 has enabled us to understand its antecedent phases rooted in the Neolithic, Chalcolithic and Advanced Chalcolithic cultures of several regions in the Greater Indus Valley like Balochistan, Sindh, Cholistan, Punjab, and Gujarat. These antecedent phases also resulted from the favourable climatic conditions, most probably triggered during the early Holocene period, which enabled the settled life of humans combined with a transformation from a food-gathering economy to a largely food-producing economy. This started a series of technological advancements, contacts with other contemporary cultures, interaction, trade contacts and exchange of commodities, the latter often exotic in nature, mainly catering to the elites. This enabled the settlements to grow in size, from villages to towns to cities, the latter achieved during the fourth millennium BCE largely. The integration of several regional chalcolithic cultures during the mid-third millennium BCE to cater to several needs of trade and economy, while also facilitated by dominant clans and tribes, probably shared by a common ideology, is a significant development to reach a stage of urbanization, which is commonly termed as Indus Valley Civilization or Harappan Civilization. The term Harappan civilization is most suitable as now it is understood that the sites sharing the various characteristic features of culture are spread not only on the Indus and its tributaries but also on the Ghagger-Hakra-Chautang / Chitrang (identifiable with Rigvedic Sarasvati and its tributary Drisadvati) and further extending into the Makran coast, Gujarat and isolated sites in Shortugai. Such a wide distribution of sites in different geographical zones cannot be identified with a single river or tributaries. Hence, terminology based on the type site of Harappa is more suitable to understand this culture and dynamism.

The widespread sites of this culture are noticed in an area of around one million sq. km in modern India, Pakistan, and Afghanistan (Figure 1). In addition to these sites, several sites in the Oman peninsula with Harappan affinity demonstrates the presence of Harappans in this region, mainly to facilitate the trade and commerce with the Mesopotamian region. The trade between Harappans (Meluhha of Mesopotamian records) and the Mesopotamian region is widely attested by the cuneiform records from the Early Dynastic to Old Babylonian Periods. Even though the discovery of the Harappan Civilization was announced by Sir John Marshall in 1924 (Marshall 1924), the visits to the site of Harappa by individuals like Charles Masson, Alexander Burnes and Alexander Cunningham (Possehl 1999) indicate this place of importance, most probably on an important trade route. The announcement of Marshall was followed by essential announcements by scholars like A.H. Sayce (1924), C.J. Gadd & S. Smith (Mackay 1925) and E.J.H. Mackay (1925), which enabled to place of the newly discovered civilization in a proper chronological context in the third millennium BCE and to understand the trade relations between Harappans and Mesopotamians.

The investigations of this culture and its antecedent phases are continuing. However, the most significant contribution in understanding formative phases is from the sites of Mehrgarh that preserves a long and continuous occupation, probably starting around the seventh-millennium aceramic Neolithic phase to the beginning of Harappan

culture during the third millennium BCE (Jarrige 1993). The continued occupation at the nearby sites like Nausharo, Pirak, and Sibri in that order of chronological succession has also enabled to reconstruct the human occupation up to the advent of the Iron Age. The excavations at Kot Diji and the subsequent identification of the transformation from the 'early' to 'mature' phase of the Harappan civilization by Rafique Mughal (1970) is another important contribution in understanding the emergence of Harappan culture. The presence of the 'Kot Dijian' culture in several sites in a wide area during the early third millennium BCE also represents a continuity into the Harappan culture. The other contemporary chalcolithic cultures are the Amri, Sothi-Siswal, and Anarta, which also contributed to the emergence of state-level societies that converged into the Harappan culture.

The advent of radiocarbon dating also helped in a better understanding of the antecedent and formative cultures in the spatiotemporal context of the Harappan civilization. The excavations at prominent sites like Harappa (Kenoyer 2013), Dholavira (2019), Rakhigarhi (Nath 2017), and other regional chalcolithic culture sites have helped in defining a chronological framework for the formative, integration and degenerative phases of the Harappan culture. The following chronological framework has been proposed by Kenoyer (2013), which can be more or less applicable to the sites of different geographical zones, with probable minor variations:

Localization Era	
Late Harappan Phase	c. 1900 – 1300 BCE
Harappa: Periods 4 and 5	c. 1900 – 1700 BCE
Integration Era	
Harappan Phase	c. 2600 – 1900 BCE
Harappa: Period 3C, Final	c. 2200 – 1900 BCE
Harappa: Period 3B, Middle	c. 2450 – 2200 BCE
Harappa: Period 3A, Initial	c. 2600 – 2450 BCE
Regionalization Era	
Early Harappan Phase	c. 5500 – 2600 BCE
Harappa: Period 2, Kot Diji Phase	c. 2800 – 2600 BCE
Harappa: Period 1, Ravi / Hakra Phase	> 3700 BCE

The early understanding of the Harappan civilization by scholars like Marshall (1931), Mackay (1943), Wheeler (1953), Gordon Childe and Piggot largely reflected them as *'austere, peaceful, lacking mental and spiritual equipment of the builders, sense of regimentation, the astonishing sameness of civilization, destroyed by invading Aryans'*. However, recent investigations, particularly of the sites of the formative and degenerative phases, have enabled scholars to identify the dynamism and processes involved in the *'regionalization, interaction, integration, localization and transformation'* eras of Harappan culture. The gradual transformation of the Harappan culture from an urbanised social organization to a 'non-urban' or 'deurbanised' economy has been identified with 'late Harappan' cultures, again in different geographical zones.

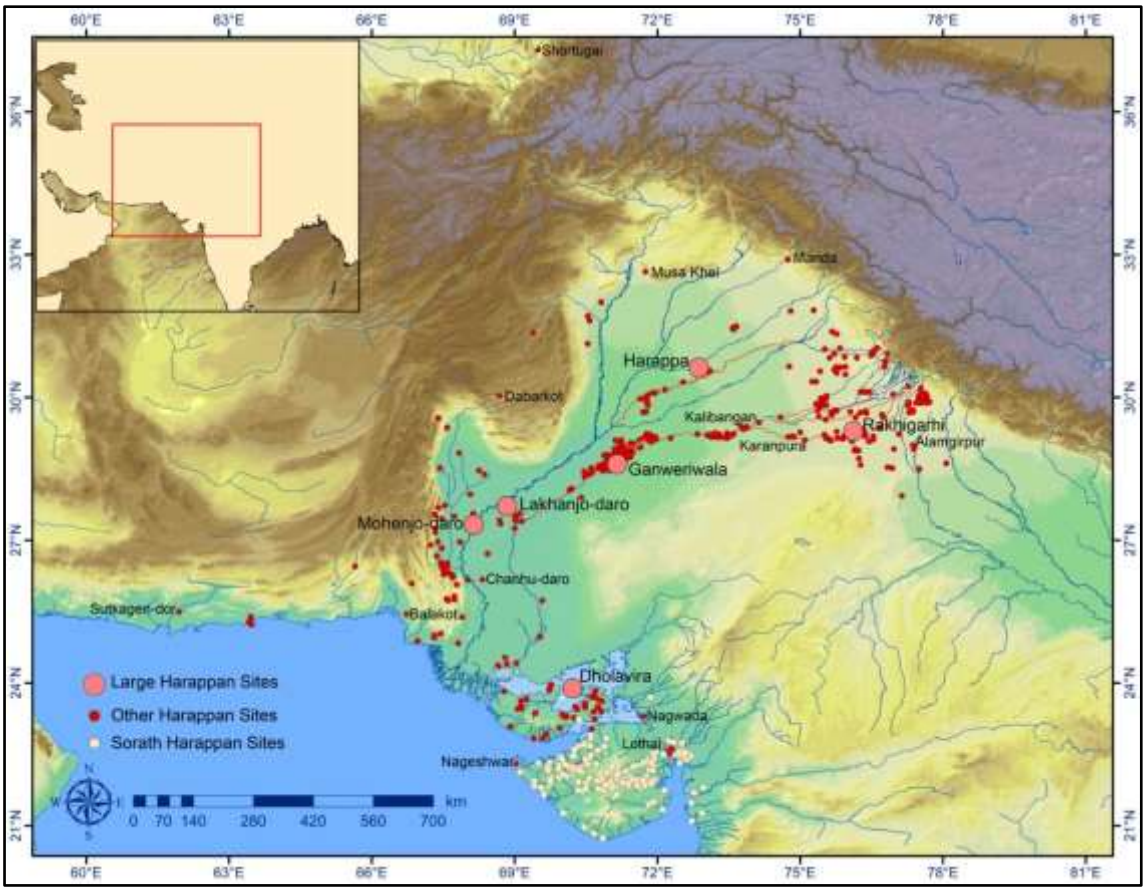

Figure 1: Map showing the distribution of Harappan sites (c. 2600 – 1900 BCE)

The Transformation from Harappan to the Late Harappan Phase

The urban characteristics of the Harappan civilizations transformed around the beginning of the second millennium BCE. This marks the end of this culture's approximately 700-year-old urban process and is distinguished by the abandonment of several larger settlements like Kalibangan along the River Sarasvati. The distribution pattern of the sites also indicates the gradual increase in the late Harappan sites in the upstream area of River Sarasvati and adjoining areas, marking an increase in the number of sites and a decrease in the average size of settlements when compared the preceding Harappan phase (Possehl 1999). This transformation was earlier understood as a sudden change and abandonment of settlements immediately after the urban phase of the Harappans, citing examples from the site of Mohenjo-daro. This initial understanding of the phenomenon has been summarised by Possehl (1977) as "...the civilization arose quickly from whatever formative base might have been present, and that it ended with equal rapidity."

The uniqueness of the mature phase of Harappan culture might have been the main reason why the archaeologists ignored the pieces of evidence present at several sites for the presence of 'late Harappan' cultural elements after the urban phase (Possehl 1977). Further, the transformations preserved in the habitation of different settlements

were also overlooked by earlier archaeologists. Scholars like Kenoyer (1998) also observe that after the urban phase of the Harappans, new cultures emerged at the Indus Valley's eastern, southern and northern edges. The pieces of evidence in the transformation of cultural processes after the decline of Harappan culture and the ultimate emergence of cultural and political centres in the middle Ganga region could have taken at least one thousand years Kenoyer (1998). The urban fabric, sustained for nearly seven hundred years that enabled the integration of a large territory for harnessing various exotic raw material sources, gradually ended around 1900 BCE. Scholars working on these processes have proposed several reasons for this transformation and the disintegration of the urban fabric. Possehl (1977) summarises the understanding and hypotheses put forth by other scholars, which include (i) Aryan invasion theory (R.E.M. Wheeler), (ii) flooding of River Indus due to a natural dam near Sehwan (R. Raikes and G.F. Dales), (iii) drying up of Rivers Sarasvati and Drshadvati, (iv) climatic changes during early second millennium BCE (Gurdip Singh), (iv) natural forces (B.R. Allchin). The other reasons could be "…extensive and repeated flooding, combined with shifting rivers…the devastating effect on the agricultural foundation and economic structure of the Indus cities" (Kenoyer 1998). The renewed data available to explain the linkage between the transformation and climatic change is more obvious now (results of the investigation by several scholars), together with the natural causes that could have led to the drying of River Sarasvati and also capturing of River Sutlej by the Indus river system (Mishra 1993).

The studies on palaeo-climatic conditions by Carriee Morrill et al (2003) based on the available research from 36 previous ones have concluded that there were three significant climatic changes in the past corresponding to c. 9500 BCE, 3000-2500 BCE, and 1300 BCE. The recent climatic studies from the lake Kotla Dahar in Haryana (Yama Dixit et al 2014) indicate two major shifts in the rainfall distribution and pattern during the mid-Holocene corresponding to c. 4400-3760 BCE and c. 2200-2000 BCE, respectively. The second change corresponds to the terminal phase of the Harappan civilization and also tallies with the shift in monsoonal data of around 300+100 years from Oman. It has been concluded that "…resultant age of drying at Kotla Dahar (~ 4.1 kya) is consistent with the suggested archaeological dates for the onset of Indus de-urbanization within dating uncertainties" (Yama Dixit et al (2014). A more recent study (Giesche et al 2019) concludes that "…strengthened Indian Winter Monsoon (IWM) surface water mixing between 4.5 and 4.3 ka correlated with a period of higher precipitation… period also represents the beginnings of the Mature Harappan phase…weakening of IWM ~4.1 ka eastern regions with more access to ISM rainfall may have been more favorable locations for agriculture. This may also help explain the broad shift in population towards more rural settlements in the northeastern extent of the Indus Civilization that occurred by ~3.9 ka and a shift to more drought-tolerant kharif (summer) season crops in Gujarat and at Harappa." Another study on the molluscan shell remains from Dholavira by Sengupta et al (2019) also concludes a climatic change. It has been observed as "…change in the humid fluvial landscape was probably due to a catastrophic drought that drove the final collapse of the settlement at

the onset of the Meghalayan Stage (~4300–4100 years BP)." Thus, the different climatic studies from various locations in the sub-continent indicate a shift in palaeo-climatic conditions ~4.1 ka, which also coincided with the drying up of River Sarasvati, capturing of River Sutlej by the Indus system and the gradual shifting of settlements towards eastern region during the late Harappan phase.

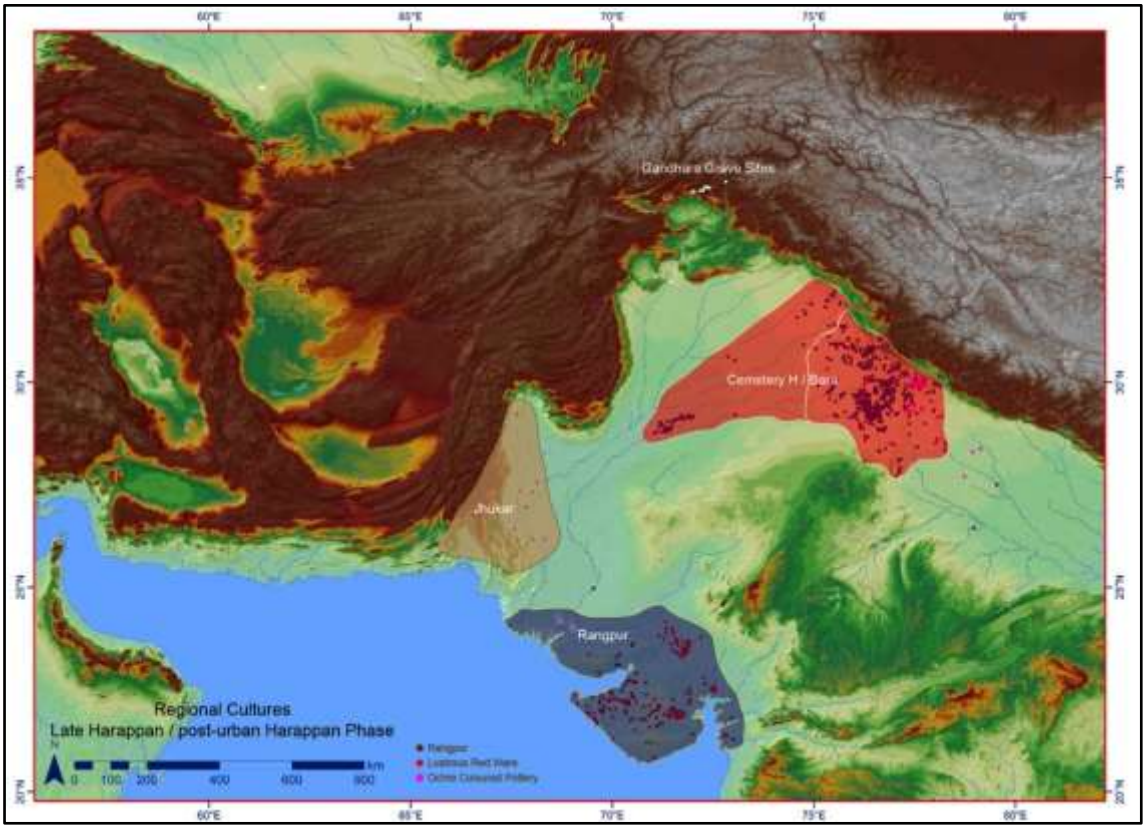

Figure 2: Map showing the late Harappan cultures

An analysis of the settlement pattern of different regions during the early second millennium BCE indicates the largescale abandonment of settlements along the Indus-Sarasvati rivers and a shift towards the upper reaches of River Sarasvati, western Uttar Pradesh. The settlements in Gujarat were more or less not affected due to this climatic change, even though the average size of the settlements reduced drastically, as exemplified by the evidence at Dholavira during Stage VI. The late Harappan cultures are also distinguished by the emergence of new ceramic styles and distinct material culture compared with the preceding Harappan phase. This period is also known as the Localization Era, and distinct regional cultures such as Jhukar, Cemetery H, Bara, Rangpur emerged in different parts of the erstwhile Harappan civilization (Figure 2). Even though there is a lack of inscribed materials from the Sindh, Panjab and western Uttar Pradesh sites, Dholavira in Gujarat produces a good number of inscribed material in the form of rectangular seals with typical Harappan inscriptions during Stage VI, which has been identified as the late Harappan phase here. The ceramic styles are also distinct, and uniformity is no longer maintained in the architecture,

standardisation of bricks, weighing system, usage of exotic materials such as agate-carnelian, lapis lazuli, stoneware bangles, shell bangles and the like. However, the proliferation of faience bangles and related items is noticed during this phase, partly to compensate for the non-accessibility of raw materials in semi-precious stones from Gujarat.

