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## **Ideology and Legitimation in the Indus State as revealed through Symbolic Objects**

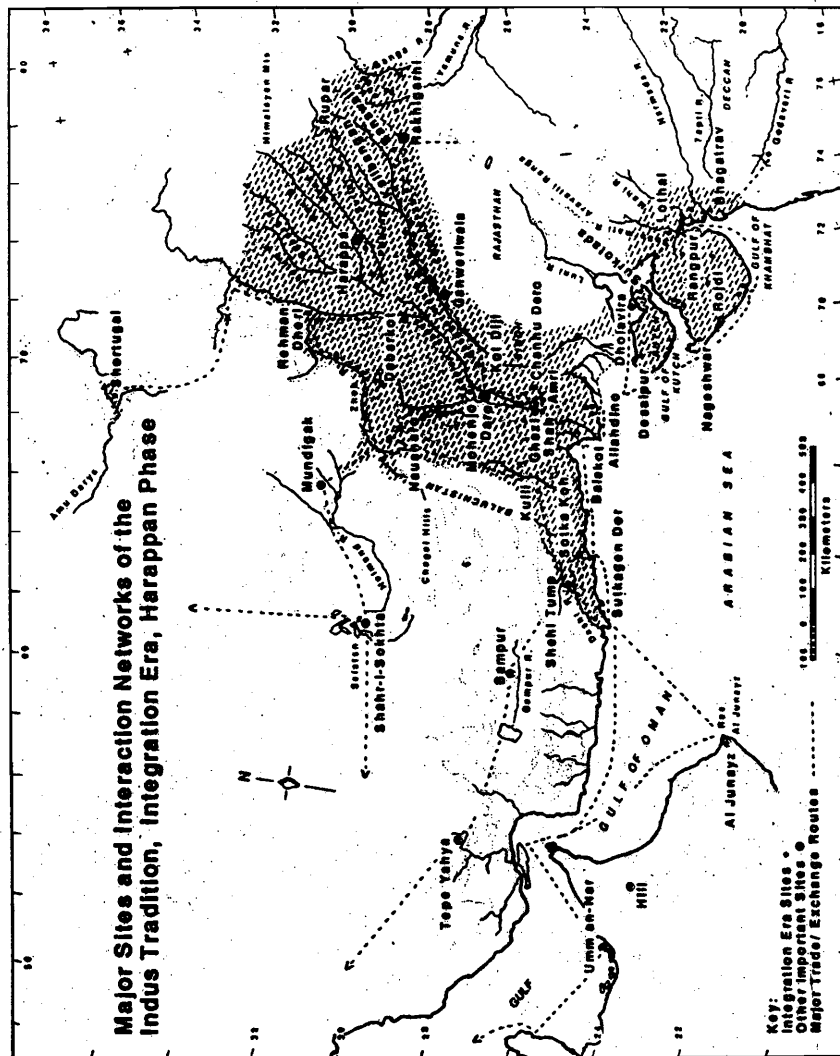
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*Jonathan Mark Kenoyer*

### **Introduction**

The discovery of inscribed seals, chert weights and other unique artifacts at the site of Harappa in 1853 heralded the beginning of archaeological research on the Indus Valley Civilization of Pakistan and Western India (Figure 1). Since that time numerous sites with similar material culture have been discovered throughout the vast alluvial plains of the Indus river valley and along the now dry Ghaggar—Hakra river as well as in the adjacent regions to the west and east. Originally referred to as the Harappa culture, the discovery of these other sites led to the common use of the terms Harappan or Indus Valley Civilization to refer to the major urban phase of this society, which dates from 2600 to 1900 B.C. (Kenoyer, 1991).

Excavations at two of the largest urban centers and many smaller sites have led most scholars to classify this urban culture as having state level political organization (Allchin & Allchin, 1982;



Dales, 1973, 1976; Jacobson, 1986; Jansen, 1987, 1989; Jarrige, 1977, 1983, 1988; Kenoyer, 1991; Mann, 1986; Miller, 1985; Mughal, 1970, 1990, 1991; B.K.Thapar, 1982, R.Thapar, 1984; H. Wright, 1989). There are however some important variables that differentiate the social and political organization in the Indus valley from contemporaneous state level societies in Mesopotamia, Egypt or China (Fairservis, 1989; Jacobson, 1986; Shaffer, 1982, 1993; Shaffer and Lichtenstein, 1989). Most scholars feel that the cities and villages of the Indus Valley civilization do not have the monumental temples, royal tombs, or palaces that so obviously reflect the highly stratified nature of those other riverine societies (Ratnagar, 1991). Nevertheless, the Indus cities were quite large, with well laid out streets and neighborhoods, huge public buildings, city-wide drainage systems, wells, platforms, walls and gateways. Standardized weights, a common writing system and culturally distinct material remains are distributed over an area that is twice the area of the early states in Mesopotamia and Egypt.

Whereas some of the settlements do appear to have had massive walls and gateways, the absence of motifs depicting war and subjugation of alien peoples suggest that the legitimization of the Indus state was achieved in a much different manner than other contemporaneous early state level societies. Some of the differences between the Indus and other early state societies may be due to problems of archaeological sampling or simply interpretation (Kenoyer, 1989), but others remain to be adequately explained. The lack of long texts and the fact that the script has not been deciphered has remained a major obstacle in explaining these differences and archaeologists have been forced to explore other avenues to try and understand the socio-economic and ritual structure of this society.

Archaeologically preserved symbols, in the form of artifacts and architecture, are the primary category of data available to scholars studying the development of early state level society in South Asia. On the basis of historical literature and ethnographic analogies, specific artifacts and forms of architecture have been identified as symbols that represent the presence of royal elites, administrators, a military and a hierarchy of social classes (Rubin, 1989). Artifacts that are thought to reflect various facets of the socio-ritual order and visually legitimize it, include the layout and

organization of cities, monumental architecture, temples or ritual structures, written texts, seals, weights, decorated objects and ornaments. Through the patterning of artifacts and their use in both public and private contexts it is possible to define socio-economic and ritual hierarchy within the Indus cities. While specific aspects of ideology and legitimation must await the decipherment of the Indus script, it is possible, at a general or abstract level, to identify some of the ideologies that defined the social order and the mechanisms that helped to legitimize and maintain it.

This paper will examine the development and transformation of specific symbols before, during and after the Indus state. Seals, weights, painted pottery, and ornaments constitute symbols that are openly viewed by the general public, while domestic cooking vessels and amulets are relatively more private. On the basis of materials and technologies used to produce these symbols, along with their distribution in the settlements, it is possible to define ranking and stratification in their use. Some of these symbols appear to reflect the ideologies of the dominant classes while others represent the views of the general public. The continuous and widespread use of specific artifacts during the 700 years of the Indus state indicates the importance and acceptance of these symbols as representing specific aspects of ideology and reinforcing the legitimation of the social order.

### Symbolic Objects

In the context of this paper, symbolic objects include symbols that can be observed by any person passing through a city or settlement regardless of their social, economic or ritual status as well as relatively private symbols. In the context of the Indus State, such symbols would include urban organization, exterior architectural features, clothing and ornaments, and written language. Symbols that are viewed by a limited number of individuals are generally restricted to the interior of habitation areas or sacred precincts, used in special rituals such as burial, or personal ornaments that are worn beneath the clothing or are not displayed ostentatiously.

In all forms of social and political organization, whether it is a state level society or a simple band of hunter-gatherers, visual

symbols served to reinforce and legitimize the social order and the ideology of a community (Anderson, 1989; Hodder, 1983b). Symbolic objects are used by human societies as a form of non-verbal communication of status, ideology and power. Once a child has become socialized or an outsider has become acculturated to a specific community, the visual effects of a wide range of cultural materials communicate meaning without the need for repeated verbal articulation.

Although symbols that reflect ideology and social order have been used since the Palaeolithic period, there appears to have been a gradual increase in the production and use of symbolic objects as human communities began to live in agricultural settlements. In most cases the invention and developments of specialized technologies, such as metallurgy, ceramics, lapidary and glazing are initially related to the production of symbolic objects and even when these crafts were used for the production of purely utilitarian objects, these objects undoubtedly had important symbolic connotations (Smith, 1976).

Following a period of gradual development of symbolic objects on a regional scale, a dramatic change in the use of symbolic objects is seen during the initial phase of urbanism, specifically in the Indus Valley region, but also in other regions where stratified societies evolved. Although the process of stratification may have taken different courses in different regions of the world, the end result was that numerous different ethnic communities and a hierarchy of mutually exclusive or stratified social groups came to be integrated and co-existed in urban contexts or smaller settlements.

The first cities of the Indus valley appear to have been comprised of many different communities and ethnic groups who shared some symbols, but distinguished themselves with others. When compared with the previous phase of regional development, we see a decrease in the variation of certain symbols, such as painted pottery, but an increase in the variety of materials used to make symbolic objects and new variations on symbolic themes, specifically in the context of ornaments. We also see the creation of new symbolic objects that are distinctive for the period of urban integration.