In contrast, the settlement at Dholavira continued its craft activities. More evidence of bead workshops and manufacturing areas and the continuation of hallmark Harappan items like decorated carnelian beads could be noticed here. There is a remarkable continuation of burial customs, particularly in the Panjab area, as identified from the earth burials of Stratum I and II from the site of Harappa. Only at a later stage did the pot burials emerge in Cemetery H, indicating a shift in the ideology and burial practices.

Kenoyer (1998) describes three major regional cultural styles of the 'localization era' or 'late Harappan / post-urban Harappans' as follows:

"...the Panjab phase refers to the northern regional culture that includes the large site of Harappa and sites further to the east in northern India. In the southern Indus valley, the Jhukar phase is named after a site near Mohenjo-daro and incorporates all sites in Sindh, as well as parts of Baluchistan (Balochistan). The Rangpur phase refers to the entire region of Kutch (Kachchh), Saurashtra and mainland Gujarat."

The ceramic traditions from Dholavira during Stage VI, particularly the white-painted black-and-red ware, have close affinities with the black-and-red ware traditions of Ahar-Banas culture, indicating an interaction with this region. The presence of Jhukar-style ceramics also shows the interactions with the Sindh region during the later Harappan phase. The Bara ceramic tradition from the type site Bara in Panjab is another manifestation that appears during the last phase of Harappan culture in Panjab and proliferates during the late Harappan phase in Panjab, Haryana and western Uttar Pradesh. The presence of both Harappan and Bara style ceramics at Rupnagar, Chandigarh, indicates the emergence of this pottery tradition towards the end of the Harappan phase in this region and dominates during the late Harappan phase. It is also noticeable that the Ochre Coloured Pottery (OCP) ceramic forms, which are noticeable predominantly from the sites in upper Ganga-Yamuna doab have close affinities with the late Harappan ceramic forms. The OCP is also a distinct ceramic in terms of fabric, technology, and manufacturing techniques compared with Harappan and late Harappan ceramics, even though a continuity in forms and shapes could only be discernible. The gradual shift of settlements from the Indus-Sarasvati core to the eastern regions towards the beginning of the second millennium BCE could have enabled interaction between them and the already existing settlements of the last phase of Harappan culture in this region, and once the urban fabric was lost along with the disappearance of manufacturing techniques and traditions, different pottery styles like the OCP could have emerged, retaining only a few forms and shapes. Often, the OCP

and the copper hoards are correlated as contemporary to each other, as many sites with the presence of the former also revealed copper hoards. However, the stratigraphic association of both is still eluding the archaeologists. In this regard, the association of antennae sword, a repertoire of copper hoard typology, in a burial (B 14) of the late Harappan phase at Sanauli is a clear indication of the interactions between the latter with the groups trading with copper hoard items.

Figure 3: General view of the Cemetery H Area, Harappa

A brief understanding of each of the phases of the late Harappan phase of the first half of the second millennium BCE will be of relevance here to situate Sanauli in the proper spatiotemporal context.

Cemetery H Phase

The evidence for the late Harappan occupation at Harappa has been identified from the areas in Mounds AB and E. The Cemetery H mound at Harappa is located to the south of Mounds E and D (Figures 3-4). The pot burials and earth burials from an area designated as 'H' area were discovered during the excavations at Harappan due to the sloped nature of the terrain in this area when compared to the surrounding mounds and a slightly elevated portion wherein the local museum is located south-southeast and exposure due to gushing of water on this area after heavy rain (Vats 1974: 203). This area was systematically excavated during the field seasons 1928-29 to 1930-31.

This phase is characterised by a distinct variety of ceramics, different from the Harappan pottery; drains, and baked bricks of reduced dimensions in comparison with

the preceding Harappan phase (Kenoyer 1991: 56). The identification of Cemetery H pottery from nearly fifty sites in the Cholistan region of Pakistan and from a site named Chak Purbane Syal has been made by Rafique Mughal (1990). Kenoyer (1991: 56) observes, based on the pieces of evidence of Period 5 at Harappa, as "focus of settlement organization from that which was the pattern of earlier Harappan phase and not cultural discontinuity, urban decay, invading aliens, or site abandonment…." (Kenoyer 1991: 56).

Figure 4: General view of the excavation in Cemetery H Area, Harappa

The burials at Cemetery H are found in two stratums, viz., Stratums I and II, the latter being the earliest containing earth burials while the former consist of pot burials. The earth burials consist of burial furniture in water pots, bowls, offerings, dishes or plates, saucers, flat covers, flasks, round vases, etc. (Vats 1940: 203). It is also pointed out that the Cemetery H area was used as a dumping ground before its use as a cemetery based on the significant occurrence of Indus-type pottery of all kinds and fabrics; the pointed-based goblets exceeded in the number of all. This area also contained a good collection of minor artefacts, which might have been deposited as discarded material along with the pottery remains (Vats 1940: 228-229).

Pot Burials from Stratum I

Vats report that up to 1928-29, 11 pot burials were excavated (Figure 5), and later 124 more burials were brought to light (Vats 1940: 217). The evidence from the burials suggests that only one pot was meant for interring the bones, even though exceptions are always found, in which a single pot contained three skulls. Some of the pot burials also exhibited the mixing of bones of one or more individuals.

Vats mention that normally the skull is placed at the bottom centre of the jar, and long bones surrounding it are placed either slanting or in the horizontal position, bisecting

each other in several cases, and the remaining spaces are filled with other smaller bones wherever possible (Vats 1940: 218). The average height of placement of bone remains inside the pot is 12.7 – 25.4 cm above the bottom, and in one case, the height noticed is 44.45 cm. Instances of charred and uncharred bones mixed with pieces of charcoal, and blackened potsherds, along with other artefacts in a jar (H 245 a), are also found, which is compared with some post-cremation urns from the mounds of Harappa and Mohenjo-daro by Vats. The child burials were found with "…one ellipsoid, one oval and nine round jars…." Usually, the younger babies are placed in an embryonic position without exposing them to the adult ones. Further, evidence of the babies tied up first in embryonic position and then wrapped in a cloth is also put forth as observed from H 83 and H 165 a (Vats 1940: 219).

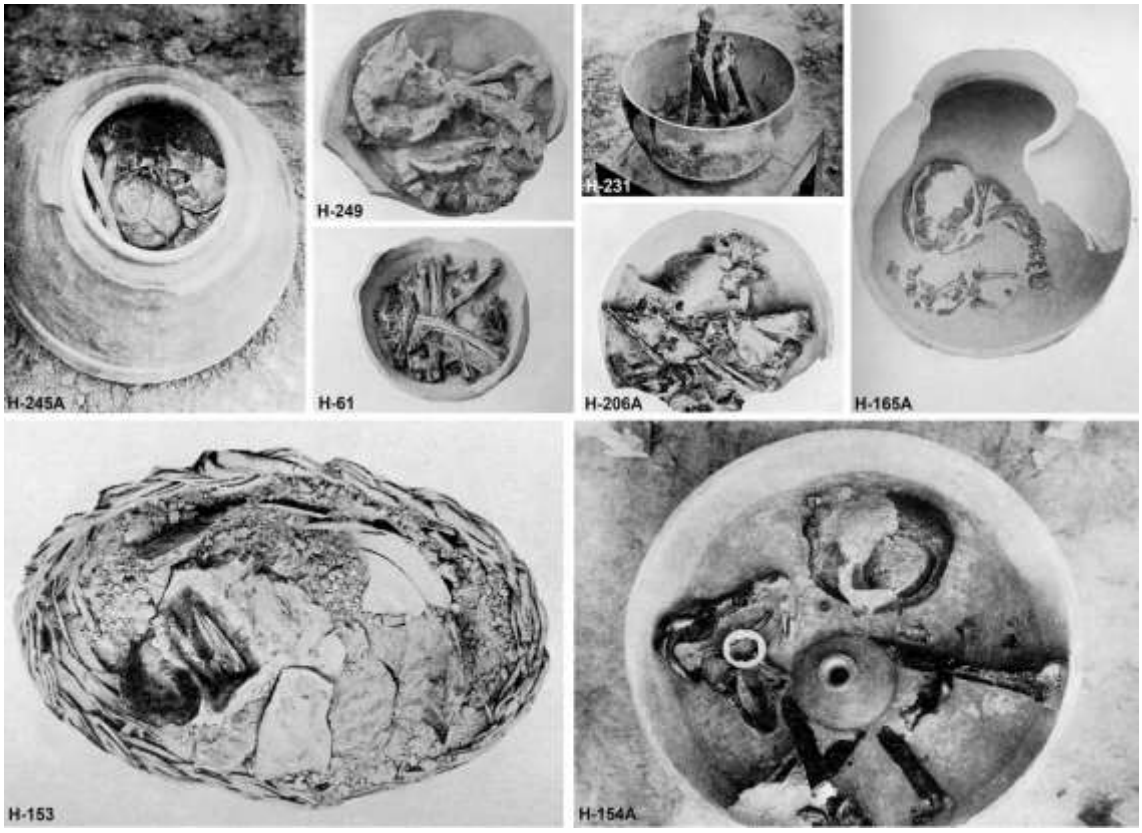

Figure 5: Nature of pot burials from Stratum I, Cemetery H, Harappa

The pot burials were found very close to the existing surface; hence, the uppermost ones were crushed heavily due to traffic. The most common shapes of the pots from the burials are round, ellipsoid and carinated with heights ranging from 25 – 60 cm (Vats 1940: 203). The round burial pots are both painted and plain; the painted ones have a flanged neck and sometimes a ring base, as in the case of ellipsoid vessels (Vats 1940: 203). The plain vessels are also decorated below the shoulder portion in roughening by fingertip / finger-groove patterns. The ellipsoid burial jars are decorated with simple painted bands; some are elaborately painted, while the pots with carination are elaborately painted (Vats 1940: 203).

The burial pots (Figure 6) were covered and closed with various utensils like inverted bowls, vases, handled lids, potsherds and bricks, and in some rare cases, further covered by a sherd (Vats 1940: 203). The burial pots usually contain fragmentary human remains placed only in the lower part, while the upper part remained empty and filled with post-burial earth (Vats 1940: 204). Vats note that these burials are devoid of certain pottery types like goblets with pointed bases, cylindrical vases, figurines, cakes, etc., which is generally associated with post-cremation urns from the mounds (Vats 1940: 204). Vats further note that the human remains interred in the burial pots are post-exposure remains from the dead bodies to birds and beasts based on the evidence of the presence of a group of bones, including two skulls, mandible and fragmentary bones in an enclosure from Mound AB (Vats 1940: 204).

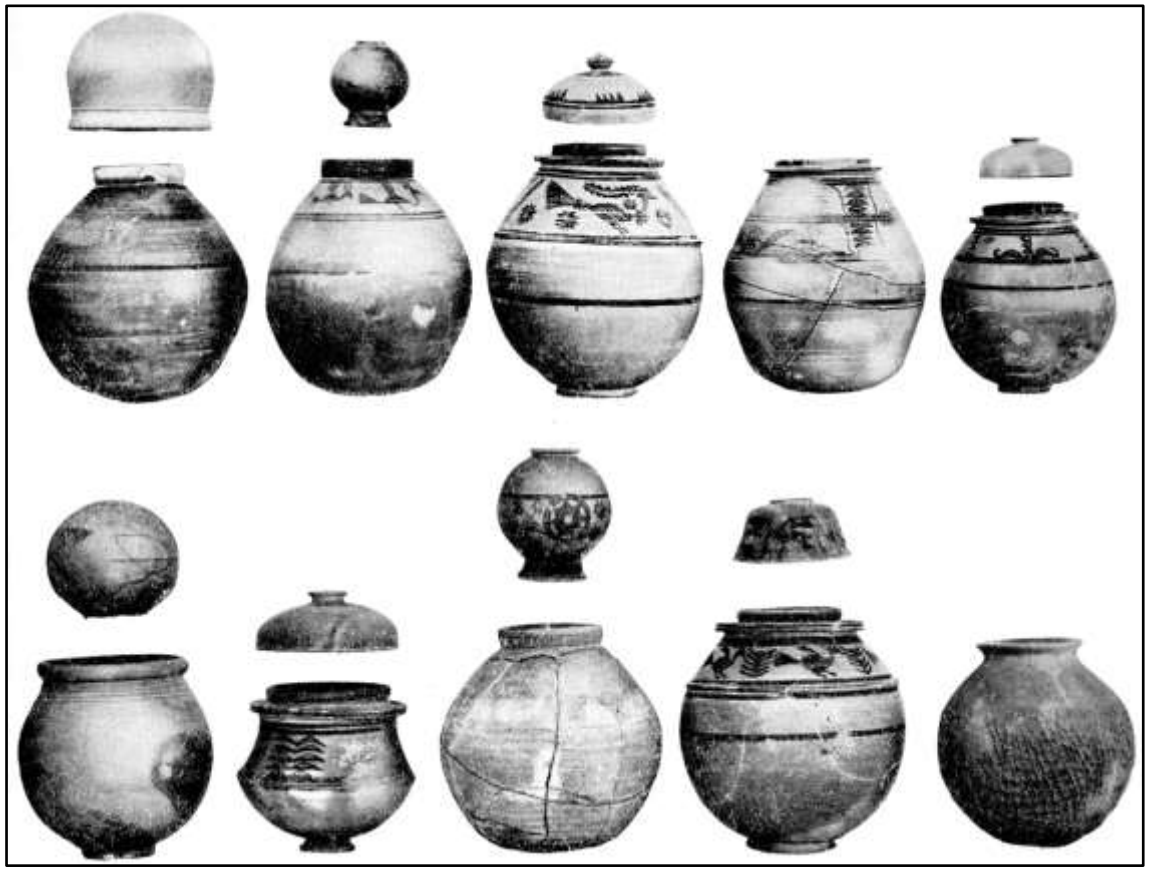

Figure 6: Pottery typology from pot-burials, Stratum I, Cemetery H, Harappa

These burial pots differ from those found in the mounds in shape and painted decorative motifs. Vats also observed that only the larger bones like skull and fragments, leg and arm bones, parts of vertebrae, pelvis, shoulder bone, and other long bones were found in the pot-burials, which also indicates that the smaller bones were scavenged and carried away by birds or beasts and hence with the leftover bones, the pot-burials were prepared (Vats 1940: 217). Several burial pots have interesting depictions of motifs, which ranged from "forepart of markhor goat" and the pottery was painted underneath with fish motifs (Vats 1940: 206); painted decoration on an

ellipsoid jar depicting three flying peacocks alternating with stars (Vats 1940: 207); mythological scene and consists of two groups of figures, "….a bull with long incurving horns on either side of a beaked human figure who has secured them by the neck with ropes held in hands and under the feet, and who also has a bow and arrow in his left hand." (Vats 1940: 207). Further, other depictions are large goats with enormous horns ornamented with eight trident-like devices (Vats 1940: 217). There are various identifications of these motifs as associated with death, the scene of hounds that of Yama, the scene of bulls with trident crest represent the 'Abode of Bliss', and the intermediary goat may be a 'pathfinder' which is deified here. The depiction of the peacock on burial pots is also noticed in Jar H 150, and Jar H 148, wherein a set of five conventionalised peacocks is depicted in the former while five flying peacocks alternating with rows of birds are shown in the latter.