In the context of the Indus State, the decrease in the heterogeneity or variability of some symbols (e.g. painted pottery designs) probably indicates ideological integration while the increase in variability of other symbols (e.g. ornamental styles and raw material used) could be the result of several factors, such as diversification of subsistence practices, development of new technologies, fragmentation and agglomeration of social groups, and stratified social organization.

In conjunction with the development of urban societies there was also an increase in potential conflict between individuals competing for status or access to new resources. Symbols would have been necessary to represent and differentiate the range of communities and occupations in the urban context, as well as the accepted ideology that integrated them. By reflecting the social and political order, specific symbols would inform other people about accepted interaction and thereby serve as important mechanism to reduce conflict as well as to reinforce or legitimize the social order.

#### Artifacts versus Texts

Archaeologists studying the rise of early state level society and urbanism have always recognized the significance of artifacts as symbols that reflect the ideology and legitimation of the social order (Anderson, 1989; Hodder, 1982; Renfrew, Rowlands et al., 1982). Unfortunately, the availability of written texts in many of the early state societies has resulted in greater emphasis being placed on what people say about their ideology and social order rather than on the material culture symbols which actually reflect that ideology and social order.

This emphasis on textual evidence alone is surprising when numerous anthropological and ethnoarchaeological studies of urban communities have clearly shown that in contrast to what people say or write about themselves, material culture patterning often reflects a very different picture of social organization and hierarchy (Gould and Schiffer, 1981; Hodder, 1983a).

There is no question that the presence of texts is extremely important for understanding the myths, legends and explanations

for specific symbols, but even in the absence of written records, significant features of actual social, economic and ritual organization can be identified through the study of material symbols. Furthermore, the patterning of these symbols in the context of early state societies may reflect aspects of the social order more accurately even than texts that would have been written by a very small segment of the population.

#### Symbols: Origins and Meanings

In order for symbols to be effective they must be commonly understood by the society at large or by the smaller community within which private symbols are viewed. Manufacture with permanent or ephemeral materials, these symbols and their ideological meanings can be result from very different processes of cultural selection and use.

Some symbols are created to represent specific ideologies or legitimized order that may last for only a short time. In traditional societies, the creation of short term symbols is generally achieved using already established norms. Commonly recognized objects are given a new design or made in a different medium. Some radical new ideologies require a total break with the earlier iconographic norms, but in the long term, familiar colors, materials or motifs appear to creep back into use.

Other symbols that represent widespread cultural norms often have long histories that reach back to the prehistoric period. For example, the use of vermilion as a symbol worn on the forehead by women represent a pervasive symbol found throughout the subcontinent and with a history extending for over 7000 years. The use of vermilion on the forehead of terra-cotta female figurines can be dated as far back as the 5th millennia B.C. in the regions of Baluchistan and the Indus Valley. These ritual figurines appear to represent adult women or goddesses. Due to the use of fugitive paints and the fact that the vermilion worn by humans is ephemeral, it is difficult to follow the use of this symbol during the intervening millennia 3rd and 2nd millennia B.C.), but the use of vermilion by women is well documented in the Hindu Epics and the thread of

continuity is picked up again from the 1st millennium B.C. to the present.

The continuous use of shell bangles by adult women can be traced for 8500 years beginning in the preceramic Neolithic period of the Indus Valley around 6500 B.C. It continued to be used by communities in the highly stratified state level society of the Indus valley Civilization, 2600 to 1900 B.C. As a symbol of ritual purity and protection shell bangles were worn by women in Hindu and Buddhist sects during the Early Historic period in South Asia (600 B.C. - 500 A.D.) and continue to be worn by married women in conservative Hindu Communities in Bengal.

In modern India, a woman wearing a streak of vermilion in the part of her hair, along with white shell bangles and red lac bangles on each wrist, is generally recognized as being a married woman of a specific Hindu community derived from Bengal. Worn to demonstrate fidelity and to ritually purify and protect her husband and children, the vermilion powder in conjunction with the red and white bangles reflect and reinforce the ritual and social order. Furthermore they help to reduce the potential for conflict by informing strangers (specifically men) of a woman's marriage status.

Vermilion has gradually been replaced with multiple colored powders and even stick-on plastic dots, but the red color dots in the middle of the forehead continue to indicate ritual purity and marriage status. The designs carved onto the shell bangles have changed repeatedly over the past millennia, and in some regions of the subcontinent shell has been replaced by ivory or glass. These changes reflect short term fluctuations in ideology and the replacement of one raw material by another. Nevertheless, the red dot on the forehead and the wearing of bangles remain firmly rooted in the general ideology of South Asian culture and continue to legitimize the role of the woman as protector of the home.

These two examples of vermilion and shell bangles demonstrate the use of both ephemeral and permanent materials to create symbolic objects. Symbols made in permanent materials and representing long term cultural processes are the primary category of data

available in the context of archaeological studies of the pre— and protohistoric period in South Asia. Through careful excavation and documentation, it is possible to differentiate symbols that have long term usage, stylistically and contextually, from those which are relatively short term. Although they represent only a fraction of the symbols used by a society, in the absence of written texts, they are at present the most reliable data for interpreting the socio-political and ritual organization of the Indus state.

### The Indus Valley Tradition

The Indus Valley Tradition (Shaffer, 1991:442) refers to the total phenomenon of human adaptations that are represented in the vast alluvial plains of the Indus and Ghaggar—Hakra river valleys and adjacent regions, including Afghanistan to the northwest, northern Ganga-Yamuna Doab to the east and the regions of modern Gujarat to the southwest (Kenoyer, 1991). From 6500 B.C. to approximately 1500 B.C., this overall Tradition can be divided into numerous Phases represented by characteristic ceramics, architecture and other artifacts. These Phases are themselves grouped into Eras that represent major patterns of adaptation, such as food producing, the development of regional economic networks and eventually integration of numerous designs.

During the integration Era of the Indus Valley Tradition, the Harappan Phase, dating from approximately 2600 to 1900 B.C. features the integration and urban phase of what can be considered the Indus State, which was also the earliest state level society of South Asia (Jacobson, 1986; Kenoyer, 1991). Two other Traditions have been identified by Shaffer and of these, the Helmand Tradition also achieved a period of integration and possible state level political organization (Shaffer 1991).

**Table 1: South Asia: General Archaeological Labels and Chronology.**

Archaeological Labels		General Dates
	Early Historic Period begins around	600 B.C.
POST	Northern Black Polished Ware	+700 to 300 B.C.
INDUS	Painted Grey Ware	+1200 to 800 B.C.
INDUS TRADITIONS	Localization Era	1900 to 1300 B.C.
	Integration Era	2600 to 1900 B.C.
	Regionalization Era	ca. 5000 to 2600 B.C.
	Early Food Production Era	ca. 6500 to 5000 B.C.

### The Indus State

On the basis of recent excavations and research in Pakistan and India it is suggested that several competing classes of elites dominated the four or five major cities that comprised the Indus state (Kenoyer, 1993ms). Instead of one social group with absolute control, the rulers of dominant members in the various cities would have included merchants, ritual specialists and individuals who controlled resources such as land, livestock and raw materials. These elites and their supporting communities maintained different levels of control over the vast regions of the Indus and Ghaggar-Hakra Valley (Kenoyer, 1984, 1989, 1991). The multiple levels of control and means of control that are demonstrated from the archaeological remains reveal the unique in the ways by which the Harappan state controlled access to resources and maintained socio-economic and political hierarchies. Nevertheless, these communities appear to have shared a common ideology and economic systems as represented by symbolic objects such as seals, ornaments, ceramics and other artifacts. The integrative aspects of this ideology were undoubtedly shared by occupational specialists and service com-

munities, who appear to have been organized in loosely stratified groups (Kenoyer, 1989, 1991).

In contrast to the large cities, rural settlements may have been less rigidly stratified and segregated, and would have included larger numbers of farmers, pastoralists, fishers, miners, hunters and gatherers, etc. It is not unlikely that the largest cities, such as Harappa, Mohenjo-daro, Ganweriwala and Rakhigarh may have been relatively independent with direct political control only over local settlements and lands. However, the trade and exchange of important socio-ritual status items demonstrates that the cities and villages were politically and economically integrated, and therefore appear to be integrated on a general ideological level as well.

### Symbols of Integration and Stratification

In the context of this paper it is only possible to discuss a few of the major examples of symbols that reflect the integration and stratification of the Indus state. Some of these symbols (bangles and beads) have an extremely long history extending back into the previous period of regional cultures and in some cases as early as the Neolithic. Others (painted ceramics) appear to have been created as a synthesis of different regional styles and still others (seals and weights) are unique for the period of urban integration.

### Script and Seals

The use of square and circular seals with geometric motifs begins as early as 4500 B.C., and there is some evidence for the use of writing just prior to the development of the Indus state. Inscribed objects have also been found in the occupational deposits following the Harappan Phase, but the extensive use of writing and specifically the use of intaglio seals with script is limited to the period of time when the Indus state flourished. (Figure 2).

The Harappan Phase and the beginning of the Indus state correspond with the first appearance of a unique form of intaglio seal that has a perforated boss on the back. Unlike the button seals, these intaglio seals are invariably made from only one type of material, which was fired steatite and almost all of the seals are

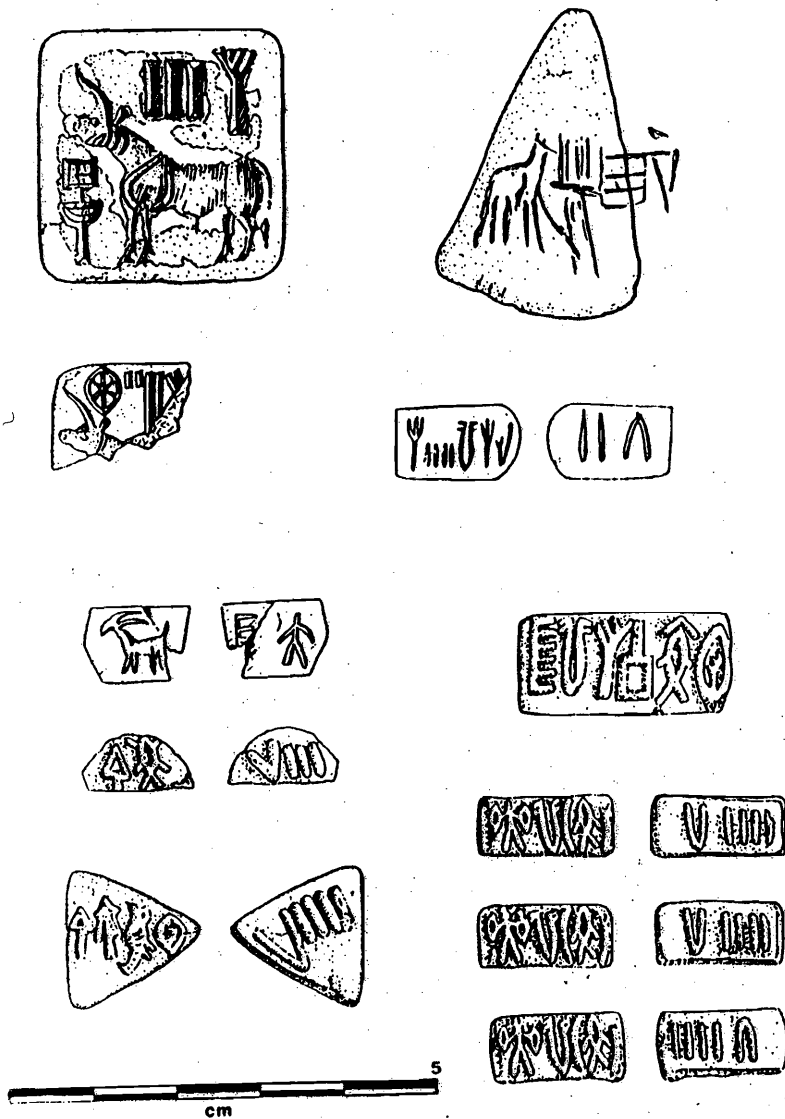


Figure 2. Intaglio Seals and Tokens.

engraved by highly skilled artisans, with script as well as zoomorphic and occasionally anthropomorphic figures. Numerous impressions on clay lumps, bullae and pottery attest to their function as actual seals, though they would also be effective as visible symbols or badges of office as well.

Button seals, with geometric motifs were found before the period of the Indus State and continue to be found in association with the intaglio seals, but the geometric designs are often different from those of earlier period. In the Harappan Phase they generally found with motifs such as the swastika, the endless knot and various stepped cross designs. These button seals are generally made in faience or occasionally fired steatite, but so far have not been found in terra-cotta, copper/bronze or bone/ivory, which were common earlier.

As a symbol of ideology and legitimation the use of intaglio seals appears to have been limited to a relatively small portion of the population, the literate merchants or political administrators, and in some cases possibly ritual elite. Current research at Harappa also suggests that although discarded seals became distributed throughout the settlements, the people who controlled and used the seals were living in specific areas of the cities (Dales and Kenoyer, 1990b). Intaglio seals were carved by skilled artisans and hardened with a glazing and firing technique that does not seem to have been accessible to the general public.

Even though only the dominant literate elite used the seals, both literate and illiterate persons would have been able to recognize the message of the seals because most seals contained two levels of information. The script along the top of the seal could have been read by literate elites, while the animal symbol or geometric designs would have informed the illiterate commoners or laborers about the social or ritual affiliation of the seal's owner. Consequently, a laborer loading or unloading goods would have been able to identify where to take specific bundles based on the visual message of the seal.

The unicorn motif is the most common symbol used on the seals, while various forms of composite animals are the least



common. Due to the lack of stratigraphic and chronological control of the seals collected in the past, it is premature to try and sort out the hierarchy of these symbols, but they probably reflect hierarchy within the elites, and may identify hereditary merchant communities, sodalities, clans, or even different classes of administrative officials.

Regardless of the actual meaning of seals, we can suggest that the visual impact of a seal worn openly by an individual or the impression of a seal on a commodity would serve to reinforce the social and economic hierarchy of the society. Furthermore, the ritual symbolism of the animal or geometric designs would serve to legitimize the social order. The presence of seals throughout the extent of the Indus state indicates that the individuals who used them were widespread and were present at both large urban centers as well as at smaller villages and outposts. This widespread presence of administrative elites or literate merchants may indicate an important mechanism that was used to support the Indus state.

The most common motif is of a unicorn, and this emblem may represent the widespread distribution of merchants or low level officials, while the symbols that are less frequent may represent the higher levels of elite who were present only at the larger cities. Another interpretation could be that the unicorn symbol represents the most powerful community and members of this ruling elite were distributed in all settlements.

The presence of seal users in all settlements can be interpreted as representing the administrative power of the state. Furthermore, the lack of evidence for overt military coercion would indicate that the state was legitimized primarily by economic and/or ritual coercion. A wide range of artifacts can be cited as evidence for the presence of both ritual and economic coercion, but only a few of the most important will be presented here.

### Weights

The Indus weight system is one of the most highly standardized weight systems in prehistory and represents a centralized authority or coalition of merchants that taxed or controlled the trade

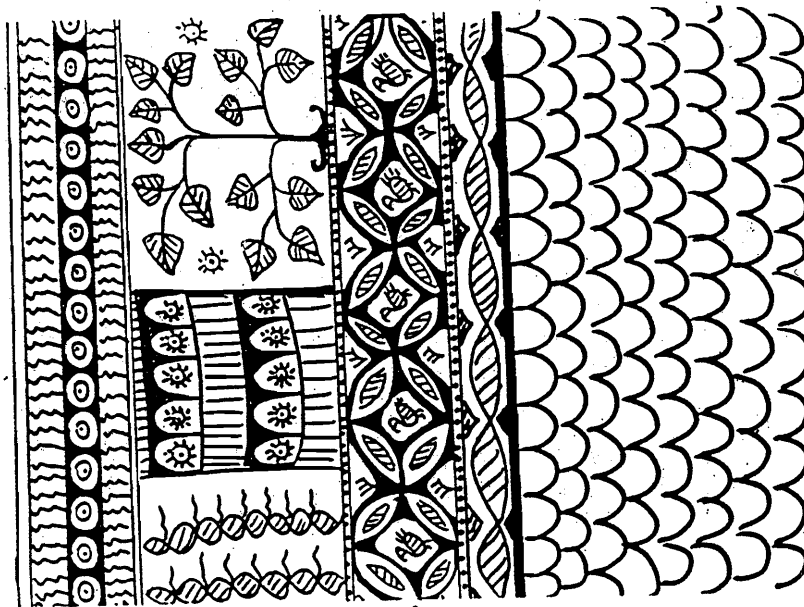
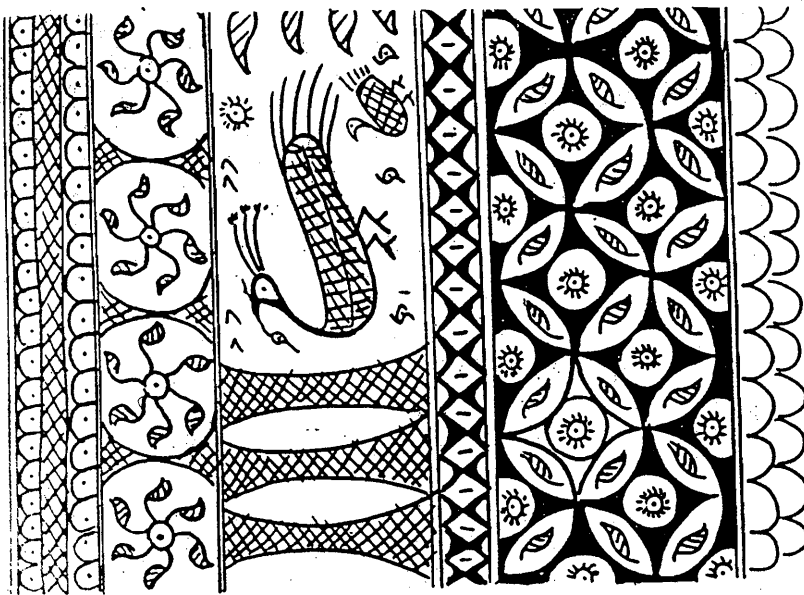
of specific commodities. The distinctive cubical chert or agate weights range from .871 grams to 10865.0 grams (Marshall, 1931) and were probably used in the measurement of small amounts of precious stones, metals and perfumes/incense, as well as for larger quantities of grain, food stuffs and other commodities. Such weights, usually in several graduated sizes, have been found in all settlements of the Indus region as well as in settlements on the periphery where Indus merchants may have obtained raw materials or traded finished products. The complete range in weight categories is found only at the larger urban centers, while the smaller rural settlements tend to have only a limited range of weight categories.