The support for such interpretations has been drawn from ancient literature like Rigveda, Asvalayana Ghrihya Sutra, Aitareya Brahmana, Katyayana Srauta Sutra, and from later literature like Ramayana, Mahabharata, and Harivamsa (Vats 1940: 208). The other depictions from burial pots include that of long-horned and humped quadrupeds identified as bulls, birds and stars (Jar H 154) (Vats 1940: 210-211), rows of flying kites alternating with leafy patterns (Jar H 148) (Vats 1940: 211), peacocks along with other animals, conventionalised trees, bulls with bird like heads carrying spirit of the dead (Group 3934) (Vats 1940: 212), a flying peacock carrying spirit of dead (in therianthropic form) (Jar H 206 a) (Vats 1940: 212), bands of paintings divided into horizontal bands in two tiers and "…subdivided into a number of triangular panels decorated with rows of flying birds or fishes" (Jar H 620) (Vats 1940: 213), two tiers, upper one consisting of rows of birds (resembling arrow-heads) and double lozenges flanked by leaves; lower one with alternating groups of varieties of birds (Jar H 623) (Vats 1940: 213), pair of peacock heads alternated with rayed orbs or stars, heads of peacocks crowned with pairs of sacred horns with twin leaves (Jar H 245) (Vats 1940: 214), two tiered decoration with markhor goat, trees and bird in upper while stars-in-crescent and birds in lower (Jar H 246) (Vats 1940: 214).

The designs executed on the burial pots other than the animals and birds consisting of stars, rayed orbs, wavy lines, vegetation, flying birds, etc., are interpreted with inner meanings by Vats. Vats associated stars and rayed orbs representing heaven and sun; wavy lines and fishes to water; flying birds to carry the soul of a dead person" (Vats 1940: 216-217). The lids of the burial pots are also decorated in various motifs like bands, rough triangles, wavy lines, pipal leaf, orbed rays, etc. Personal belongings like clay balls; flat & feather-like ornament of ivory with linear decoration are also found, as in the case of Group 3934 (Vats 1940: 211). In another burial (Jar H 231 b), the personal belongings of two cog-wheel-shaped nose discs of steatite were found. From burial Jar H 149, artefacts like terracotta cakes, a pointed base goblet of Indus type, a dish, a terracotta ball, pieces of a bangle and a pestle were also found (Vats 1940: 219). The orientation of the pot-burial is mentioned only in the case of H 246, wherein within a group consisting of 9 jars, 4 lay roughly in a north–south direction.

Earth Burials from Stratum II

The further excavation in Cemetery H below the levels of pot burials brought to light a different pattern of burials in Stratum II. The burials from Stratum II brought to light remains of human burials, extended in nature, complete and fractional, and interred into graves dug into the ground (Figures 7-8). These burials also contain burial furniture like ceramics, which differs in nature and typology from pot burials. The evidence gathered from the earth burials indicates that the orientation in most cases is from northeast–southwest, while in three instances, it is east–west and, in one case, west to east (Vats 1940: 226).

In most burials, the dead are placed in an extended supine position, while in five instances, the legs are flexed inwards. The burials also generally contain grave furniture in the form of pottery (Figures 9-11), and in the case of five extended ones and four incomplete burials, no burial pottery was found. The burial pottery is finished with a red polish over the surface and decorated with black paintings, a tradition continuing from the burials of the Harappan phase, even though the fabric is different. The nature of burial pottery associated with the burials is a water pot, a small round ghara (pot), a round pot, a squat vase, a bowl, a flask, food plates or dishes, and flat covers. The order of frequency among the pottery from maximum to fewer in order is water pot, bowl with or without a flask inside, food plates or dishes with or without a stand (Vats 1940: 227). The pottery, which occurs in fewer frequencies, is the flasks, saucers and flat covers. The lesser frequency pottery also occurs separately in the burials, and if not associated with other major pottery types, they are usually found in large numbers (Vats 1940: 227). The pots that are generally larger than the water pots are termed as kalasas by Vats, and these types of vessels are found with gypsum crystals at the bottom, which is interpreted as due to the presence of water inside. The kalasa is also covered with a small flask, which is said to have been used to drink water for the deceased (Vats 1940: 227). The burials, which are rich in terms of pottery, are H 502, H 502, H 697, and H 698, and their general arrangement consist of placing near the head, the body, and the foot, with the most common preference being the first one.

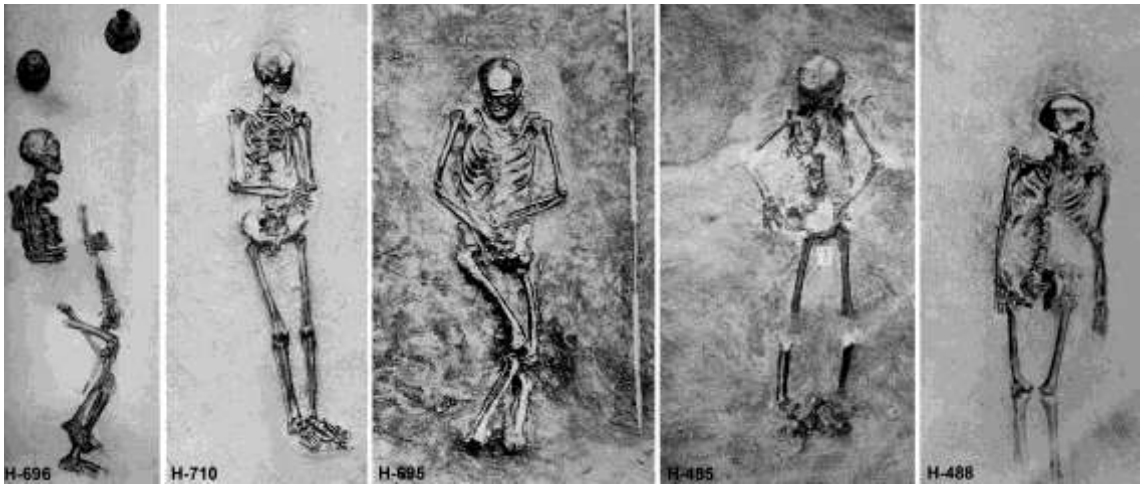

Figure 7: Nature of burials from Stratum II, Cemetery H, Harappa

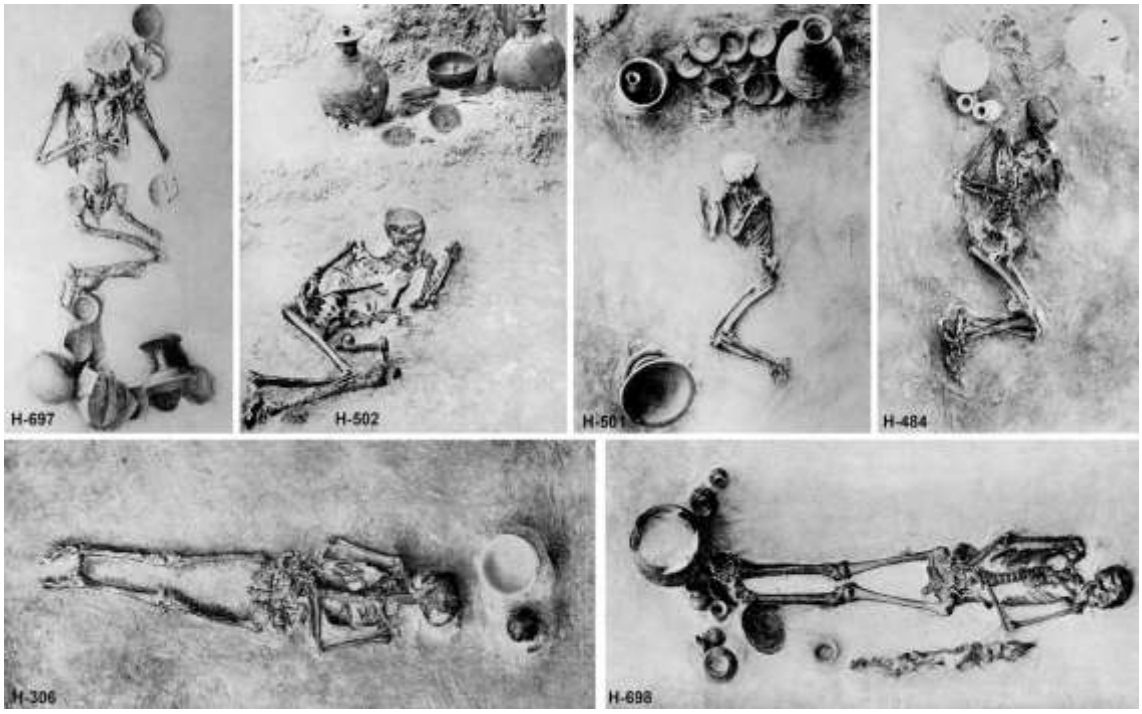

Figure 8: Nature of burials from Stratum II, Cemetery H, Harappa

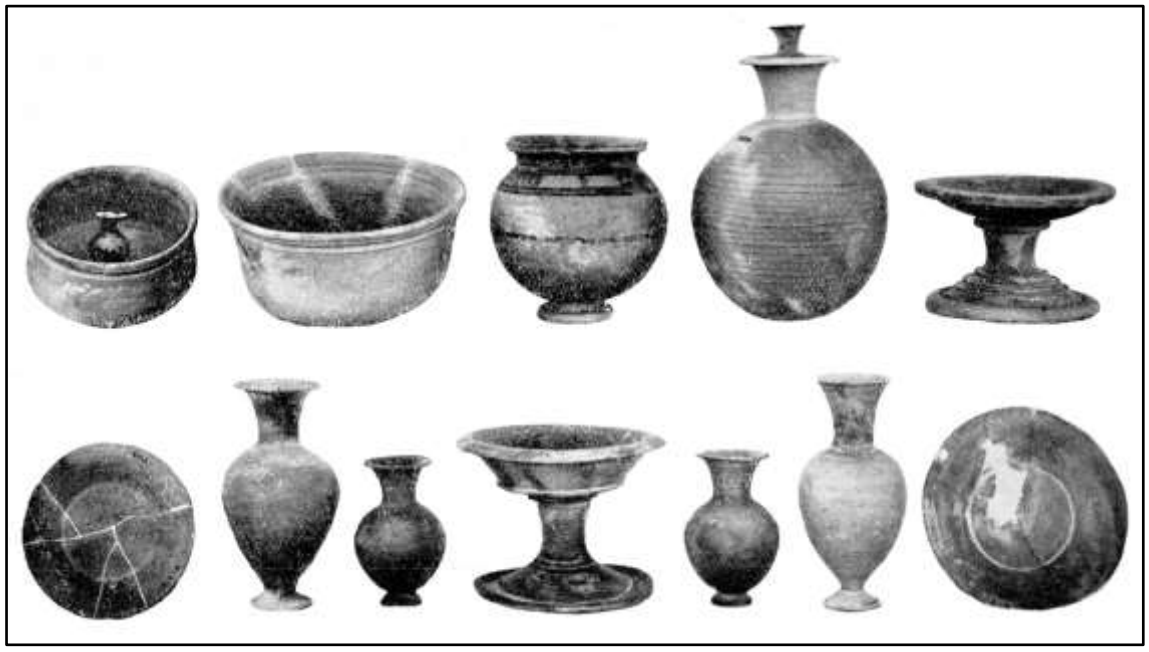

Figure 9: Pottery typology from Stratum II, Cemetery H, Harappa

The category of pottery described as offering dishes "…..are squat, strong and well made, with raised horizontal mouldings on the base" (Vats 1940: 227). The bowls are plain, while the saucers are deep and decorated with chevrons and holes at the rim. The saucers are painted on the underside with motifs like "….deer, peacocks, trees, leaves, stars, birds, fishes, hands, tassels, etc." Vats also notes that the profusion in the decoration is pointed out in the upper levels of the stratum (Vats 1940: 228).