The strict adherence to a standard weight system was probably reinforced from the major cities through centralized workshops that produced the weights and by the repeated tours of officials who would check the weights being used in the rural areas. This later practice is well documented during the Early Historic Mauryan State (circa. 3rd century B.C.) where the state appointed a Minister of Weights and Measures and his officers were responsible for checking weights being used in the markets and ensuring that taxable items were being properly assessed (Chattopadhyaya, 1987; Prasad, 1984, 1987).

So far no actual weight manufacturing workshops have been found at an Indus site, but the discovery of unfinished weights indicates that they were being manufactured primarily at the larger urban sites of Mohenjo-daro, Harappa and Chanhudaro.

The use of cubical stone weights can be seen as a symbol of ideology regarding the economic systems of the Indus state and possibly also system of taxation. Whether used specifically for taxation or simply for the weighing of special commodities, these weights and the fact that they were highly standardized provide evidence for a coercive authority that reached to almost every settlement of the Indus region. In combination with the evidence from the seals mentioned above, we can visualize literate merchants or elite, who along with their seals and standardized weights represented the authority of the Indus state. Seals and weights are symbols of authority that would have been visible to the general public but would have been used exclusively by elites. The ideology





The dominant style in the north and northwest of the Indus and Ghaggar—Hakra region is called Kot Dijian (Mughal, 1970, 1982, 1992), while in the south and southwest the Amrian style is most widespread (Casal, 1964; Jarrige, 1983, 1981, 1984). Other ceramic styles that existed during the Regionalization Era are found in the peripheral regions of Gujrat and Kutch (to the southeast) (Hegde, Sonawane et al., 1988; Possehl, 1987); in eastern Punjab and Harayana (to the northeast) (Bhan, 1973; Bhan and Shaffer, 1978), and along the highlands of Baluchistan to the west of the Indus Valley (Fairservis, 1956, 1959; Flam, 1981; Mughal 1974, 1991).

The distribution of these dominant ceramic styles correspond closely with the distribution of other artifacts such as chert used for stone tools, colored stones used for making beads, and marine shell ornaments. It is generally assumed that ceramic distributions reflect regional exchange networks among culturally integrated communities who shared a specific ideology and world view. This would have been overtly represented in the shapes, motifs and color combinations used on their painted ceramic vessels. Specific difference in motif, organization of designs and color combinations between Kot Dijian and Amrian painted styles would indicate that many aspects of ideology and symbolism were quite different between these regions.

The symbols that appear to have been shared between these two cultural styles are natural motifs of the pipal tree or leaf, the symbol of the bull, other animals and fish, and some common geometric shapes. These motifs were occasionally painted in black or brown on buff colored unslipped surfaces or on a range of reddish to yellow-brown or even puple-brown slips. Vessels with red slip and black painted motifs are the most distinctive stylistic category shared by both ceramic assemblages.

The painted vessels were probably used for dowry or ritual purposes as well as in the domestic context and they may reflect a community that spanned or linked both the Kot Dijian and the Amrian socio-economic spheres. The nature of ceramic studies by earlier archaeologists and selective availability of published materials makes it difficult to determine the precise nature of this linkage

or overlap, however, current excavations at Harappa are collecting the type of detailed information that is needed to begin testing this proposition.

The distinctive red slipped and black painted ceramics became the most dominant form of painted ceramic in the Indus state. Other forms of Kot Dijian and Amrian style ceramics disappear almost entirely from the repertoire of the Indus sites except for some peripheral areas (e.g. Rehmandheri, Sheri Khan Tarakai, Ganeshwar, and various sites in Baluchistan and Afghanistan) where there appear to be communities who were not integrated into the Indus state, either economically or ideologically.

The site of Harappa is located in the core of the Kot Dijian cultural style and the earliest occupation of the site, dating to 3300 B.C. is characterized by distinctive Kot Dijian ceramics as well as occasional sherds with red slip and black painted designs. The final analysis of the ceramics at Harappa has yet to be completed, but if this style does reflect a community that begins to integrate the two cultural traditions, we can predict that the gradual dominance of this style of painted pottery will correspond with the appearance of chert tools and shell bangles that demonstrate expanded trade contacts to the south and undoubtedly result from the creation of new alliance or increased control over distant resource areas.

The fact that red slipped and black painted ceramics become the diagnostic form of painted pottery during the Indus state would indicate that anyone desiring to emulate, affiliate or integrate to this social-ritual-political system would acquire and visibly display such ceramics. Such ceramics were not used only in the domestic context but are also found set along the public road in front of houses (often used as a sump pit). (N.B. This secondary use of what might once have been a dowry item with ritual significance is not uncommon in traditional South Asia. Beautifully carved grinding stones (which have ritual symbolism) and temple columns are often reused in construction of domestic or public structures without creating offense).

One possible interpretation for this pattern is that the initial phase of urbanism saw the widespread use of painted ceramics

reflecting the integrative ideology of the Indus state. These painted ceramics are not limited to specific areas of the cities and it is highly unlikely that they were used only by one community or only by the elites. Such a pattern would indicate that the ideology reflected by the painted pottery was embraced by the many different stratified communities present in the cities. Furthermore, the presence of these distinctive ceramic in both large and small settlements indicates the widespread acceptance of the ideology in the countryside.

Over time one would expect the use of such symbols to change and indeed there does appear to have been a decrease in the use of highly painted ceramics towards the end of the Harappan Phase, which lasted over 700 years. The earliest stratigraphic levels of the Harappan Phase at Harappa (2600 B.C.) have a relatively large number of painted sherds, while in the later levels (1900 B.C.) there is a definite decrease in the amount of painted ceramics. In the domestic contexts of the city, the decline of painted ceramics may result from economic stress, with relatively higher value decorated materials being placed with utilitarian plain wares. On the other hand it may reflect an ideological shift, either in the core beliefs of the elites who originally used the painted wares, or due to the influx of new communities who were not becoming totally integrated with the ideology reflected by the painted ceramics. Such a process might eventually lead to fragmentation and a weakening of the infrastructure of the cities.

The decline in painted pottery is also reflected in the use of pottery which was included as grave goods, probably filled with food offerings. The excavation of the Harappan Phase cemetery at Harappa revealed that red slipped and black painted vessels were included as grave goods in most of the earlier burials. In some of the intermediate burials there is evidence for the covering the black painted motifs with a plain red slip and finally in the latest burials, most of the pottery used for grave goods are plain wares (Dales and Kenoyer, 1990a).

The people buried in the Harappan Phase cemetery at Harappa represent only a small portion of the city's population. On the basis of the types of ceramics and the use of characteristic artifacts in the grave goods, including bronze, shell, and stone

objects, these individuals probably represent one of the more affluent or elite communities. Modifications in burial rituals of this community are undoubtedly associated with changes in the belief systems and these changes may also have had repercussions throughout the other communities living in the city.

While this pattern of gradual decline in painted ceramics is clearly represented at Harappa, the available data does not allow us to determine if this change was also occurring at the contemporaneous urban center of Mohenjo-daro in the south.

At the end of the Harappan Phase we see the appearance new ceramic styles in each of the major regions of the Indus state. In the northern regions this style is referred to as Cemetery H style, while in the south it is generally called the Jhukar style (Table 1). Both styles make their first appearance during the Harappan Phase and gradually replace the diagnostic Harappan painted ceramics (Dales and Kenoyer, 1986, 1989). This process was by no means abrupt and excavations at Harappa have shown the the Cemetery H forms and some of the motifs show a continuity with the earlier Harappan Phase styles.

What is interesting about the Cemetery H style (and also the Jhukar style) is that it represents a resurgence in the use of painted ceramics and the appearance of many new motifs. The colors of the slips and paints are also somewhat different and may result from different firing techniques or different sources of clay and paints. In conjunction with the widespread use of Cemetery H ceramics we also see a change in burial practices and the use of painted ceramics as grave goods.