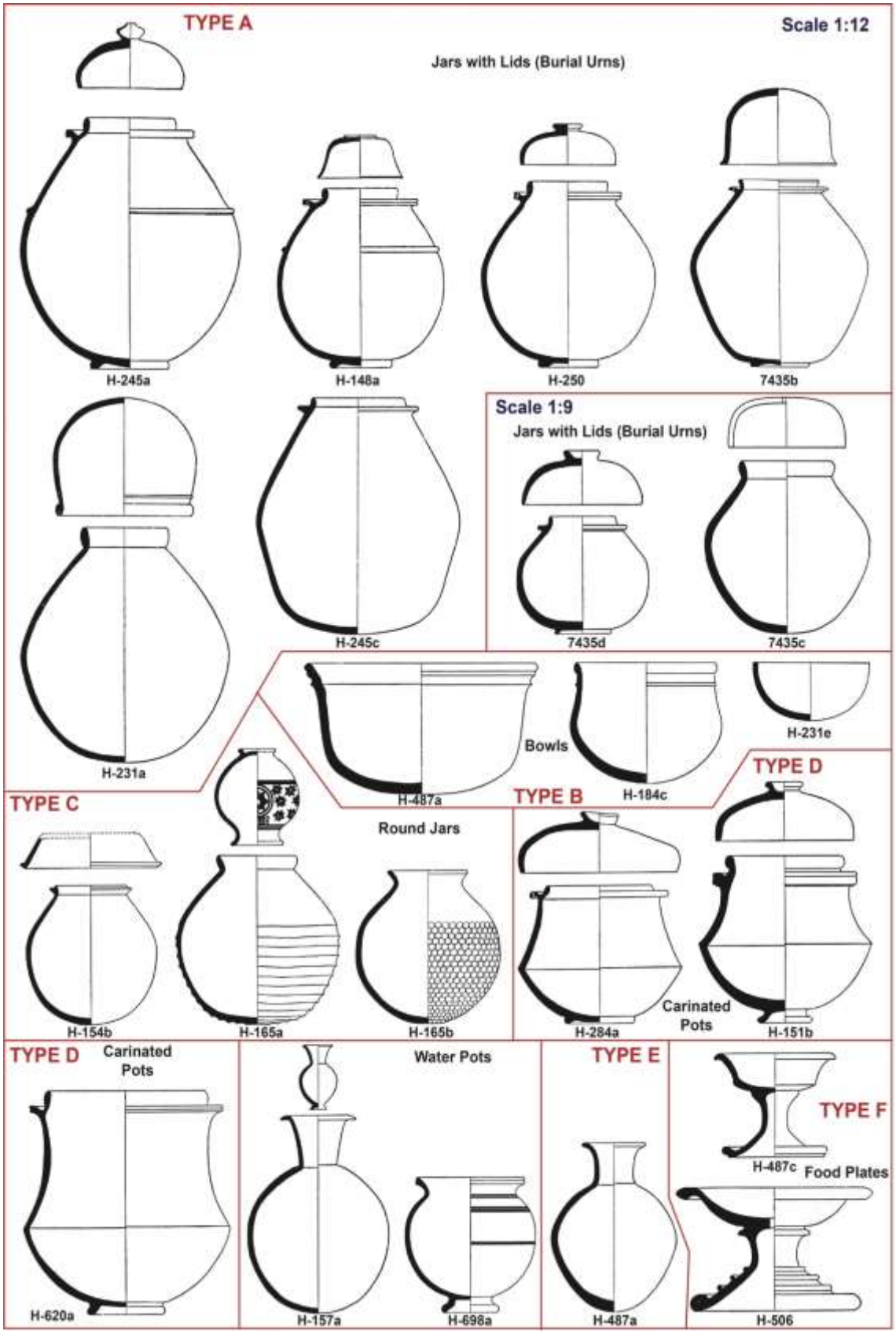

Figure 10: Pottery typology from Cemetery H, Harappa

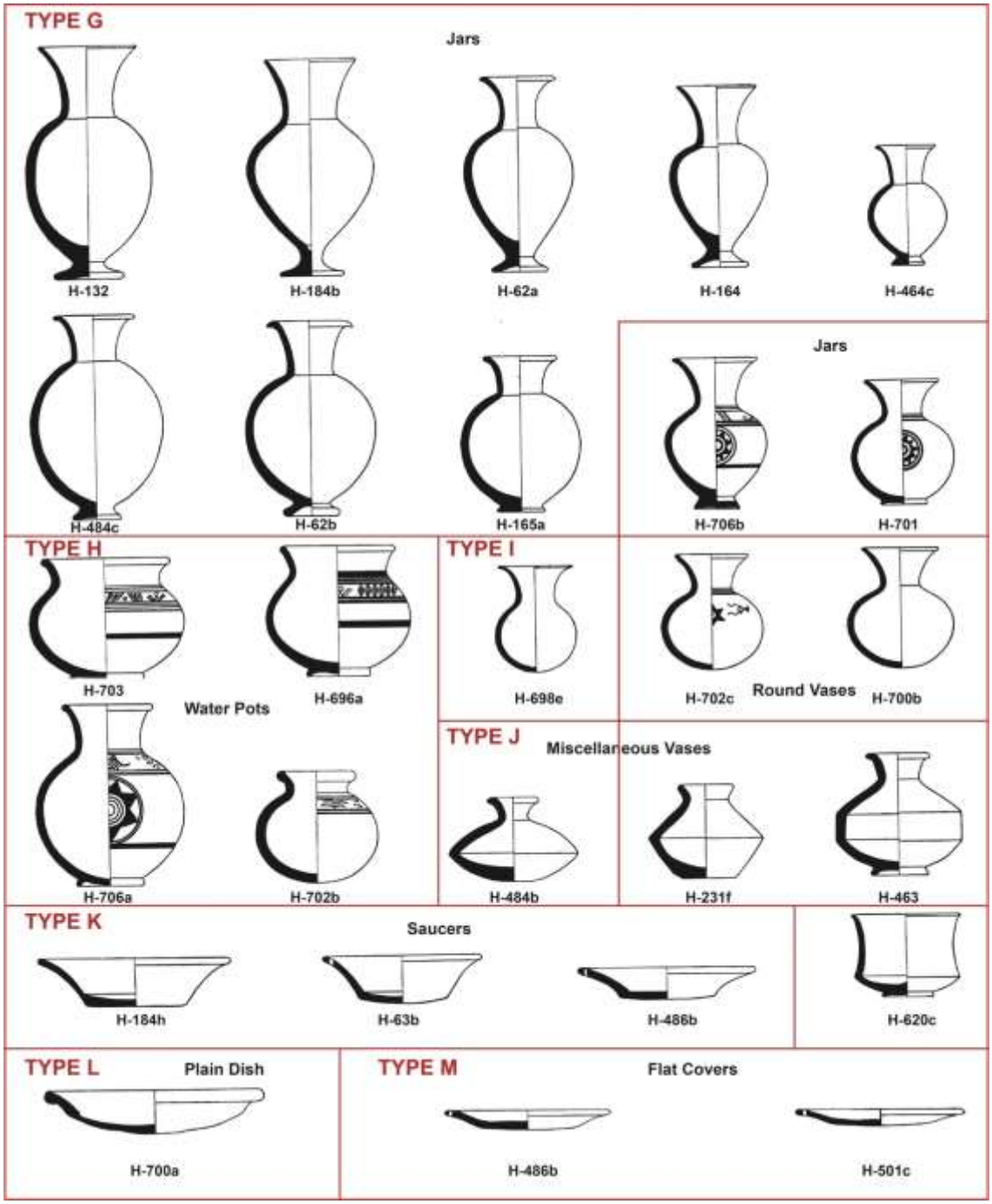

Figure 11: Pottery typology from Cemetery H, Harappa

The flasks from the burials have both well-defined bases as well as roundish bases without no projection and are decorated with "…simple designs consisting of lines and chevrons, stars in circles or crescents, and with a dark slip over the neck; in others, only the neck is painted" (Vats 1940: 228). The Harappa Archaeological Research Project (HARP) also excavated at Cemetery H, recently corresponding to Cemetery H culture at this site. Kenoyer (1998) notices a gradual transformation from Harappan to Panjab Phase (Cemetery H culture).

Based on the excavations of burials belonging to Cemetery H, Kenoyer (1998) observes that "……painted jars with high flaring rims are a new style that can be associated with highland cultures to the west, but the large jars with ledge rims and the heavy dish-on-stands have strong links with earlier Harappan styles…..a new variation of the dish-on-stand has ridges on the base and hole at the center…..adults were cremated, but children were placed inside large urns, then covered with a second pot. These large burial urns are heavily decorated with painted motifs…." Kenoyer (1998) further estimates that the ceramic tradition of Cemetery H is found "….throughout northern Pakistan, even as far north as Swat, where they mix with distinctive local traditions….numerous sites in the Ganga-Yamuna Doab provide evidence for the gradual expansion of settlements into this heavily forested region."

Figure 12: Dish-on-stand, Harappan / Bara levels, Rupnagar

Figure 13: Trunk of dish-on-stand with paring, Harappan / Bara levels, Rupnagar

Bara Phase

In the eastern domain of the Harappan region, it has been observed that the Cemetery H tradition also coincided with the Bara ceramic tradition. The Bara phase was first reported from the site of Bara (Sharma 1981) near Sanghol, located on the left bank of a seasonal river called Bukdi nala, draining into River Sutlej. Sharma (1981) identifies a 'distinct culture' dividable into three phases, the lower, middle and upper.

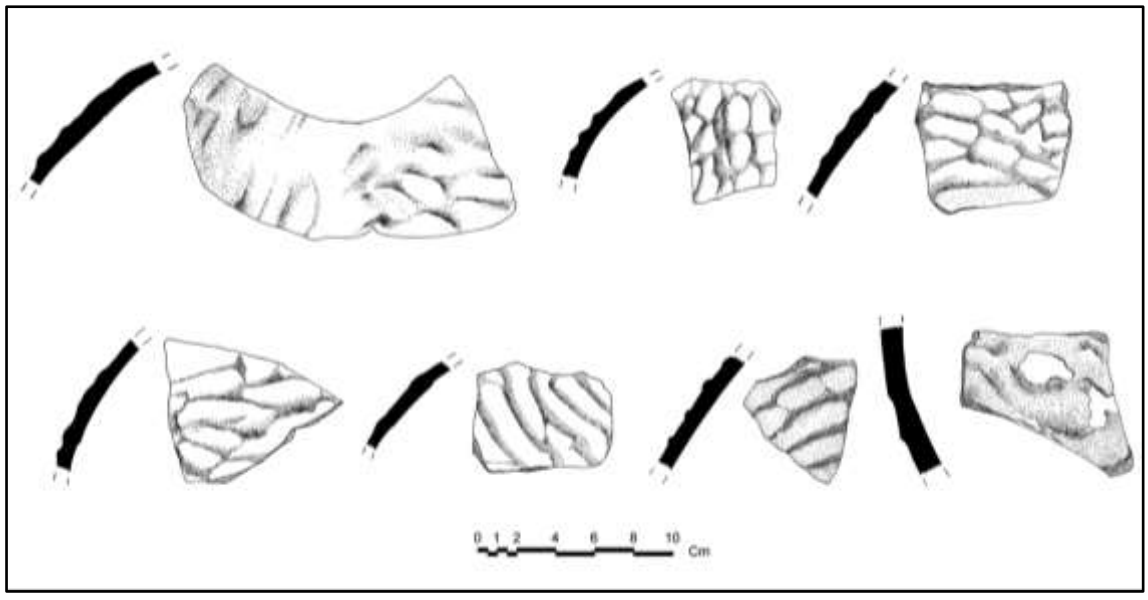

Figure 14: Rustication patterns on Bara ware, Rupnagar

Figure 15: Rustications on Bara ware, Rupnagar

The site was excavated by Y.D. Sharma (1981: 143) and the ceramics are characterised by "…made of well levigated, fine to medium-grained clay, it is all-wheel turned, with a self-slip or applied slip, a dull brown in colour. Designs are painted in dull chocolate or black and are incised with wooden points or brushes. Paring is present, but the more characteristic is a technique of drawing designs with a blunt point on a smooth surface. These designs acquire a sheen or burnished appearance when fired…Bara ware is also characterized by incisions on the shoulder and rustications on the base in a 'wet ware technique' with "…honey-combed ridges, brushed spirals or finger patchwork." The excavations at Rupnagar (Figures 12-16) and later at Chandigarh enabled the identification of the stratigraphical association of Bara ceramics with the Harappan phase. The Bara ceramics appear towards the end of the Harappan phase at both these sites, intermixed with Harappan ceramics and later dominated the entire ceramic complex.

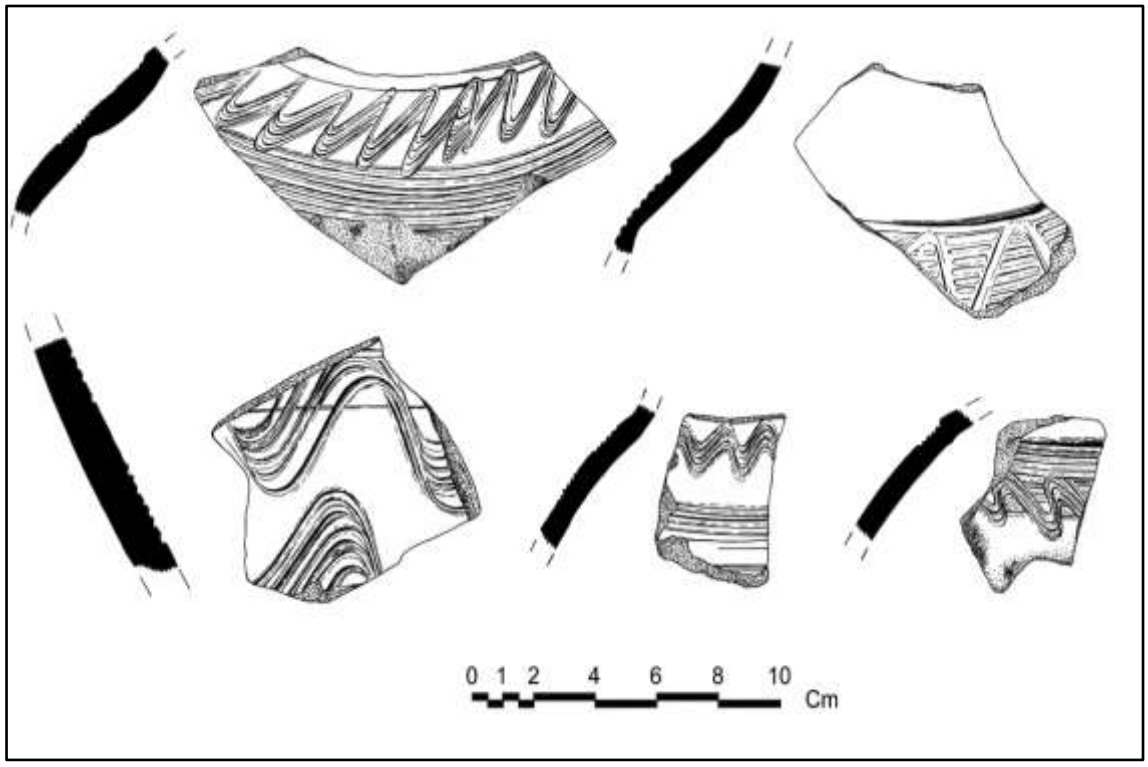

Figure 16: Low-incised decorations on Bara ware, Rupnagar

The gradual shift of Harappan settlements during the localization era saw the occupation and settlement at several new sites in the Ganga-Yamuna doab. This also coincides with the interaction and gradual contact with the Ochre Coloured Pottery (OCP) culture and its supposedly associated Copper Hoards. Excellent evidence in this regard is from the site of Sanauli, district Baghpat wherein a large late Harappan cemetery was exposed with 116 contexts. The Burial 14 from Sanauli is a symbolic burial without any skeletal remains and with18 pottery vessels – nine jars, four bowls, two dishes-on-stand, and three big jars – placed to the northwest of the burial and an antenna sword along with a copper sheath. The antenna sword is a typical Copper

Hoard repertoire indicating a clear interaction between the two cultures. Another antenna sword is also reported from the same site, discovered by the villagers and hence from a secondary context. However, the discovery of two antennae swords substantiates the contacts between the late Harappans and Copper Hoard / OCP culture.

The emergence of faience technology in a substantial manner is another hallmark of the late Harappan phase. This is due to the gradual decline in the procurement of semi-previous raw materials like agate-carnelian, lapis lazuli, and turquoise due to the breakdown in trade routes towards the end of the Harappan phase. Kenoyer (1998) also observes that the technology of faience becomes more refined during Cemetery H culture. The evidence of faience artefacts from the sites of Mitathal (Kumar et al 2012; Uesugi et al 2017), Sanauli (Prabhakar 2014) and other sites in Rajasthan and Haryana (Uesugi et al 2017) of the terminal phase of Harappan and late Harappan phase indicates the shift in technology and preference towards such items. The remarkable number of faience beads found from the Sanauli burials, which exhibit simple to complex technologies, also supports this. The faience beads at Sanauli consist of beads cut from long tubes, wound beads consisting of two to multiple colours, and an imitation of agate-carnelian eye beads. The emergence of wound beads comprised of various colours indicates complex technology, which in early Historical times could have been transformed to produce wound glass beads. This phase also saw the emergence of new technologies for drilling the agate-carnelian and other stone beads, as witnessed from a hoard of beads from Harappa. The discovery of a 'bead pot' at Harappa in 1996, datable to 1730 BCE, had beads drilled using a tubular copper drill with abrasive. This was not a dominant technology during the preceding Harappan phase, as ernestite and chert were the chief drilling material. Again, the breakdown in trade routes cut off the ernestite supply and the late Harappans expanded and improvised the tubular drilling technology in a major way.

Jhukar Phase

The late Harappan localization era in the lower Indus plains is represented by the Jhukar and Pirak phases. A separate culture based on the distinct ceramic style at Jhukar was first identified by N.G. Majumdar (1931 and 1934) and later at Lohumjadaro. The excavation at Chanhudaro (Mackay 1934) and Amri (Casal 1964) helped in placing the Jhukar ceramics in a proper stratigraphical sequence.

The excavations at Jhukar were renewed under Mughal in 1973 and 1974 to understand this phase's stratigraphical position. Mughal identifies three phases in the Jhukar phase as early, middle and late based on the ceramics, structures and floor levels. Kenoyer (1998) observes that "...Jhukar and subsequent Pirak phases represent …gradual change during which a new group of elites emerge with different ceramic styles once again employing circular seals with geometric designs." The emergence of the Jhukar phase is identified towards the end of the Harappan phase and datable to c. 2000-1800 BCE, followed by the Pirak phase, datable from c. 1800-800 BCE.

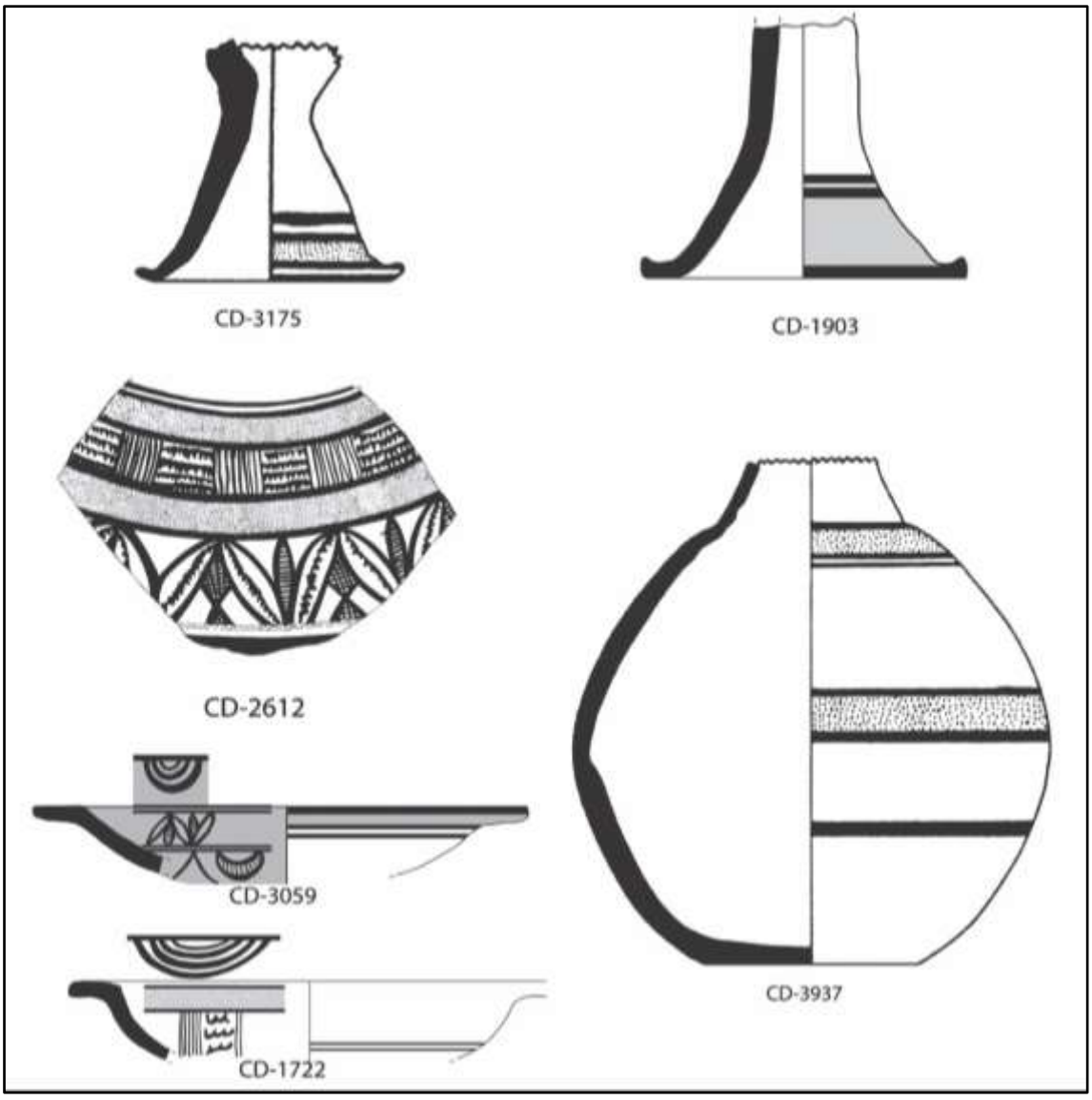

Figure 17: Jhukar ware types from Chanhudaro (Courtesy H. Miller)

The Jhukar phase continues after the end of the Harappan phase at sites like Mohenjo-daro, Chanhudaro (Figure 17), Jhukar and Amri and has links to the Pirak phase found mostly in Kachi plain. Kenoyer (1998) argues for a dominant localized culture of the Jhukar phase due to the continuing occupation of major sites in the southern Indus Plain. Mughal (1990) observes that while the Harappan ceramic types continue in all the phases, new types later identified as Jhukar ceramics appear in the middle and late levels. The Jhukar style ceramics are also reported to be found in Dholavira (Stage VI) (Figure 18), Lothal (A) and Rangpur (IIA). While Kenoyer (1998) notices continuity in major technological features in pottery and other objects, he also observes major differences in the pottery designs, the absence of writing and Harappan-style animals on seals and the increased use of circular seals with geometric designs. The chert cubical weights were discontinued, as well as stylized female figurines, the script only found on pottery.

Figure 18: Jhukar ware from Dholavira

The evidence from Pirak on the Kachi plains indicates "…strong cultural connections to other sites on the Kachi plain and settlements in the highlands to the west" (Kenoyer 1998). The emergence of compartmented square-circular seals in terracotta and bronze with geometrical designs is completely new in form and different from the preceding Harappan phase in this region. The circular seals are similar to Jhukar style ones, which also have continuity from Period V at Mehrgarh (c. 3300-2800 BCE).

Rangpur Phase (entire region of Kutch/Kachchh, Saurashtra and mainland Gujarat)

The evidence for a gradual transformation from Harappan to the late Harappan phase is visible from the excavation of sites like Dholavira, Lothal, Surkotada, and Rangpur. This phase also saw a remarkable increase in settlements compared to the preceding

Harappan phase. Stage VI at Dholavira, Period IB at Surkotada, Lothal B and Rangpur IIA & IIC exhibit a decrease in typical Harappan ceramics and the emergence of new ceramic types like white painted Black-and-Red ware having parallels with Ahar ceramics in association with coarse red ware (Figure 19). The sites of Lothal and Rangpur indicate the emergence of lustrous redware during this phase. In addition, certain ceramic styles, such as stud-handled bowls, are distinct to the Saurashtra region and appear as early as Lothal A. These ceramics proliferate during later levels, as indicated at Lothal B and Rangpur IIA and IIB. This phase is also characterised by rubble stone structures, as evidenced from Dholavira, Surkotada, Bagasra, and others from the Kachchh region.

Figure 19: Black and red ware of Stage VI (late Harappan), Dholavira

The best evidence for the transformation during Stages VI and VII from Dholavira, during which the occupation area of this settlement is reduced to almost one-fifth, with only portions of the castle, bailey and southern parts of the middle town. The urban fabric of the settlement was transformed along with changes in seal types and ceramic styles. The seals are now devoid of animal motifs; only the script is noticed on rectangular-shaped ones. The bead industry, which was dominant at Dholavira (Figure 20) during the preceding Harappan phase, continues in Stage VI also.

The continuing use of ernestite drills during this stage in large numbers indicates the regional domination in using such drills. Of 1470 ernestite drills from Dholavira, 243 are from Stage VI, clearly showing the continuing domination of the bead industry using ernestite here. The structural activities continue at Dholavira during Stage VI

with the reuse of stones and architectural members from the Harappan phase. Remarkably, two bead-working areas, one each from near the west gate of the Castle and west of the north gate of the Bailey, are worth mentioning. The bead working area from Bailey still has the bead polishers surrounded by stones arranged circularly. The bead working area from Castle shows evidence of the reuse of stone architectural members, most probably from the gateways and used as an anvil.

Figure 20: (a) Bead workshop area, Bailey; (b) Bead polisher and working floor in situ, Bailey; (c) Bead workshop, Castle

Figure 21: Structure of Stage VII, Dholavira

Figure 22: Structure of Stage VII, Dholavira

Stage VII at Dholavira is a further devolved culture characterised by circular structures (Figures 21-22), the continuity of which can be noticed in the present vernacular architecture in the entire Kachchh.

The Evidence from Sanauli

Sanauli or Sadiqpur Sinouli (290 8′ 18″ N; 770 13′ 1″ E) is located 7 km east of River Yamuna in the Baghpat district of Uttar Pradesh. The remarkable findings of late Harappan ceramic remain, agate-carnelian beads, and antennae swords, along with skeletal remains, were discovered in 2004 during agricultural operation by the villagers, which prompted the ASI to carry out extensive excavations at the site during 2005-16 (Sharma et al 2004, 2006, 2013); Prabhakar 2013, 2014a, 2014b, 2015a) and later 2017-19 (Manjul et al 2018) (Figure 23). The observations of Sharma et al (2004), even before the excavations, explicitly indicate the late Harappan affiliation of the ceramic assemblage. Sharma et al (2004) observe, "....the total pottery assemblage so far recovered from Sanauli is that of late Harappan style, showing complete absence of classical Harappan types....the ceramic shapes...share striking correspondence with the Bara pottery types which are widely known and spread all over Punjab, parts of Haryana and the upper Ganga-Yamuna doab...based on ceramic traditions, the site may be dated somewhere around the beginning of the second millennium BC...".

The subsequent excavations brought to light several facets of the largest cemetery complex of the late Harappan period (Sharma et al 2007 and Manjul et al 2018). The detailed analysis of the findings from the burials by the author (Prabhakar 2012, 2012,

2014a, 2014b, 2015a) enables a better understanding of the cemetery complex along with the social organisation of contemporary society. The prominent findings of the burials (Prabhakar 2012, 2014a) are repeated here for better understanding.

Orientation and Typology of the Burials

The excavations during 2005-06 have reported the remains of 116 burial remains (Sharma et al 2007) even though closer investigations indicate several of these contexts are not actual burials and only secondary discarded remains (Prabhakar 2012). The burials are predominantly oriented in a northwest–southeast direction with variations of 30 – 80 degrees to the left of true north. The Harappan burial typology also clearly indicates north–south orientation, with variations towards the left or right of true north. The head portion is pointed towards the northwest, and the body extends towards the southeast. The burial furniture, mostly funerary ceramics, is placed near the head portion. However, a few other ceramics, in particular the dish-on-stand, was found to be placed below the hip portion at the centre of the burial pit. The analysis of the placement of burial goods and body remains indicates that in only 71 cases, a clear orientation was discernible out of the 116 reported contexts. The evidence for orientation is observed in these 71 cases based on the availability of skeletal remains, consisting of at least leg bones kept in situ. In case the long bones are unavailable, clues are taken from the arrangement of burial pottery kept in a noticeable orientation.

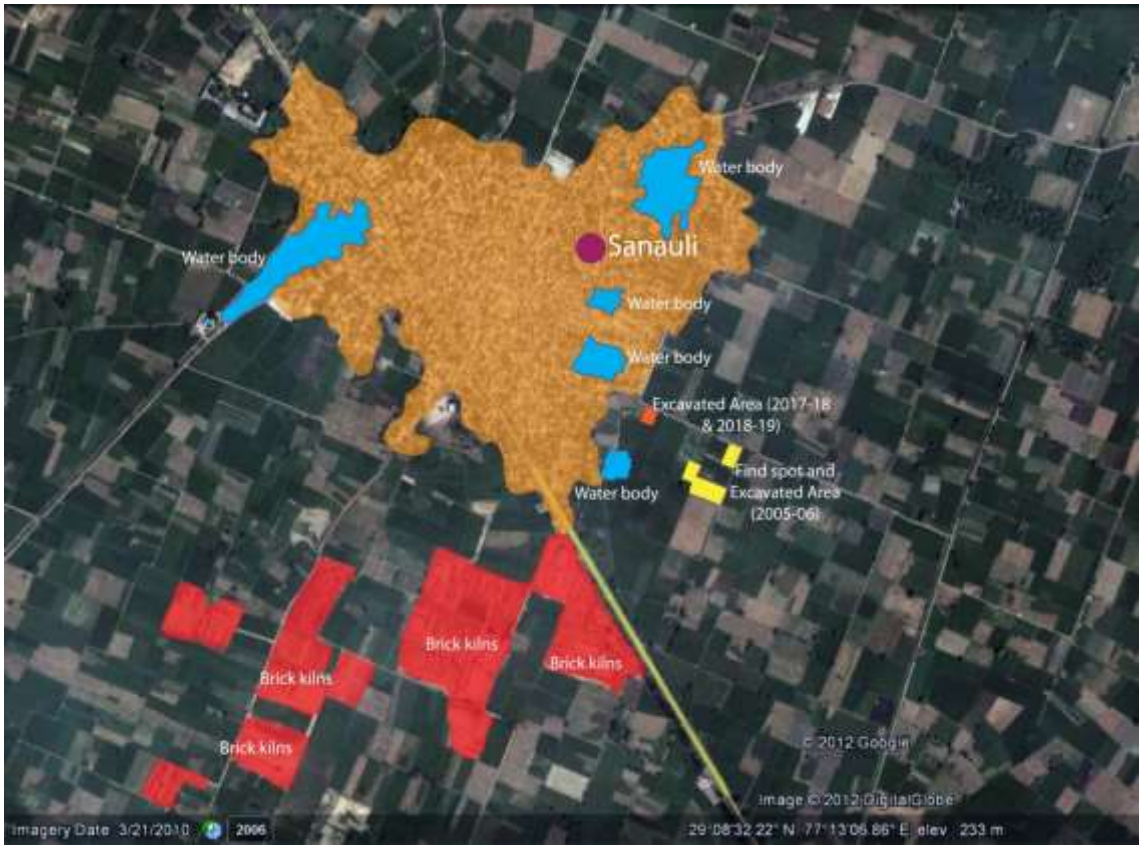

Figure 23: Location of the excavations carried out during the 2005-06 and 2017-19 seasons at Sanauli

The analysis of the orientation of various burials indicates that 19 burials are oriented between 550 and 600 to the left of true north, 16 burials are oriented between 500 and 550 to the left of true north, 11 between 450 and 500 to the left of true north and 9 between 600 and 650 to the left of true north. Thus, it is evident that the most preferred direction is between 45 and 65 to the left of true north, while some stray ones are noticed near E – W orientation (Figure 24). Burial 106 is of E – W orientation, a symbolic burial in the form of a human torso decorated and outlined with steatite flat discs upon which a copper sheath was placed diagonally. The other burials which are nearly E – W orientation (4 burials in the histogram, between 75 and 85 degrees to the left of true north) are Burials 73 (77.350), 25 (75.150), 16 (80.660) and 18 (760). The arrangement of pottery is generally found near the head towards the north, along the body, and beneath it.

Figure 24: Typology of burials excavated during 2005-06, Sanauli

The renewed excavations during 2017-19 brought to light the remains of eight burials (Manjul et al 2018), including three coffin burials. The subsequent excavation in 2019

brought to light two coffin burials, which seem to be part of the earlier discovered complex (personal observation). The coffin burials consist of probably wooden-legged coffins. One of the most elaborate wooden coffins (Burial 6) was found completely wrapped with copper sheets nailed onto the wooden base (Manjul et al 2018).

Figure 25: Details of Burial 14, Sanauli

The legs of the coffin were also covered with copper sheets. The lid of this coffin was elaborately decorated with a series of eight copper anthropomorphic figures, most probably representing facial features. The excavator has yet to ascertain the exact meaning of these decorations on the lid. The remarkable finding from the coffin burials is the internment of burial goods, indicating the social status of the individuals buried in the complex. This burial complex is located at a distance of 120 m northwest of the earlier excavated complex. It consists of coffin burials, burial goods in the form of chariots, antennae swords (Figure 25), copper vessels, and others, clearly indicating the earmarking of a separate area for the internment of a group of individuals probably belonging to a family of high social status. However, the ceramic traditions from these burials have a close affinity or are similar to the other burials from the entire Sanauli complex, indicating their contemporaneity.

Figure 26: Parts of chariot from the 2005-06 excavation, Sanauli

Further, on close observation and analysis of the findings from the 2005-06 excavation, remains of what probably parts of a chariot could be identified (Figure 26). The remains have not been catalogued previously as part of any burial context. The remains were also found in a highly disturbed context due to the proximity to the surface; hence, its full configuration could not be understood earlier. However, one such remain been published by Sharma et al (2006).

The remains consist of four channelled copper tubes bound by a string of faience beads of long cylindrical types along with a copper strip. This remains was also found in association with another long copper channel. These remains could be interpreted as parts of a chariot, the former consisting of part of the vertical column as observed in the Burial 6 of the 2017-18 excavations at Sanauli. The long copper channel forms part of the horizontal column connecting the scabbard with the yoke.

Another interesting feature, albeit again without the association of any burial context, is the remains of triangular faience inlays (Figure 27), similar to the copper triangular inlays found affixed on the solid wooden wheels of the chariot from Burial 6. These faience inlays have also been found with the dorsal view exposed, the ventral probably originally affixed on a wooden wheel. This interesting re-interpretation of the remains from the 2005-06 excavation indicates the chariot's interment and burials. The identification of the portions of the vertical column from 2005-06 could be possible from the well-preserved remains of similar remains from the 2017-18 excavation. Thus, while the five coffin burials of the renewed excavations at Sanauli indicate a separate area in the cemetery complex, the similarity of the interment of chariots in both areas indicates the equal social status of the individuals.

Figure 27: Triangular faience inlays, Sanauli

The burial typology from Cemetery R 37, Harappa indicates the orientation of north to south, with the head varying between northwest to the northeast (Wheeler 1947) and the presence of wooden coffin burials along with lids (Wheeler 1947, Dales & Kenoyer 1988). The analysis of wood remains from the 1946 excavations from Cemetery R 37

indicated that the walls were made of rosewood (Dalbergia sp. especially latifolia), while the lid of the coffin was made of a type of cedar (Cedrus sp. particularly, Cedrus deodara) (Chowdhury & Ghosh 1947). Further, mud-brick coffins are also found in Harappa (Wheeler 1947), Lothal (Rao 1979), and Kalibangan (Thapar 1975). Thus, the tradition of interring the corporeal remains inside a coffin, either a wooden one with a wooden lid or a mud-brick walled chamber, can be traced to the Harappan period. The typology of burials from other sites of the eastern region like Farmana (Shinde et al 2011), Rakhigarhi (Nath et al 2015) and Rupnagar (IAR 1953-54 & IAR 1954-55) also clearly exhibit north–south orientation (the placement of head varying between northwest to northeast), placement of burial pottery towards the northern portion, with spilling over to other parts of the pit depending upon the social status of the individuals. In particular, the excavation at Rupnagar highlighted the differential placement levels of burial pottery and human remains, clearly indicating ritualistic processes. The same can be deduced from other Harappan burials from Harappa, Kalibangan, and Farmana. At Sanauli, too, while the orientation of the burials is from northwest-southeast (Prabhakar 2012), the placement of burial pottery, and its arrangement at a different level than that of the corporeal remains, all indicate the continuation from the Harappan period. The typology of the Sanauli burials, both with and without coffins, clearly exhibits a continuation of Harappan tradition in terms of orientation, placing of burials goods, and the tradition of coffin burials. The analysis of probable wood remains from the 2017-19 excavation may help understand the nature of the wood used to prepare coffins.