The cemetery of this later period is located in the same area as the earlier Harappan Phase cemetery except for directional orientation (which is not standardized) and the painted pottery styles. The earliest Cemetery H burials were extended, supine and laid out in much the same way as the Harappan burials. However, in the later burials of the Cemetery H culture there is a shift in mortuary practices, even though there is an overall continuity in ceramic styles. In the later burials, the dead were first exposed or cremated and the bones were subsequently placed in the elaborately painted

burial urns and buried in a pit along with smaller painted ceramic vessels, which probably held food offerings.

The conjunction of these two patterns of change in burials and in ceramic styles clearly demonstrates a shift in belief systems and dominant ideologies. The fact that the Cemetery H style is limited to a much smaller geographical region would indicate that this cultural ideology had a limited range of influence and did not have the power to integrate vast regions as was done in the previous Harappan Phase. This localization process is also reflected in the break down of inter-regional trade networks, specifically to the south and to the west (Kenoyer, 1991).

### Cooking Vessels

In contrast with the elaborately painted vessels, the ridged cooking pot is one category of utilitarian ceramic that may have been used primarily in the private context of the household kitchen. This distinctive form of cooking pot (Fig. 3) begins to appear in both the Kot Dijian and Amri ceramic repertoire along with the black painted and red slipped vessels during the latest phase of the Regionalization Era (Dales and Kenoyer, 1986). It continues to be used during the Harappan Phase, and becomes the dominant form of cooking vessels at all Harappan sites. Numerous stylistic variations of this type of vessels occur in terms of form and decoration, but most commonly, the rim and ridged shoulder are painted with a simple red or black slip.

In South Asia today, different social groups and ethnic communities can be distinguished by the types of cooking and eating vessels that they use. Due to rules of ritual pollution and purity, the kitchen or cooking area is one of the most restricted areas in the household, whether isolated in a separate room or as a section of an open courtyard. While cooking vessels are made by potters and openly sold, their use is generally private and restricted. Consequently they can be seen as private symbols that reinforce the ideology at a household level and the different styles of cooking vessels publically reinforce social order at a larger community level.

Figure 4. Ornament Styles of the Harappan Phase.

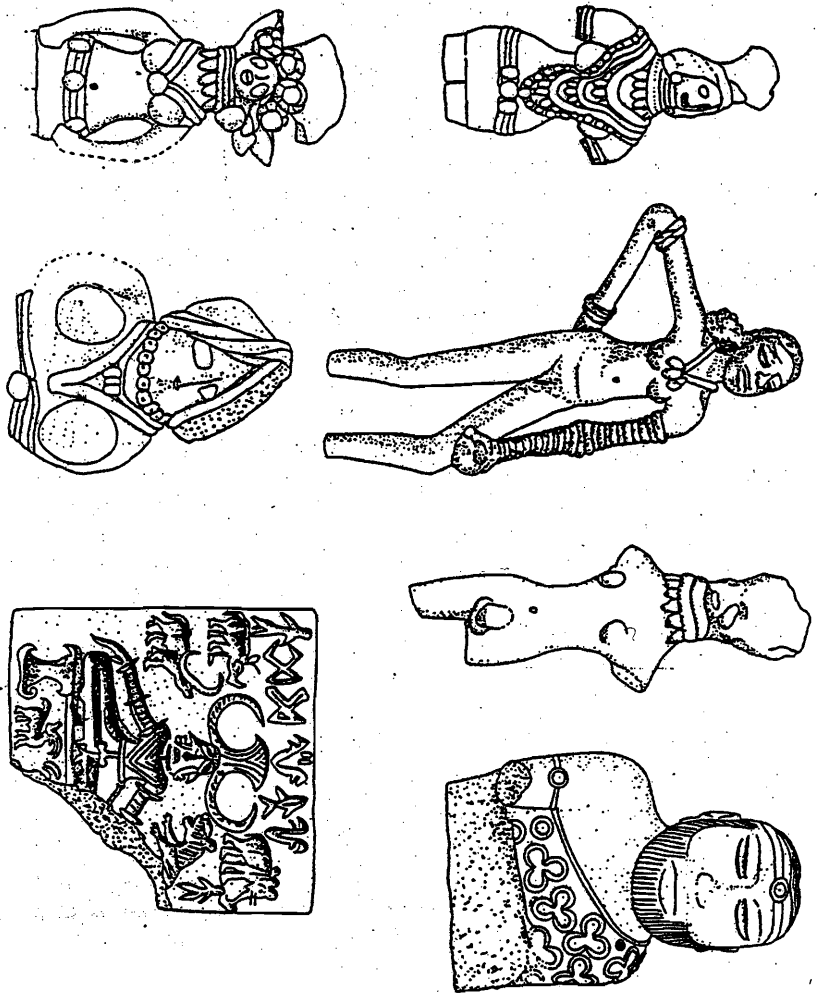
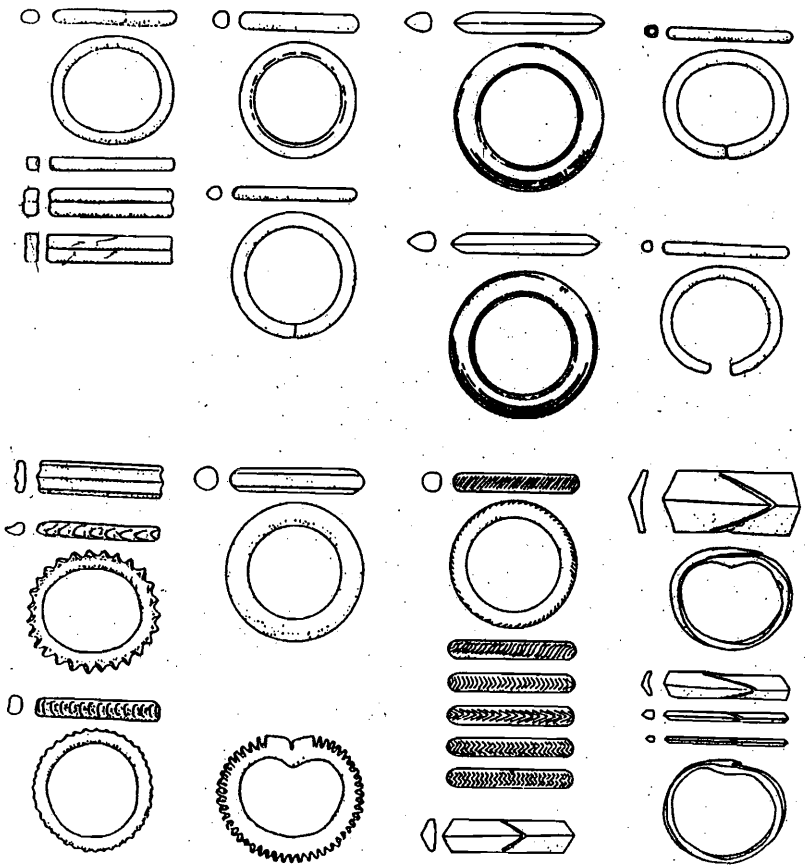


Figure 5. Major Harappan Bangle Types.



Cooking traditions are generally conservative and while changes in the utilitarian function of cooking vessels can be directly associated with major changes in foods, stylistic changes can be attributed primarily to cultural affiliation or ideology. At the end of the Harappan phase the use of the diagnostic ridged cooking vessel ends along with the use of Harappan style painted ceramics. The new forms of cooking vessels are functionally unchanged, indicating a continuity in certain basic foods and cooking habits, but stylistically they are quite different (Dales and Kenoyer, 1986; Jarrige, 1985). Of all the changes in the ceramics, this one perhaps has the most significance in demonstrating a shift in one aspect of ideology between the Harappan and the Late Harappan phase.

Detailed studies of chronological changes in ceramic style and the patterning of ceramic assemblage within the settlements are underway and will provide more information on the distribution of distinct communities within the cities. It is not unlikely that these studies will reveal a degree of ranking in technology and decorative motifs within the larger Harappan ceramic style. Such patterns can be compared with the very clear evidence for ranking that is seen in the ornaments that were used by different communities and individuals who were living and interacting in the cities.

### Ornaments

In contrast with the horizontal distribution of painted ceramics, Harappan Phase ornaments reflect the distribution of identical symbols across the vertical hierarchy, while at the same time reinforcing the hierarchy of the Indus society through the important differences in raw materials and technology. During the Harappan Phase, new styles of bangles and beads were made using different raw materials and in many cases different technologies (Fig. 4, 5, 6). The use of different raw materials to produce identical shapes and styles can be interpreted as the need to reinforce general cultural beliefs or aesthetics, ranking or stratification within the society as a whole appears to have been reinforced by the use of various raw materials and manufacturing processes that resulted in finished objects with different related values.