Context of the Burials

The burial contexts from 2005-06 have been understood better and imply that most (62 burials) are in a primary condition (Figure 28), even though disturbances are also observed due to the later period interventions (Prabhakar 2012). The burial interments were also classified into five broad categories, viz. primary, primary/disturbed, symbolic, disturbed and those in which skeletons were not available (Prabhakar 2012). The primary/disturbed burials indicate that later-period interments unknowingly disturbed the earlier-period burials while digging the pits for their burials. This also indicates a long burial ground continuation, as observed by Sharma et al (2006). The renewed excavation during 2017-19 also records primary, secondary and symbolic burials (Manjul et al 2018), and most of the primary burials belong to the coffin burial types. The 2005-06 findings indicate that the coffin burials were also present in the form of Burial 116, wherein a mud brick coffin is found (Prabhakar 2012).

The excavations carried out did not report any wooden coffin burial. However, looking into the contexts of the renewed excavations arrangements of pottery and copper vessels along with the burial interments, the best possible candidate for a coffin burial is Burial 95. This burial was also elaborately furnished in terms of burial interments, which included two jars, three bowls and a deep copper bowl below the central part of the human interment. Further, this burial was embellished with four gold bangles, two on each hand, nine long agate-carnelian beads and a necklace

around the neck, indicating it as an important burial in exotic jewellery. The arrangement of this copper bowl can be comparable with the Burial 6 of the 2017-18 excavation, wherein a pedestalled bowl (published as a chalice) is placed below the central portion of the coffin. As the excavated remains of Burial 95 from the 2005-06 excavation have been filled in and removed from the original context, it may not be feasible to confirm whether it contained a wooden coffin precisely. However, the comparable evidence, burial furniture arrangements, and their position indicate such a possibility.

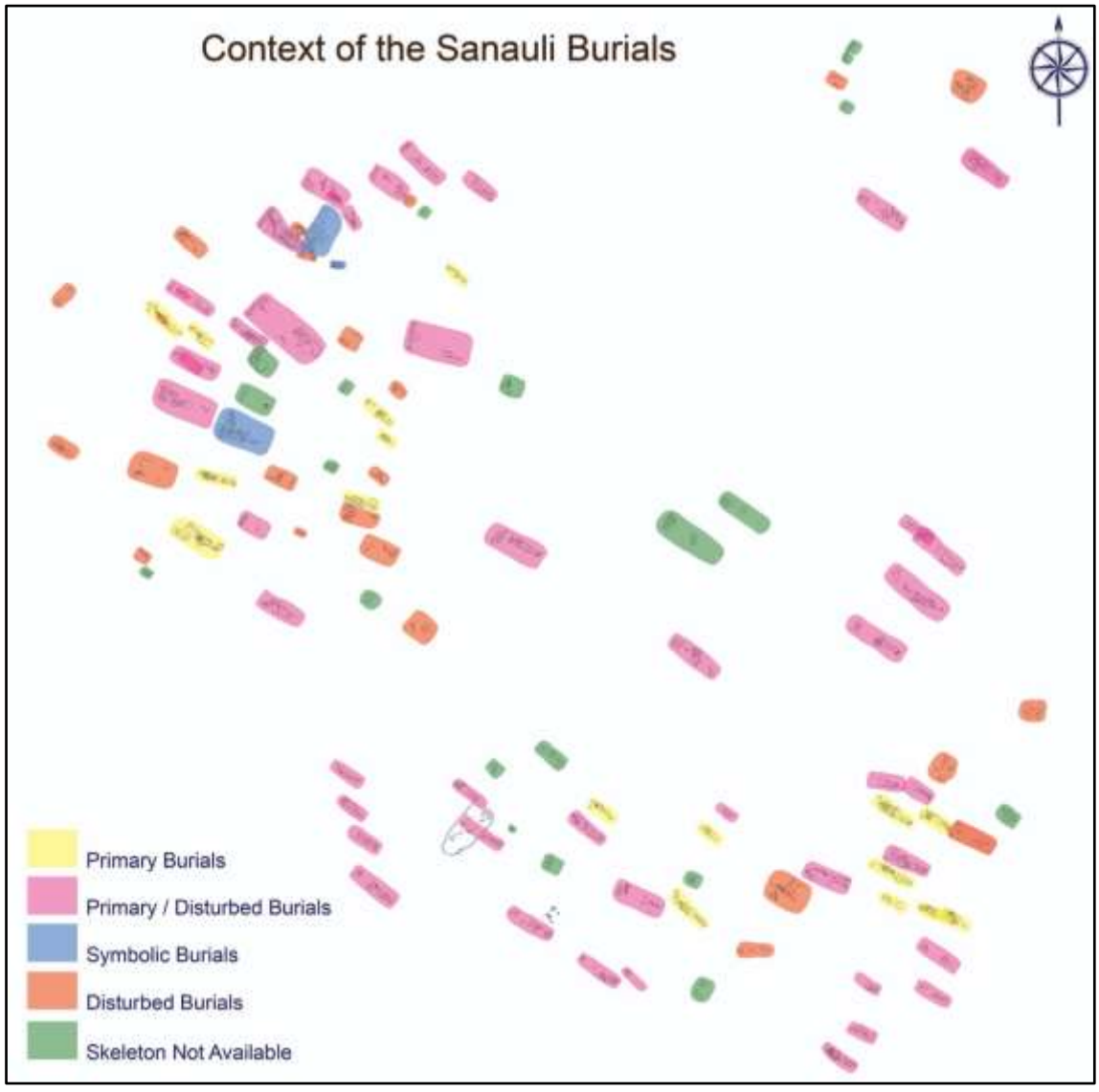

Figure 28: Context of the burials found from the 2005-06 excavation at Sanauli

Ceramic Assemblage from the Sanauli Burials

The author did a detailed analysis of the ceramic remains from the Sanauli cemetery (Prabhakar 2013). The excavations at Sanauli during 2005-06 and 2017-19 have indicated the positioning of the ceramic interments in the burial pits. While the

orientation of the burials is from northwest-southeast, invariably, the ceramics were placed towards the northwestern end, beyond the head portion of the person interred and at a lower level. Elaborate burials also indicated the positioning of the ceramics at the northern end. They spilled to other parts of the burial pit, for example, below the deceased body, at a different level. The differential levels of arrangement of burial pottery and the deceased body indicates their deliberate placement, which may be possible due to the performance of rituals and placement of food offerings in the vessels (Prabhakar 2014). The coffin burials also indicate similar treatment of placing burial goods at a lower level per the individual interred's differential social status.

The typology of the burial assemblage from Sanauli indicates (Prabhakar 2013) the presence of dishes-on-stand, bowls-on-stand, bowls, deep bowls, basins, tall jars (with contiguous and non-contiguous bases), globular jars with lids, small pots (plain and decorated) (Figures 29-30). The number of burial pottery also varied, indicating social stratification. The types and shapes of these vessels also indicate the different purposes of holding food items, both liquids, semi-solid and other food items. Even though the food items have not been found in the burials, scrutiny of the traditions and ancient literature indicates such a possibility (Prabhakar 2014). The ceramics from Sanauli burials with the late Harappan types have already been identified by Sharma et al (2004, 2006).

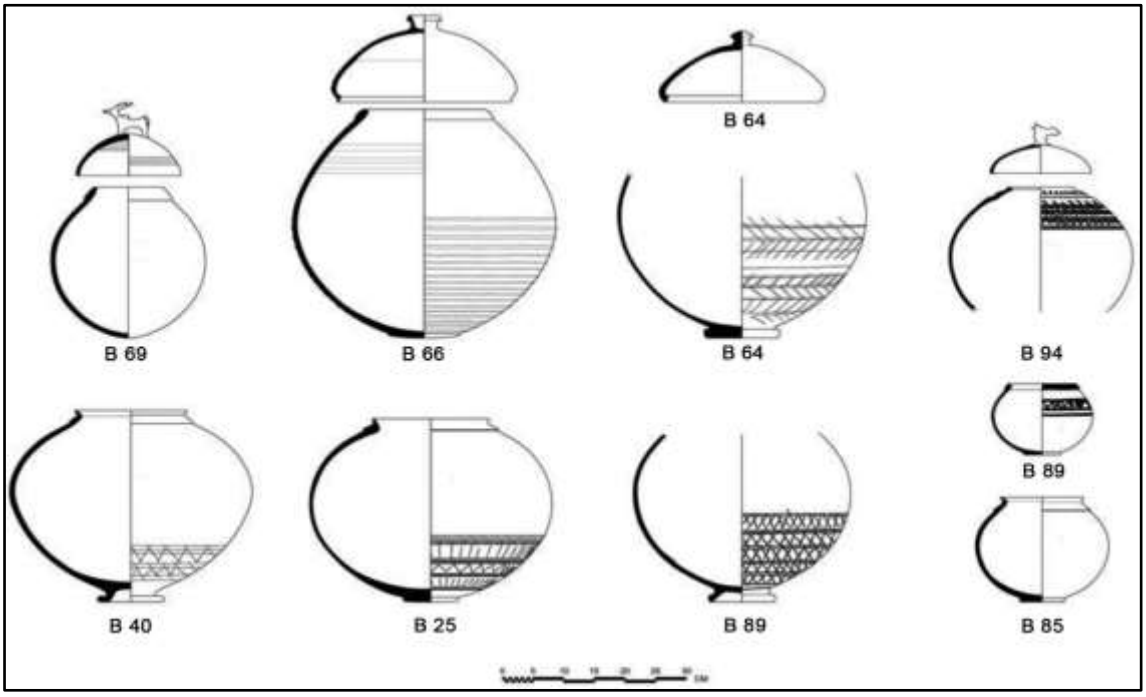

Figure 29: Pots of different forms and with low-incised decorations similar to Bara types, Sanauli

Further, parallels of Sanauli ceramics have also been observed in the types from Cemetery H at Harappa (Sharma et al 2006; Prabhakar 2013). In particular, the jar and large urns with lids can be comparable with the similar types from Sanauli. However,

at Sanauli, the large globular jars were also found as a burial good and contained no skeletal remains. While the forms and shapes of Sanauli ceramics are comparable with Cemetery H types on the one hand, it is also similar to the Bara types, particularly the jars of globular types, with low incised decorations on the shoulder as well as the lower body portion. The ceramic types from Sanauli can be comparable with those of high-necked jars from Mitathal, Bedwa (Uesugi and Dangi 2017), bowls-on-stand from Bedwa, globular jars with low incised decorations from Mitathal, Bedwa (Uesugi and Dangi 2017), Bara (Sharma 1981).

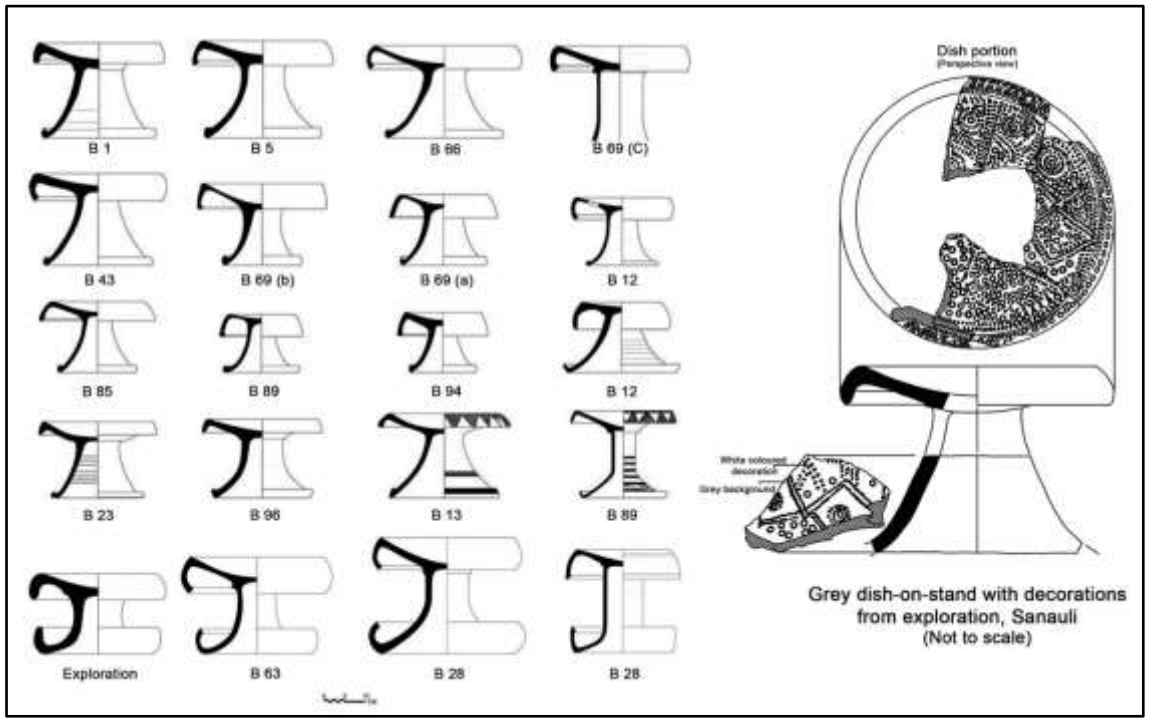

Figure 30: Variants of dishes-on-stand from exploration and excavation, Sanauli

A wide variety of dishes-on-stand from Sanauli has been discovered from the burials. The interesting feature is the placement of these types below the hip portion of the interred individual. In Burial 13, the pelvic part of the skeletal remains is found directly over a dish-on-stand. All the dishes-on-stand from the burials belong to the drooping rim variety, a typical pottery form which emerged during the late Harappan period. In particular, several variants of these types could be observed from the sites like Bara (Sharma 1981), Bhagwanpura, Hulas (Dikshit 1982), Mitathal, and Mandi (Sharma et al 2004). Another interesting feature of the dishes-on-stand from Sanauli burials is the presence of a few examples, with the base matching the drooping rim, with an identical projection upwards. In other words, while the rim of the dish droops prominently, the rim of the base projects upwards. This variety was noticed in Burials 28, 63, and another example from the exploration. The remaining dishes-on-stand have drooping rims only, while the base consists of a slight upwards projection, as noticed from typical examples from the Harappan period. The stand portion of the dish-on-stand varieties from Sanauli is also squat and not of the long varieties usually found

during the Harappan period. While a majority trunk or stem portion has a broader base than at the top, a few varieties (Burials 28, 63 and one example from exploration, see Figure 30) have the step in the form of a cylindrical tube. The drooping rim of the dish-on-stand from Burials 13 and 89 has a frieze of triangles with hatchings inside. While the loop of triangles from Burial 12 consists of inverted triangles, the decoration from Burial 89 consists of upright triangles. Another example of a broken grey dish-on-stand from the initial probing before the excavation had elaborate decorations on its surface filled with white-coloured steatite/faience paste. The decorations were chiefly circular motifs engraved over the ceramic surface and filled with white-coloured steatite/faience paste. The decorations are found on the dish and the stem portion of the dish-on-stand. A similar decoration consisting of circular motifs could also be noticed over a grey lota-shaped jar from Burial 89.

Ornament Varieties from the Sanauli Burials

A variety of ornaments is found interred in the Sanauli burials (Figures 31-35). The ornament varieties consist of bangles of copper and gold; necklaces of composite gold and agate-carnelian; necklaces of agate-carnelian, faience and other solitary examples of several beads without contextual evidence. These ornaments exhibit excellent evidence for the continuity of the forms and shapes that originated during the Harappan period or earlier. In particular, the agate-carnelian beads depict a copy of the decorated carnelian beads, hallmark Harappan eye beads. The bangles of copper and gold, resembling shell bangles with the typical inward projection, also related to the fertility symbol and womb, are an example of continuity. This particular shape is also found in shell inlays and, in one rare instance, a well from Mohenjo-daro. Further, the typical raw material for the Sanauli ornaments is the faience, the technology of which emerged during the Harappan period and diversified during the late Harappan period. A detailed look at these three essential ornament varieties will help better understand continuity.