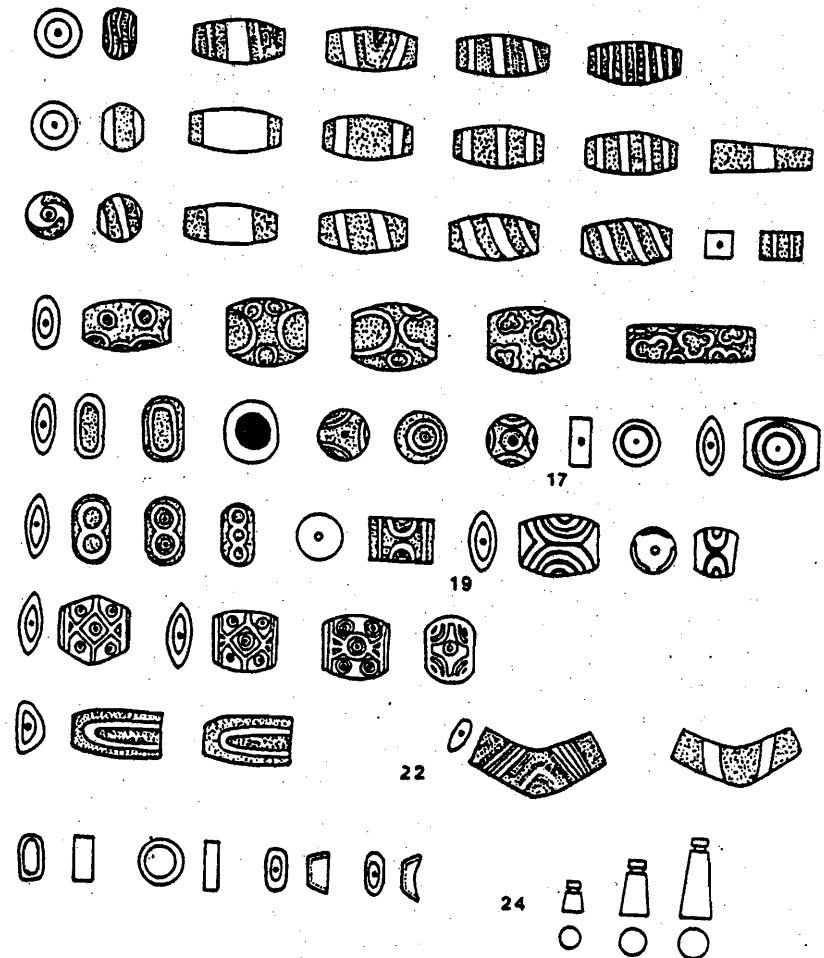


Figure 6. Harappan Bead Designs and Amulets.

For example, bangles with the same shape and design were made from common terra-cotta, fine processed clays, stone ware, glazed faience, copper/bronze, silver and gold (fig. 5). Decorated bangles were made from the same range of materials including several species of marine shell. Identical shapes of beads were made from terra-cotta, faience, agate/carnelian, copper/bronze, silver and gold (fig. 6). Circular and banded designs found on natural stones were copied in terra-cotta, inlaid stone, and painted stone. regardless of the specific meaning of these raw materials, the ornament shapes and styles, they all reflect the use of symbols that communicated socio-ritual status and identity.

On the one hand, from a distance many of these ornaments would have been indistinguishable and would serve as symbols to express overarching cultural beliefs or aesthetics. Because of the fact that they were made in many different raw materials, these symbols would have been accessible to all members of the society, thereby reinforcing important belief systems and the social order.

The precise nature of the ornament, its relative value and presumably the economic and socio-ritual status of the wearer would have been discernible upon closer examination. The manufacture of similar beads or bangles from different raw materials is not unique to the Indus Civilization, but is seen in all societies where valuable raw materials are not equally assessable to all members of a community. In such contexts, different raw materials can be used to differentiate individuals on the basis of economic, social and ritual affiliations.

While most Harappan ornaments would have been worn openly, providing public information about ones status and social affiliation, some beads and pendants appear to have been worn hidden from view under clothing or separate from the more elaborate ornaments. Such ornaments would have function as private symbols that informed and reinforced ideologies or legitimation of the social order on a more intimate level (Dales and Knoyer, 1992).

These examples of both private and public ornaments illustrate the hierarchical use of symbols which in turn reflect the stratification and social order of Indus society. After over 700 years

of apparently continuous use, many of the distinctive styles of Indus ornaments disappeared. Harappan ornaments were replaced by stylistically different forms but in most case there was a continuity in general function and technology of production. Shell bangles continued to be worn in some regions and in others were replaced by faience and eventually glass or ivory bangles (Kenoyer, 1983). Beads with specific designs or motifs continued to be produced in a wide range of materials that can be ranked and correlated to socio-economic or ritual status (Kenoyer, 1986). Private ornaments that were used to define social sub-sets continued to be produced and are still an important feature of ornaments in Pakistan and India (Kenoyer, 1992).

### Discussion

Specific aspects of legitimation of the ideology that served to integrate the Indus state cannot be directly addressed without the aid of written texts. However, it is clear that visual representations of ethnic identity, status and wealth along with the segregation of living areas and areas of public interaction were critically to the maintenance of the Harappan state level social order. Each of the categories of symbols discussed above provides a distinct perspective on the organization of the Indus society and gives some insight of the ideology and legitimation of the Indus state. Many other categories of artifacts, architecture, etc. can be contributed to this discussion of ideology and legitimation, but it is not possible to go into detail in this paper.

Although my conclusion about Indus ideology and political organization are different for those proposed by some other scholars (Miller, 1985; Fairservis, 1989; Ratnagar, 1991) one point that we all seem to agree on is that the socio-political and economic organization of the Indus state was significantly different from early states in other regions of the world. It is clear that the Indus elites had very different, but equally effective means of distinguishing themselves within their own cultural context. The objects that are most visible archaeologically have been presented above and clearly demonstrate the importance of public symbols of wealth and power, literacy and ritual legitimation.



Seals represent the dominant socio-economic, political and ritual communities, and the symbols on the seals reflect the source of legitimation for their political, economic and ritual control. Even though we cannot interpret them specifically the unicorn and other animal motifs found on the seals, along with the less common narrative seals that depict mythological scenes indicate that the basis for legitimation was probably ritual power rather than physical coercion. The predominant use of natural symbols and the repeated use of symmetrical geometric motifs such as the swastika may be taken to represent the naturalization of this ideology as universal law (Hodder, 1983). In later religions of South Asia, the swastika and stepped cross motifs come to be used as representations of universal order and as mandalas that defined and promoted ritual order.

In contrast, Miller (1985) suggests that the Indus state saw the development of an idiosyncratic form of social organization, which he likens to a conservative asceticism. He suggests that the Harappan (Indus) civilization is basically opposed to nature, with a standardization of and around the mundane. Furthermore he proposes that the people that were in control were conspicuous by their asceticism and by the lack of conspicuous consumption. The use of numerous natural motifs, regional and chronological variation, exquisitely produced and elaborate ornaments all serve to contradict such a conclusion.

Fairservis (1989) proposed that the Indus civilization was a chieftainship and not a state level society. On the basis of his identification of Indus script with various Dravidian language roots, he has presented a detailed reconstruction of Harappan social organization and ideology. While many of his ideas are attractive, the archaeological evidence does not support some of his conclusions and many of his interpretations cannot be tested at all. He states that the prime function of these seals was as a marriage badge and that they were only occasionally used for stamping. Besides the fact that the use of an intaglio (reverse) seal for a marriage badge is somewhat peculiar, the discovery of numerous seal impressions and seals with wear form repeated stamping clearly demonstrate that they were made to be used as seals. The idea that these seals represent sodalities of totemic clans that were divided into two

moieties is not testable because these seals were never buried with the dead.

An important mechanism of control by the elites in later period in South Asia has been the control of ritual knowledge and legitimation through the restriction of access to written or memorized documents. Although repeatedly challenged by reformers and benevolent leaders, the literate Brahminical elites were able to dominate ritual ideology and in many cases socio-economic organization through their ability to control knowledge. In the context of the Indus state, the limited distribution of written materials and their use by elites suggests that this pattern of control may have started as early as the first urbanism in the Indus cities.

Weights are a symbol of economic and probably represent taxation, which is another important mechanism used for economic control. The standardized weight system developed by the Indus elite continued to be maintained after the decline of the Indus state and was eventually adopted by the Imperial Mauryan State. Historically, this system was used for coinage and taxation, and it is still used by many traditional communities, especially merchants who deal in precious metals and gems. If the weights do indicate a form of taxation then we must assume that some form of bureaucratic infrastructure was present in the major cities. The lack of detailed records on archaeologically preserved materials has led some scholars (Ratnagar, 1991) to conclude that there was no formal bureaucratic system. However, the use of palm leaf manuscripts and account ledgers in historical South Asia reflect a cultural choice regarding the form of recording medium and this tradition may have its beginning in the Indus state.

Some form of coercion is usually necessary for the implementation of and maintenance of a taxation system and it is not unlikely that some physical coercion was used to bring many communities under the socio-economic order of the Indus state. However, the lack of visual reminders of physical coercion suggests that the benefit of organized trade and standardization appear to have been mutually beneficial to those being integrated into the Indus system.

Ceramic styles and painted motifs served as a symbol of pan-Indus ideology which had sufficient room for regional variation. Specific aspects of this ideology were further reinforced by the repetition of symbols found on ceramics, using different materials and object; for example, carved ivory gaming pieces, shell inlay, geometric and narrative motifs on seals, terra cotta figurines, and the stylistic aspects of copper/bronze tools and vessels. Together, these artifacts demonstrate the integrative power of legitimation mechanisms over a wide range of communities in a vast geographical region. Similar types of artifacts may have been used as symbols in the subsequent periods, but detailed studies remain to be undertaken, specifically for the Mauryan and early Kushana periods.

In the Indus context, ornaments appear to have served as symbols of hierarchy and shared beliefs. The commonality of ornament styles within the urban centers and in distant settlements is a strong indicator of shared values, although specific meanings of the ornaments styles were probably regionally varied. Some of the uniformity in ornaments may derive from their production by specialists who were either centrally located or were widely distributed in tightly knit hereditary communities. The fact that many of these skills were modified or lost at the end of the Indus state may indicate that specific stylistic and technological aspects of these crafts were taught through apprenticeship that was in turn closely tied to the prevailing ideology. Faience production declines and is replaced by glass, specific types of long carnelian beads are no longer produced, the decorative designs on carnelian beads and shell bangles change dramatically.

On the other hand, the basic ideologies that stimulated the production of these types of symbols appear to have continued much longer and were eventually incorporated in the urban culture of the Early Historical states, 300 B.C.

Glass bangles came to be used in specific ritual and social contexts as non-verbal symbols of status, marriage or widowhood, possibly replacing similar ideologies that that were prevalent for faience and terra-cotta bangles. The new designs that appear on the Early Historical period carnelian beads and other forms of ornaments can positively be identified with prevailing beliefs of Hindu,

Buddhist and Jain sects. Iconographic evidence for the use of ornaments to depict hierarchy is quite well documented by art historians, and the shared beliefs of religious sects are commonly represented by clothing, hairstyle and ornaments (e.g. Ajanta murals).

Where as in the past scholars have emphasized the discontinuities between the Indus state and later Vedic and early Historic period polities, at present there is considerable evidence for linkages, Continuities in the use of the specific technologies, types of symbols and even the weight system indicate that some of the basic ideologies and infrastructures developed by the Indus state were adopted and modified by later cultures that occupied the same regions as well as those to the east in the Gangetic basin (Kenoyer, 1993). Miller (1985) has suggested that the decline of the Indus Civilizations was the result of a legitimation crisis, a breakdown of the ideological control that unified the various elements of the civilization and justified its continuance.

There is little question that legitimation of the Harappan society became disrupted, but this was most likely due to the disruption of the agricultural base which in turn was affected by changing river flow. The eventual breakdown of economic exchange and a general decentralization of control would have contributed to a legitimation crisis that could have seriously undermined and eventually broken down the integrative power of the state.

However, it is possible to define the presence of regional polities that maintained certain features of the earlier Indus state and these qualities can be correlated with the Late Harappan cultures in the northern Indus region, the upper Ganga—Yamuna Doab, Sindh and Gujarat. Along with their Indus connection they would have made it difficult for a totally new social and political organization to evolve in the Indus core region. Current research is beginning to demonstrate that the transition from the Indus to the Early Historical state is not a Dark Age, but a period of socio-political reorganization and ideological synthesis. It is no longer tenable to conceive of invading Aryans bringing in a totally new ideology that resulted in a new state society and the eclipse of the Indus culture and ideology.

In fact, the next state level society developed further to the east in the middle and lower Gangetic basin, which falls outside the eastern periphery of the Indus core region. During the period from 600 B.C. to 300 B.C. we see formation of kingdoms and variously organized republics in the regions spanning the northern and eastern periphery of the Indus region (Prasad, 1984, 1987). Eventually, the dominant role was taken by communities in the middle and lower Gangetic basin (Magadhan and Mauryan) and the Mauryan state was firmly established by military conquest which subdued and integrated the surrounding polities, including the Indus region.

Military conquest and a strongly centralized state ruled by a king represent a very different ideology from that of the earlier Indus state, and change is clearly visible in the archaeological record. Fortifications, weapons, palaces and royal symbols confirm specific aspects of the extensive literary documentation for the organization and structure of the Mauryan state. The fact that this state evolved on the external periphery of the Indus region may indicate that certain aspects of ideology and the legitimation of social organization in the Indus state continued to have an effect on communities in the core regions of the Indus and along its immediate periphery. Eventually, after conquering and annexing the Indus core regions, the new Mauryan state appears to have absorbed and assimilated many of the earlier characteristics of the Indus state; e.g. the weight system and various symbols mentioned above.

In conclusion, this paper attempts to illustrate the potential for understating aspects of the Indus state through the identification and analysis of symbols that are distinctive of the Indus state and also demonstrate important continuities with later cultures in the subcontinent. Ongoing research at Harappa and many other sites in Pakistan and India are beginning to contribute new types of detailed information on the functional and symbolic role of objects during the Indus period. When combined with historical, linguistic and anthropological approaches these archaeological data will be important for testing and refining our understanding of early state level societies in general.

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## References

- Allchin, B. & Allchin, F. R.* (1982). *The Rise of Indus Civilization in India and Pakistan*, Cambridge University Press, Cambridge.
- Anderson, R.L.* (1989). *Art in Small-Scale Societies*. Prentice Hall, Englewood Cliffs, N.J.
- Bhan, S.* (1973). The Sequence and Spread of Prehistoric Cultures in the Upper Saraswati. In: Agrawal, D.P. and Ghosh, A. (ed.), *Radiocarbon and Indian Archaeology*, Bombay, pp. 252-263.
- Bhan, S. and Shaffer, J.G.* (1978). New Discoveries in Northern Haryana. *Man and Environment*, 2: 57-68.
- Casal, J.-M.* (1964). *Fouilles d'Amri*, Commission des Fouilles Archéologiques, Paris.
- Chattopadhyaya, B.* (ed.) (1987). *Essays in Ancient Indian Economic History*. Munshiram Manoharlal, New Delhi.
- Dales, G.F.* (1973). Archaeological and Radiocarbon Chronologies for Protohistoric South Asia. In Hammond, N. (ed.), *South Asian Ar-*

*chaeology 1973*, Duckworth, London pp.157-170.

- Dales, G.F.* (1976). Shifting Trade Patterns Between the Iranian Plateau and the Indus Valley in the Third Millennium B.C. In Deshayes, J. (ed.), *Le plateau iranien et l'Asie Centrale des origines à la conquête islamique*, C.N.R.S., Paris, pp.67-68.
- Dales, G.F. and Kenoyer, J.M.* (1986). *Excavations at Mohenjo Daro, Pakistan: The Pottery*. University Museum Press, Philadelphia.
- Dales, G.F. and Kenoyer, J.M.* (1989). *Preliminary Report on the Fourth Season of Research at Harappa, Pakistan*. U.C. Berkeley and U.W. Madison.
- Dales, G.F. and Kenoyer, J.M.* (1990a). Excavations at Harappa - 1988. *Pakistan Archaeology* 24: 68-176.
- Dales, G.F. and Kenoyer, J.M.* (1990b). *Preliminary Report on the Fifth Season at Harappa, Pakistan, January 1 — March 31, 1990*. U.C. Berkeley and U.W. Madison.
- Fairservis, W.A.* (1956). Excavations in Quetta Valley, West Pakistan. *Anthropological Papers of the American Museum of Natural History*. 45 (part 2):
- Fairservis, W.A.* (1959). Archaeological Surveys in the Zhob and Loralai Districts, West Pakistan: *Anthropological Papers of the American Museum of Natural History* 47 (part 2):

- Fairservis, W.A. (1989) An epigenetic view of the Harappan culture. In Lamberg-Karlovsky, C.C. (ed.), *Archaeological Thought in America*, Cambridge University Press, New York, pp. 205-217.
- Flam, L. (1981) *The Paleogeography and Prehistoric Settlement Patterns in Sind, Pakistan (ca. 4000-2000 B.C.)*, Ph.D. University of Pennsylvania.
- Frank-Vogt, U. 1993 Stratigraphy and Cultural Process at Mohenjo-Daro. In: Gail, A. & Mevissen, G. (eds.), *South Asian Archaeology 1991*, Stuttgart, 87-100
- Gould, R.A. and Shiffer, M.B. (ed.). (1981). *Modern Material Culture: The Archaeology of Us*. Academic Press, New York.
- Hedge, K.T.M., Sonawane, V.H., Shah, D.R., Bhan, K.K., Ajitprasad, Krishnan, K. and Chardnan, S.P. (1988). Excavation at Nagwada - 1986 and 1987: A Preliminary Report. *Man and Environment* 12: 55-56.
- Hodder, I. (ed.). (1982). *Symbolic and Structural Archaeology*. Cambridge University Press, Cambridge.
- Hodder, I. (1983a) *The Present Past*. Pica Press, New York.
- Hodder, I. (1983b) *Symbols in Action: Ethnoarchaeological Studies of Material Culture*. Cambridge University Press, Cambridge.