Agate-carnelian beads of the decorated carnelian and long barrel cylindrical bead types: Among the hallmark and exotic ornament items of the Harappan times, decorated carnelian beads (also called etched/bleached) and long barrel cylindrical beads (long bicone or long cylindrical) are the most important ones (Prabhakar 2018). These exotic items are among the things of international maritime trade as attested from their finds from sites in ancient Mesopotamia and regions of Magan (Mackay 1925, 1933, 1937 & 1943; Possehl 1996; Kenoyer 1997; Reade 2001; De Waele and Haerinck 2006; Kenoyer & Frenez 2018). The decorated carnelian beads have three broad types and range in age from the third millennium BCE to the early Historic period from Indian sites (Prabhakar 2018). However, the third millennium BCE types are typical in their shapes and forms and are attributed to the Harappan civilization. The white-coloured decorations on the red-coloured agate-carnelian beads consist of geometrical patterns like single, double, and triple eyes; multiple double and triple eyes; and other complex patterns. The technique of application of white-coloured decorations is also extensively studied by Bellasis (1857), Mackay (1933 & 1943), Beck

(1933), and Kenoyer (2006), which also indicates the complexity of the process and mastered by the Harappans. The complexity and rarity of such items of ornaments from the Harappan sites and their presence in Mesopotamia and Magan indicates their exotic nature and is attributed as an elite item. This is further substantiated by the manufacture of imitated decorated carnelian beads from sites like Harappa (Beck 1940), Mohenjo-daro (1931), Karanpura (Prabhakar & Majid 2014), Farmana (Konasukawa et al 2011), catering to those who could not have afforded the exotic original ones. Attempts have also been made to assign relative ranking or ranking of the ornaments of the Harappan period based on the type of raw materials, difficulties and expertise involved in manufacturing processes, which places ornaments of stone, faience, gold and silver in the highest category (Kenoyer 1991).

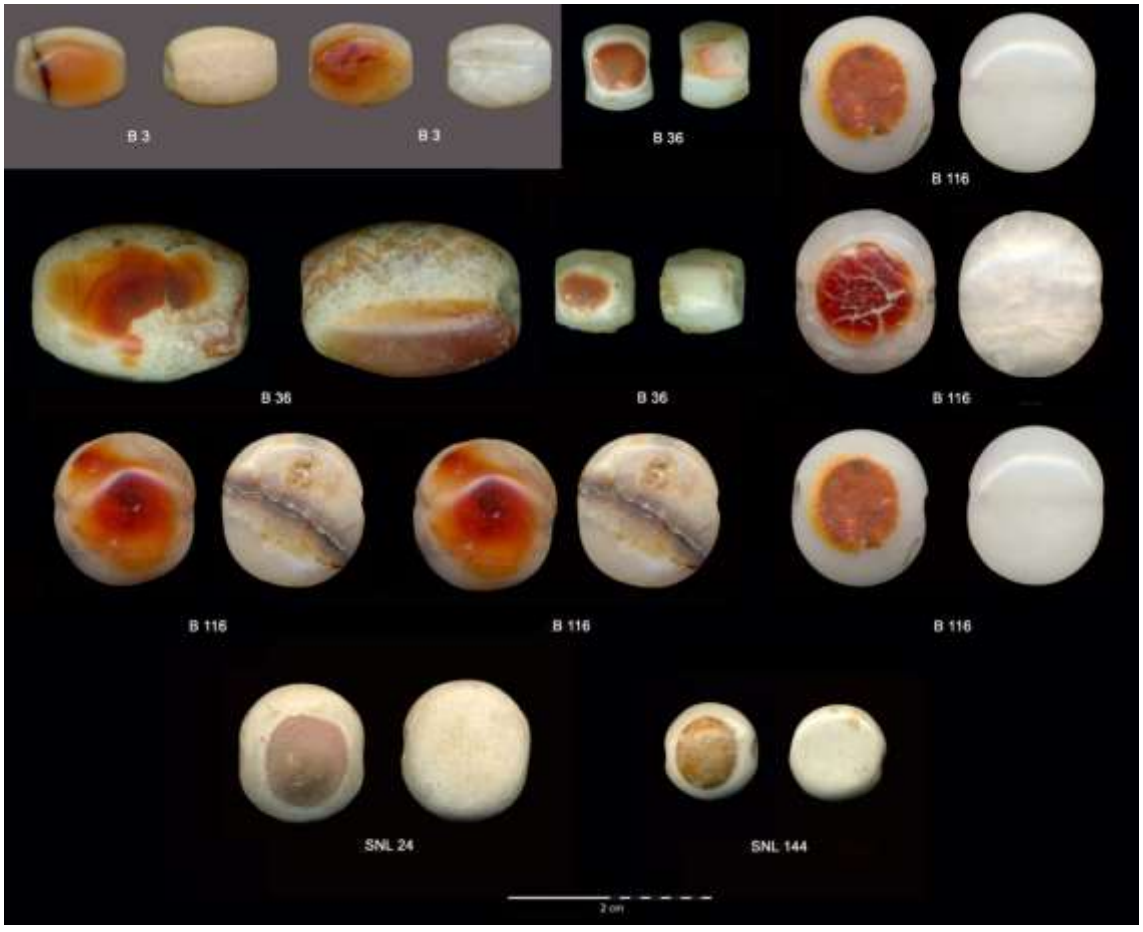

Figure 31: Eye beads in stone and faience (SNL 24 & SNL 144), imitating the decorated carnelian beads, Sanauli

The context of the ornaments is known from the male and female terracotta figurines. However, the original context, meaning and nature of the exact ornament worn is known only from the burials in the absence of detailed portrait forms from the Harappan period. The study of contexts of ornaments from the burials from Harappa indicates that the beads were displayed as not only items of social status and wealth but also symbols of rituals (Kenoyer 1991).

The Sanauli burials did not yield the typical eye beads characterised by the white pigment decoration on the carnelian beads found from the classical Harappan sites. However, the stone beads fashioned as eye beads indicate the continuity and efforts to replicate the decorated carnelian beads, mainly the single-eyed bead. Similar stone beads were found from B 3, B 36 and B 116. Instead of the white-pigmented decoration, the raw material was selected with white and red coloured patterns, then fashioned and finished exposing the white background and red coloured decoration resembling the decorated carnelian beads. Further, two more beads of faience from a non-burial context have also been found in Sanauli. These faience beads have also been fashioned to resemble the decorated carnelian beads, the single-eyed one. The contextual analysis of occurrences of beads from the burials is essential in understanding their proper use and function. In this regard, the three stone eye beads in Burial 36 (child burial) were found in a proper context. Each of these beads was found at the humerus, neck and lower right arm. The location of the eye bead in different locations indicates the complex meaning of such beads in contemporary society. The evidence from Sanauli clearly shows the continuity in manufacturing the eye beads, albeit transformed, which may be due to the discontinuity in the manufacturing process. However, these eye beads indicate the continuation of tradition and usage as they have been found in a proper context from the burials.

The next exotic item that was an essential trade item during Harappan times was the long barrel cylindrical beads (long bicone or long cylindrical). These beads can also be considered an elite item catering to the social elites. Examples of such beads are found from sites like Harappa (Beck 1940), Mohenjo-daro (Mackay 1931 & 1938), Chanhudaro (Mackay 1943), Allahdino (Fairservis 1986, Kenoyer 1998), Lothal (Rao 1985), Surkotada (Singh 1990), Dholavira (Bisht 2017). One bead from Dholavira is of bloodstone (a variety of jasper) of the same shape but finished with faceted sides. The drilling technology of these beads was also complex as these beads often reach a length of 70-100 mm. The Harappans used different sizes of 'ernestite' drills for perforating one half of the bead.

Figure 32: Long barrel beads from Burial 95, Sanauli

The process was repeated on the other side, too, and the perforations meet at the centre; the impression of such bead holes gives a step-like feature of making perforations (Kenoyer & Vidale 1992). These beads formed a multi-stringed six-rowed waistband; only three such complete specimens are known from the Harappan sites at Harappa (Kenoyer 1998), Mohenjo-daro (Marshall 1931) and Allahdino (Kenoyer 1998, NHK 2000). Similar to the decorated carnelian beads, imitations in faience and terracotta have also been found from sites like Harappa (Kenoyer 1998), Mohenjo-daro (Mackay 1931), Surkotada (NHK 2000), Dholavira (personal observation), Lothal (Rao 1985) indicating the preference for such beads albeit in imitated forms by the non-elites. The terracotta imitations were painted bright red to closely resemble their stone counterparts, as observed from the Surkotada example (NHK 2000). The long barrel carnelian beads were an essential trade item exported to Mesopotamia and other contemporary sites and are attested by the studies of Chakrabarti (1977, 1982), Possehl (1996), Kenoyer and Frenez (2018).

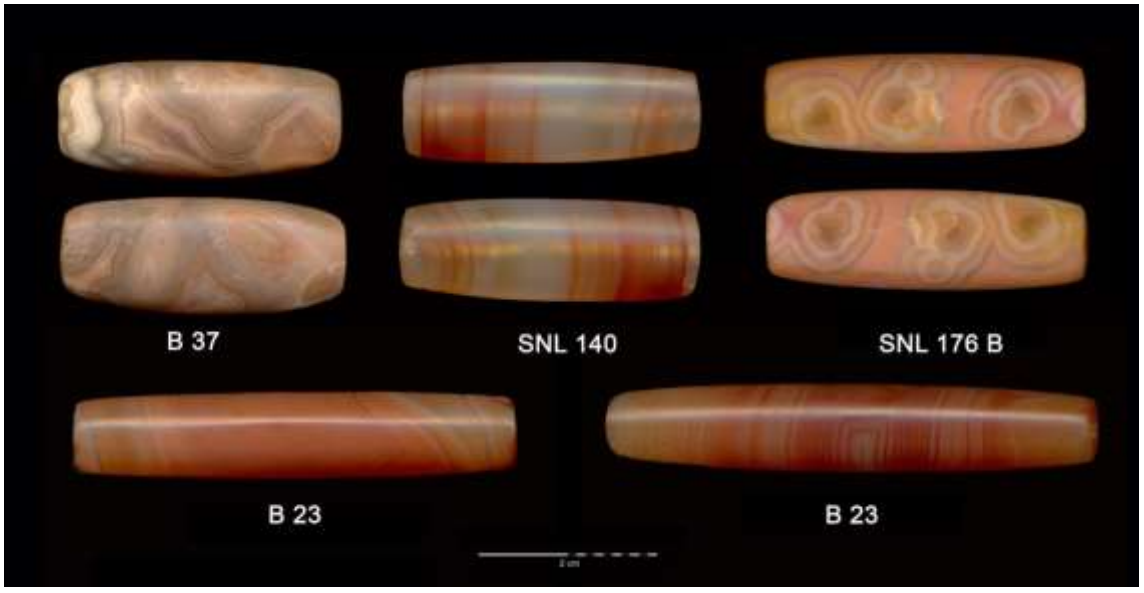

Figure 33: Long barrel beads from B 23 & B 37 and non-burial contexts, Sanauli

The excavations at Sanauli brought to light nine long barrel carnelian beads from Burial 95, forming part of probably a necklace. Even though the shape from Sanauli does not correspond to the long-barrel cylinder beads from the Harappan civilization, long barrel beads indeed occur more prominently from several Harappan sites, unlike the rarity in the occurrence of long-barrel cylindrical beads. The long barrel beads are differentiated from the long-barrel cylindrical ones without central protuberance, making it a distinct feature of the latter. The long barrel beads from B 95 range from 1.5-3 cm in length and are typical of the agate-carnelian stone varieties, which could have been heat treated to obtain the characteristic reddish-orange colour, the hallmark feature of the Harappan bead manufacturing technique. Further, long barrel beads have also been found from B 23 and B 37, and two more beads from non-burial contexts have also been reported from Sanauli. All these beads are more than 2 cm

long, and hence considerable effort might have been spent on the perforation of these beads, which the Harappans excelled during their heydays. The location analysis indicates that the longer beads were used as necklaces, found near the neck portion in both burials.

The analysis of drill impressions from select beads from the burials has been discussed by Prabhakar (2014b), which indicates a continuation of manufacturing techniques from the Harappans. Even though the analysis did not indicate the usage of ernestite drills, the drilling technique could have combined solid and hollow metal drills and stone drills with abrasives. The perforation of these longer beads was made from both the ends and different sizes of drills used, as indicated by the width of the drill holes. This is also a typical feature of the Harappan bead drilling technique. Further, the nature of agate-carnelian raw materials used here clearly indicates their origin to the raw material sources in Gujarat, particularly those from B 23, B 95 and SNL 140.

Faience Beads: Faience commonly refers to glazed ceramic, but archaeological parlance refers to a material manufactured from powdered quartz by a technique known as efflorescence, which facilitates the fusion of glaze with the core enabling the same colour to both of them (Kenoyer 1994). Faience is one of the commonly occurring raw materials in the Harappan context on which beads of various shapes and sizes were manufactured for embellishment in ornaments like girdles, necklaces and torques (Kenoyer 1986). Faience was also used to manufacture artefacts like tablets, figurines, miniature vessels, bangles, seals, and spacer beads. Kenoyer (1994) also identifies two basic processes of manufacture, both heating and melting powdered quartz and mixing with flux and colouring agents. The typical colour of faience artefacts is bluish-green, resembling turquoise. The other colours in faience are white, deep azure, black, yellow, brown, red-brown and bright red (Kenoyer 1994). The faience bangles are found in compact, thicker and also thin varieties. The faience bangles range in colour from green, bluish-green, and white and on the exterior decorative chevron designs are noticed (Kenoyer 2003). Faience beads are found in single, bichrome and multi-coloured ones, particularly towards the terminal phase of Harappan culture. This trend also continued well into the late Harappan period. It has been witnessed that natural stones were replicated by copying them in faience, in particular, bichrome for banged agate, alternating bands of different colours, white & brown and white and red colours to imitate the eye beads and decorated carnelian beads (Kenoyer 1994). Scholars agree that the usage of faience gained prominence due to its ability to replicate the natural colours of rare and exotic raw materials, which were difficult to procure.

The preference for faience as a raw material gained prominence during the Harappan period due to its flexibility and also to reproduce any desired colour and shape. The tradition also continued well into the late Harappan period (Kenoyer 1996), as attested from the sites of Mitathal (Prabhakar et al 2010), Harappa (Kenoyer 2005), Sanauli (Prabhakar 2014a). The excavations at Sanauli brought to light 2193 beads, out of which 1398 are from burial contexts. An overwhelming 1982 beads are of faience,

consisting of various colour variants, including complex multi-coloured, grooved and eye beads (Prabhakar 2014a). The colours noticed are bluish-green (95.9%), grey-white (1.5%), blue, green (1%), white (0.8%), variegated black & white, variegated white, black, brown (0.3%), red & white and brown & white varieties. Most of the bluish-green faience beads were discovered from Burial 116, arranged in the form of a torso. The surface indications of these beads illustrate the pattern in which they were manufactured. Initially, long faience tubes could have been manufactured and cut into desired beads lengths by a string or copper wire. The marks of the string can be seen distinctly on the beads.