- Jacobsen, J. (1986) The Harappan Civilization: An Early State. In Jacobsen, J. (ed.), *Studies in the Archaeology of India and Pakistan*, Oxford and IBH, New Delhi, pp. 137-174.
- Jansen, M. (1987). Mohenjo-Daro — Stadt am Indus. In Jansen, M. and Urban, G. (ed.), *Vergessen Städte am Indus*, Philip von Zabern, Mainz am Rhein, pp. 119-136.
- Jansen, M. (1989). Early Cities—A Comparative Study of Urban Development. *Lahore Museum Bulletin*. 11 (1): 5-14.
- Jarrige, J.-F. (1977). La Civilisation de l'Indus. *La Recherche No. 76* 8: 245-ff.
- Jarrige, J.-F. (1983). *New Trends in the Archaeology of Greater Indus in the Light of Recent Excavations at Mehrgarh, Baluchistan*. International Seminar of Peshawer.
- Jarrige, J.-F. (1985). Continuity and Change in the North Kachi Plain (Baluchistan, Pakistan) at the Beginning of the Second Millennium B.C. In Shotsmans, J. and Taddei, M. (ed.), *South Asian Archaeology 1983*, Instituto Universitario Orientale, Naples, pp. 35-68.
- Jarrige, J.-F. (1988). *Les Cités oubliées de l'Indus*. Musée National des Arts Asiatiques Guimet, Paris.

- Jarrige, J.-F. (1981). Economy and Society in the Early Chalcolithic / Bronze Age of Baluchistan: New Perspectives from Recent Excavations at Mehrgarh. In Härtel, H. (ed.), *South Asian Archaeology 1979*, Dietrich Reimer, Berlin, pp.93-114.
- Jarrige, J.-F. (1982). Excavations at Mehrgarh: Their Significance for Understanding the Background of the Harappan Civilization. In Possehl, G.L. (ed.), *Harappan Civilization*, Oxford and IBH Publishing Co., New Delhi, pp.79-84.
- Jarrige, J.-F. (1984). Chronology of the Earlier Periods of the Greater Indus as Seen from Mehrgarh, Pakistan. In Allchin, B. (ed.), *South Asian Archaeology 1981*, Cambridge University Press, Cambridge, pp.21-28.
- Joshi, J.P. and Parpola, A. (ed.). (1987) *Corpus of Indus Inscriptions*. Suomalainen Tiedeakatemia Toimituksia, Annales Academiae Scientiarum Fennicae, Saja-Ser, B, Nide, - Tom. 239. Memoirs of the Archaeological Survey of India, No. 86. Suomalainen Tiedeakatemia, Helsinki.
- Kenoyer, J.M. (1983). *Shell Working Industries of the Indus Civilization: An Archaeological and Ethnographic Perspective*. Ph.D. University of California—Berkeley.

- Kenoyer, J.M. (1984). Shell Working Industries of the Indus Civilization: A Summary. *Paléorient* 10 (1): 49-63.
- Kenoyer, J.M. (1986). The Indus Bead Industry: Contributions to Bead Technology. *Ornaments* 10 (1): 18-23.
- Kenoyer, J.M. (1989). Socio-Economic Structures of the Indus Civilization as reflected in Specialized Crafts and the Question of Ritual Segregation. In Kenoyer, J.M. (ed.), *Old Problems and New Perspectives in the Archaeology of South Asia*, Dept. of Anthropology, U.W.-Madison, Madison, WI, 2, pp.183-192.
- Kenoyer, J.M. (1991) The Indus Valley Tradition of Pakistan and Western India. *Journal of World Prehistory* 5 (4), 331-385.
- Kenoyer, J.M. (1992). Ornament Styles of the Indus Tradition: Evidence from recent excavations at Harappa, Pakistan. *Paléorient* 17 (2-1992): 79-98.
- Kenoyer, J.M. (1993). Interaction Systems, Specialized Crafts and Culture Change: The Indus Valley Tradition and the Indo-Gangetic Tradition in South Asia. In Erdosy, G. (ed.), *Archaeological and Linguistic Approaches to Ethnicity in South Asia*, (in press).
- Mann, M. (1986). *The sources of social power: a history of power from the begin-*

- ning to A.D. 1760. Cambridge University Press, Cambridge.
- Miller, D. (1985). Ideology and the Indus Civilization. *Journal of Anthropological Archaeology*. 4 (1): 34-71.
- Mughal, M.R. (1970). *The Early Harappan Period in the Greater Indus Valley and Northern Baluchistan*. Ph.D. University of Pennsylvania, dept. of Anthropology.
- Mughal, M.R. (1972). *Explorations in Northern Baluchistan, 1972*. 11th Annual Symposium on Archaeological Research in Iran, Tehran.
- Mughal, M.R. 1982 Recent Archaeological Research in Cholistan Desert. In: Possehl, G.L. (ed.), *Harappan Civilization*, Oxford and IBH Publishing, New Delhi, 86-95.
- Mughal, M.R. (1990). Archaeological Field Research in Pakistan since Independence: An overview. Professor H.D. Sankalia Memorial Volume, Deccan College, Pune, 49, pp.261-277.
- Mughal, M.R. (1991). The Cultural Patterns of Ancient Pakistan and Neighbouring Regions circa 7000-1500 B.C. *Pakistan Archaeology* 26 : 218-237.
- Mughal, M.R. (1992) *The Geographical Extent of the Indus Civilization During the Early, Mature and Late Harappan Times*.

- Possel, G.L. (1987). *The Sorath Harappan: A New Regional Manifestation of the Indus Indus Urban Phase*. Assoc. of South Asian Archaeologists in Western Europe.
- Prasad, K. (1984). *Cities, Crafts and Commerce under the Kusanas*. Agma Kala Prakashan, Delhi.
- Prasad, K. (1987). Urban Occupations and Crafts in the Kusana Period. In Chattopadhyaya, B. (ed.), *Essays in Ancient Indian Economic History*, Munshira Manoharlal, New Delhi, pp. 11-120.
- Rao, S.R. (1979). *Lothal: A Harappan Port Town, (1955-62)*, Vol. 1. Memoirs of the Archaeological Survey of India, 78. Archaeological Survey of India, New Delhi.
- Rao, S.R. (1985). *Lothal: A Harappan Port Town, (1955-62)*, Vol. 2. Memoirs of the Archaeological Survey of India, 78. Archaeological Survey of India, New Delhi.
- Renfrew, C., Rowlands, M.J. and Segraves, B.A. (ed.). (1982). *Theory and Explanation in Archaeology*. Academic Press, New York.
- Rubin, A. (1989). *Art as Technology*. Hillcrest Press, Beverly Hills.
- Shaffer, J.G. (1982). Harappan Culture: A Reconsideration. In Possehl, G.L. (ed.), *Harappan Civilization*, Oxford and

- IBH Publishing, New Delhi, pp. 41-50.
- Shaffer, J.G. (1991). The Indus Valley, Baluchistan and Helmand Traditions: Neolithic Through Bronze Age. In Ehrich, R. (ed.), *Chronologies in Old World Archaeology (3rd Edition)* University of Chicago Press, Chicago, 1, pp.441-464.
- Shaffer, J.G. (1992). Reurbanization: The Eastern Punjab and Beyond. In Spodek, H. and Srinivasan, D.M. (ed.), *Urban Form and Meaning in South Asia: The Shaping of cities from Prehistoric to Precolonial Times*, National Gallery of Art, Washington, D.C., Washington, D.C., pp.53-68.
- Shaffer, J.G. and Lichtenstein, D.A. (1989). Ethnicity and Change in the Indus Valley Cultural Tradition. In Kenoyer, J.M. (ed.), *Old Problems and New Perspectives in the Archaeology of South Asia*, Wisconsin Archaeological Reports, Madison, WI, 2, pp.117-126.
- Smith, C.S. (1976). On Art, Invention Technology. *Technology Review* 79: 36-41.
- Thapar, B.K. (1982). The Harappan Civilization: Some Reflections on Its Environment and Resources and their Exploitation. In: Possehl, G.L. (ed.), *Harappan Civilization*, Oxford and IBH Publishing, New Delhi, pp.3-13.

Thapar, R.

(1984). *From Lineage to State: Social Formations in the Middle-First Millennium B.C. in the Ganga Valley*. Oxford University Press, Bombay.

Wright, H.T.

(1986). The Evolution of Civilization. In Meltzer, D.J., Fowler, D.D. and Sabloff, J.A. (ed.), *American Archaeology: Past and Future*, Smithsonian Institution Press, Washington, D.C., pp.323-365.