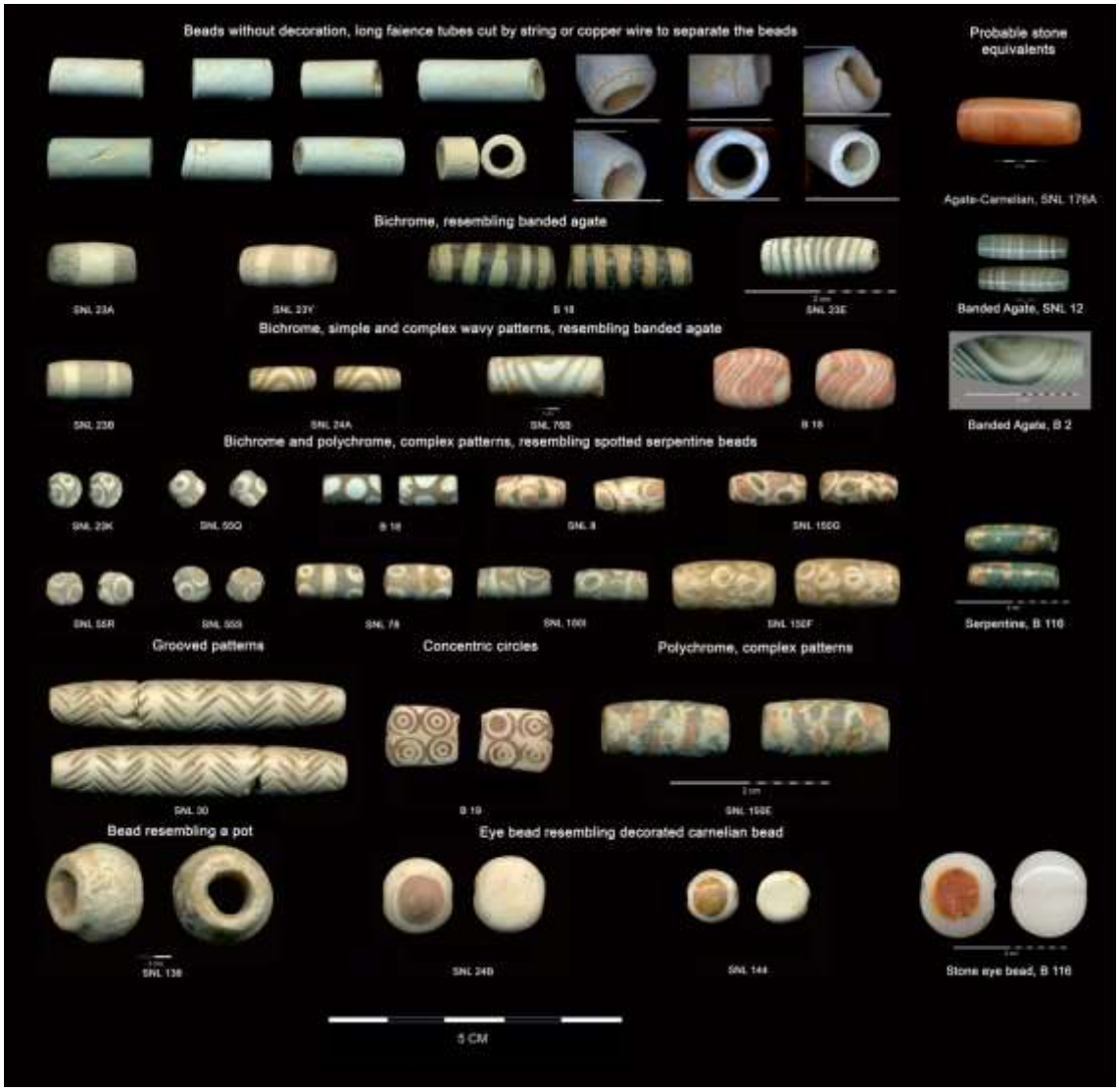

Figure 34: Varieties of faience beads, Sanauli

The varieties of patterns indicate (i) plain bluish-green faience resembling plain stone beads without any distinct surface patterns or decorations, (ii) bichrome, with simple vertical patterns as well as complex wavy patterns resembling banded agate, (iii) bichrome, with mosaic patterns, (iv) polychrome, with mosaic patterns resembling

similar patterns on stone beads as indicated by a serpentine bead found from Burial 116, (v) white faience beads with grooved patterns, (vi) white faience bead with concentric circles, a typical Harappan motif found on seals, combs, and also on the grey coloured pot and dish-on-stand from Sanauli itself, (vii) pot shaped faience bead, (viii) eye beads, with brown and white colours, resembling decorated carnelian beads and similar stone beads from Burial 116. The faience beads from Sanauli indicate the continuation of traditions from the Harappan period, particularly the plain, bichrome, and polychrome varieties noticed at the Harappan sites in the Ghaggar plains (Uesugi et al 2017: Figure 8 & 11). Of particular interest are two eye beads, closely resembling the stone eye beads from Sanauli itself have parallels from the site of Harappa. A red and white coloured faience eye bead from Harappa has been described as an imitation of the 'bleached' carnelian eye bead, also known as the etched carnelian bead (Kenoyer 1994). The bichrome and polychrome beads could have been manufactured by fusing two or more coloured faience sheets or tubes as the pattern requires, then rolling them and reheating them to obtain a homogenous mass. The desired shape and design can be obtained by combining faience tubes and sheets. This technique was followed in producing glass beads and can be witnessed in collared (Francis 1986), drawn, wound, folded, pinched, mosaic and gold-glass beads (Francis 1991). The faience technology of the Harappan civilization also formed the base for the later period of glass technology (Kenoyer 1994), and the gains made in the working and modification of quartz, fluxes and additives could have helped in the perfection of glass making during early historic times.

The faience technology at Sanauli is thus the result of a clear continuity from the Harappan period, with remarkable innovations and improvements. In particular, the reproduction of eye beads in faience, closely resembling the ones from Harappa, also indicates its popularity in the later Harappan period.

Bangles: The contextual presence of bangles, made of copper and gold, is found in Burials 1, 48, 93 and 95 at Sanauli. The bangles from the Burials 1, 48 and 93 are made of copper, while those from Burial 95, four in number, are of gold. Of particular interest in the context of continuity of forms are the bangles from Burials 1 and 95, which resemble the shell bangle with inward projections related to the fertility symbol and womb. The solid copper bangles from Burial 1 are two, while the gold hollow bangles, four in number, are from Burial 95, two in each hand. The womb shape of these bangles can be found in many mediums from the Harappan context.

In particular, the faience bangles finished with grooves from Harappa (Marshall 1924; Kenoyer 1991), shell inlays from Dholavira (Bisht 2017), Mohenjo-daro (NHK 2000), unicorn pendant from Mohenjo-daro having several sacred symbols including a womb design on the body (Shah and Parpola 1991; M 1656A). Similar shapes of silver and gold bangles have also been found from the late Harappan site of Mandi (Figure 36), wherein a large hoard of gold beads, stone beads and bangles was discovered in 2000 (Sharma et al 2000). The gold and silver bangles were not recovered during the initial

investigations. After much persuasion by the Archaeological Survey of India, the villagers later gave them, which are now displayed in the National Museum, New Delhi.

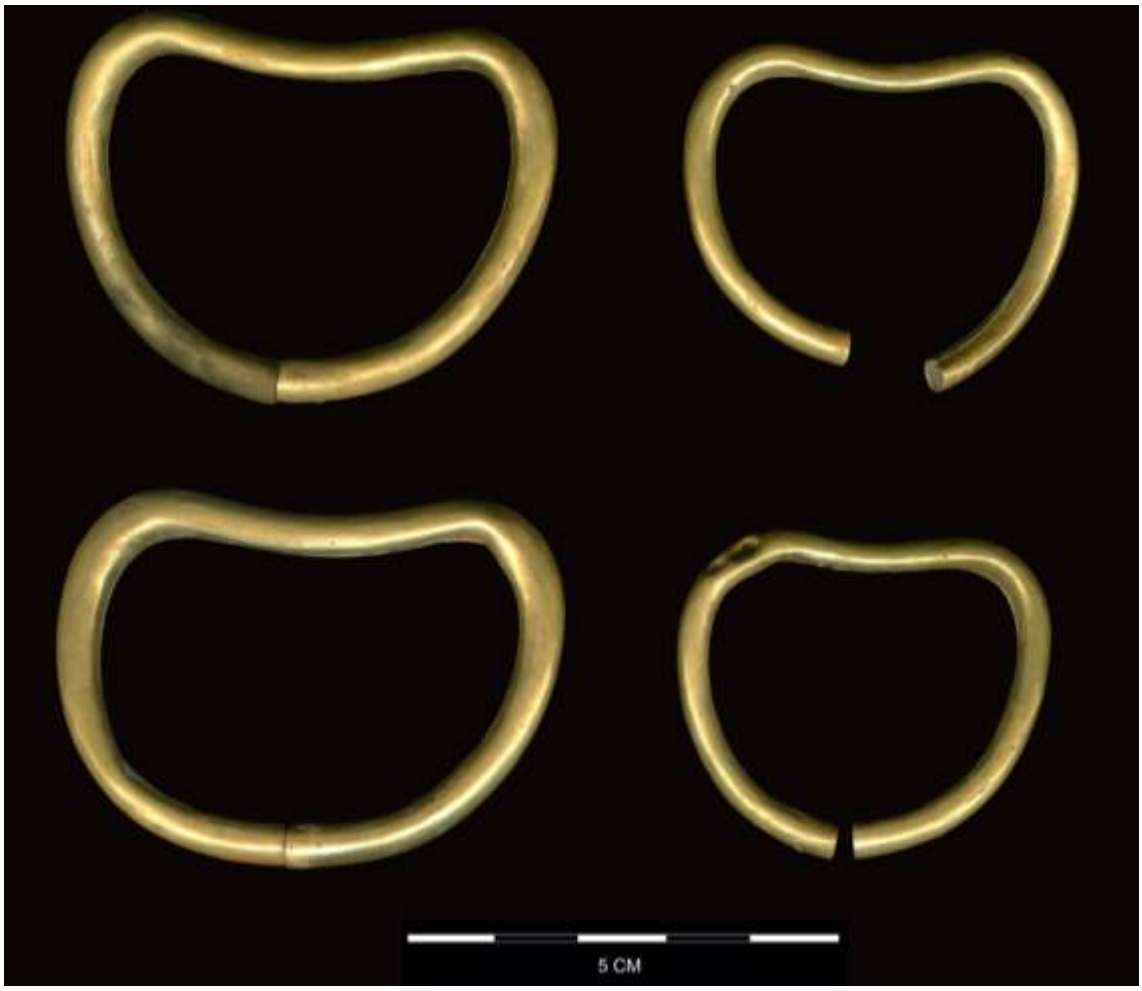

Figure 35: Womb-shaped gold bangles from Burial 95, Sanauli

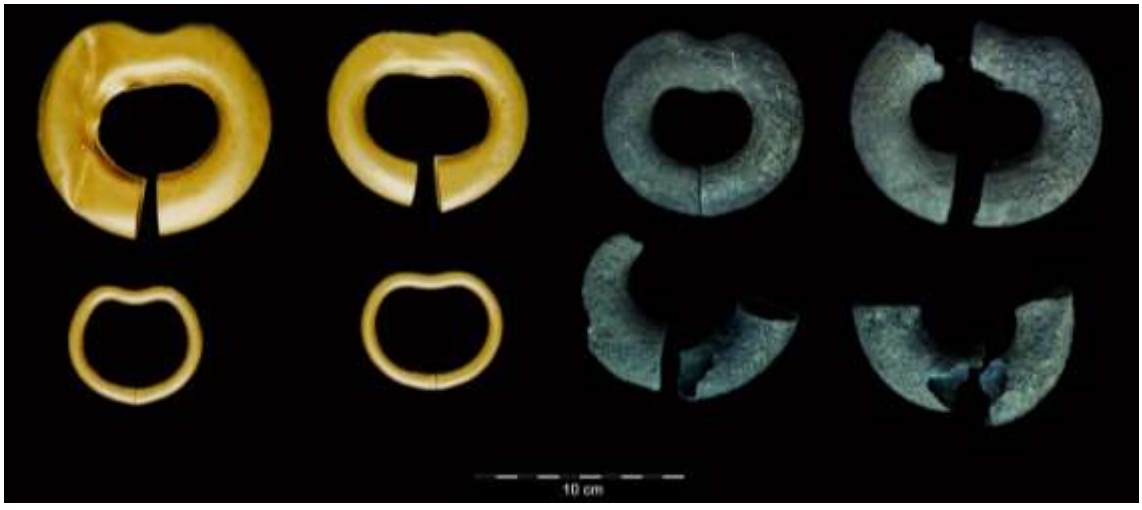

Figure 36: Womb-shaped gold and copper bangles, Mandi, district Muzaffarnagar

As explained above, the bangle forms in the shape of a womb from Sanauli, and its close affinities with the forms and shapes indicate the continuities in the belief systems and sanctity attached to such symbols. Further, the similar forms of bangles from Mandi, district Muzaffarnagar, another late Harappan site, clearly illustrate the overall continuity in this region during the aftermath of Harappan civilization.

Discussion and Conclusion

The above discussion briefly analysed the data available from Sanauli at present and also a re-evaluation of a few pieces of evidence from the previous excavations related to the continuity of Harappan elements and their association, in particular in terms of burial customs and traditions, ceramic forms, ornaments and their forms, shapes and ideological elements. The findings of an antennae sword in situ from Burial 14 are reported earlier (Sharma et al 2006), along with another sword of the same type from surface findings. The antennae sword is a typical element of the copper hoards, in particular from the Ganga-Yamuna doab. However, the chronological horizon of these findings is still eluding the archaeologists without any datable contexts. The association of the antennae sword with the Sanauli burials enabled a tentative relative chronology around the first half of the second millennium BCE. Another important aspect of the burials is that only one element of the copper hoard repertoire (antennae sword) is present. All other cultural elements are either of the late Harappan typology or of Harappan continuity. The ceramic typology from the Sanauli burials is distinctly of the Bara phase of the late Harappan period and has no affinities with the Ochre Coloured Pottery (OCP).

Further, a few ceramic forms also have affinities with the Cemetery H ceramic typology. The ceramics at Sanauli are manufactured out of well-levigated clay, have a fine red slip in most cases, are well-fired and cannot be comparable with the OCP. In such a scenario, the Sanauli burials cannot be associated with the OCP cultural elements; that, too, assigning a spatiotemporal context to the OCP findings is still a difficult task. Even though the discovery of OCP in a stratigraphical context at Hastinapura (Lal 1954-55) enabled to place it in a chronological context of the second half of the second millennium BCE, the problems in associating this pottery in a holistic cultural milieu are still eluding the archaeologists (Nair 2012). The association of OCP with copper hoards is another problematic issue, and so far, the site of Saifai has only yielded a stratigraphical correlation. The recent claims (Manjul et al 2018) that the Sanauli evidence has an OCP / copper hoard association and also mentioning sites like Madarpur, Haripur, Hulas, Alamgirpur, Mandi, Bhorgarh indicating its co-existence with mature Harappans is also unsubstantiated and unverified. A brief look at the findings from these sites is warranted to understand them from the correct perspective. While Madarpur is a single cultural site in the district Moradabad, yielding only OCP and claims of having some affinity with Harappan pottery of western Uttar Pradesh (Sharma et al 2002). Further, this affinity has also been surmised as 'tentative' and 'more evidence is required to confirm this assumption' (Sharma et al 2002). The chronological horizon of Madarpur is also not discussed by Sharma et al (2002). In such

a scenario, comparing the evidence at Madarpur in relation to Sanauli (Manjul et al 2018) is untenable. The same is the case with Haripur, wherein a hoard of copper vessels has been reported, dated to c. 2200 BCE. Still, flimsy assertions have been made to associate them as 'Harappan find' (Vikrama et al 2017: 81). A mere date obtained from a vessel or pot cannot associate with contemporary culture, too, in the absence of other associated cultural elements. Another assertion that the stray finds of OCP from near the find spots and its association with the hoard (Vikrama et al 2017) is also unsubstantiated as no stratigraphic association is provided.

The excavation at Alamgirpur (Singh et al 2013) brought to light a four-fold cultural sequence from Harappan to the late Medieval period. The earliest period is assigned to Harappan levels having both Harappan and Bara wares and a few sherds of 'poorly fired cooking vessels' tentatively identified with OCP. Y.D. Sharma (1989) also reports the presence of Bara and Harappan wares from Alamgirpur. As described by K.N. Dikshit (1982), the ceramic finds from Hulas consist of typical Harappan and non-Harappan sturdy red and grey wares and not any OCP finds.

Further, the description of ceramics, including a few with 'paring technique', indicates the possibility of the presence of Bara ware at the site. The excavations at Rupnagar (Y.D. Sharma 1982; Prabhakar 2015b) and Chandigarh (IAR 1985-86: 15) also indicate the stratigraphical position of appearance of Bara ware after the Harappan phase, after a brief period of co-existence. The excavation at Bhorgarh brought to light a four-fold cultural sequence, with the earliest occupation identified as the late Harappan by the excavator (Babu 1995).

Further, the late Harappan presence is indicated only by the presence of two graves from which the orientation and placement of burial pottery tally well with the Sanauli evidence. The hoard of gold and stone ornaments from Mandi also brought to light ceramic remains identified as of Harappan affinity, with similarities to those from Alamgirpur and Hulas (Sharma et al 2001). The author also examined the pottery remains from Mandi during the discovery, and no typical Harappan ware was found in the collection. A re-examination of Mandi's ceramic remains is required to place them in a proper cultural context.

The above review clearly shows no valid evidence to associate the Sanauli findings with OCP / copper hoard elements based on the ceramic finds and the associated artefact evidence. The ceramic finds from the burials are closely associated with Cemetery H and Bara Ware in terms of forms, shapes, and surface treatment. Further, the ceramics at Sanauli is superior in techniques of manufacture, firing and surface treatment and not at all comparable with the OCP of upper and middle Ganga-Yamuna doab. The excavated OCP sites have yet to demonstrate any aspects of sophistication like Sanauli finds in terms of pottery, beads of faience, agate-carnelian, metal objects, and other cultural elements. The OCP sites reported and excavated so far are flimsy in nature, with tangible habitational remains, except the findings of

ceramics, which are not comparable to Sanauli ceramics in terms of technology surface treatment and painted decorations. Further, as discussed and demonstrated, the material culture at Sanauli has close affinities and cultural continuity with the Harappans. It represents no independent or chalcolithic culture but belongs to the Bara phase of the late Harappans.

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