

**Development of the Inter-regional Interaction System
in the Indus Valley and Beyond
- A Hypothetical View towards the Formation of an Urban
Society -**

1 Role of the Inter-regional Interaction in the Urbanization Process

Since the establishment of sedentary settlements with the introduction of agriculture, human society entered into a new arena of its history. The establishment and expansion of inter-regional cultural interaction within and beyond a region is one of the phenomena related to this revolution. It enabled the human society to extend its world through migration, trade and socio-cultural interaction. People sought out various raw materials and utilized them for daily consumption as well as for special purposes, such as trade or for symbolizing their culture and society. The development of inter-regional interaction through history expanded the reach of human society in terms of space and complexity of society. The regional society strengthened its social tie with neighbours through the socio-cultural interaction within and beyond the society.

Urban society is a highly complex system in terms of its institutions, hierarchy, integration, etc. A vast region is incorporated into one social system which is based on cities. This is common nature among human societies all over the world, even if the spaces and time periods differ among them. On this basis, it is naturally assumed that the process of development of an urban society is accompanied by the development of an inter-regional interaction system, which forms a foundation of the social system and socio-political structure of the urban society (see Schortman and Urban 1992 for the theoretical issues of the inter-regional interaction studies).

If one looks at human society since its birth, there is a clear trajectory of development of social relations and an increase of inter-regional interactions over time. Starting from a very small fragmented society with sporadic or meagre relations with neighbouring communities, the humanity developed a highly complex network of social relations which covered an extensive area. The birth of urban societies in human history is a consequence of this development of social relations and inter-regional interaction systems. Thus the evaluation of inter-regional interaction systems in the urbanization process is significant for understanding the intra- and inter-regional social relations of urban societies and how the social relations had developed and changed in the process.

In order to understand the development of inter-regional interaction systems in the archaeological records, one can look at the differences of material culture in space to differentiate the regional manifestation of material cultures and at similarities of material culture among regional cultures to identify cultural contacts and social relations among them. By placing these differences and similarities in time, one can understand the change and development of inter-regional relations over time. The inter-regional relations may not be necessarily stable, especially during a period of social development like urbanization. At such times, the inter-regional social relations may change frequently and drastically as such social transformation entails reorganization of social structure and institutions. In this sense, it is very significant to look at the dynamic

aspects of inter-regional relations and interaction in the urbanization process; how the regional cultures were related to each other and what social relations existed in the development of an urban society as a social foundation of the society.

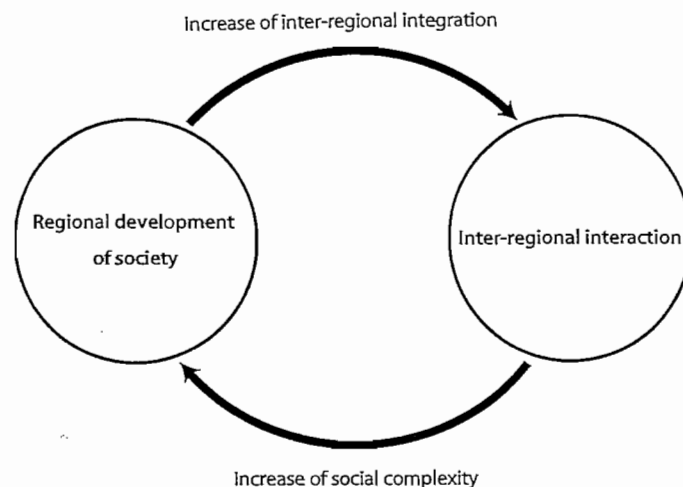


Figure 1. Diagram showing the relation between local society and inter-regional interaction

In South Asian archaeology, and especially in Indus archaeology, the idea of the 'Early Harappan period' argued by M.R. Mughal from the 1970s onwards is important for understating the formation process of the urban society of the Indus Civilization (Mughal 1970, 1991). By analyzing the stratified evidence from Kot Diji in Sindh, Mughal argued that the Indus Civilization was not founded by the influences from West Asia but was an indigenous cultural development in the Greater Indus Valley. By the 1970s archaeological excavations at several sites like Kot Diji, Gumla, Damb Sadaat and Kalibangan revealed various regional pre-Harappan material cultures. Mughal, based on these excavations, pointed out that these newly revealed pre-Harappan cultures, which were considered by him as being related to each other, formed the early phase of the Indus Civilization and that the birth of civilization in South Asia was an indigenous process of social and cultural development in the Greater Indus Valley. The following decades of the Indus archaeology witnessed great efforts by many archaeologists to understand the nature and role of the Early Harappan period in the urbanization process of the region. For example, the excavations at Mehrgarh and Nausharo in Kachi by the French mission have revealed a long cultural sequence from the beginning of agriculture in the seventh millennium BCE to the end of the Indus Civilization in the beginning of the second millennium BCE, enabling archaeologists to establish the trajectory of cultural development in the region (Jarrige, C. et al. 1995). The excavations at Harappa have also provided great information on the formation of an urban centre of the Indus Civilization (Meadow ed. 1991; Kenoyer 1993; Meadow and Kenoyer 1994, 1997, 2005; Kenoyer and Meadow 2000). Besides these, there are a number of important sites for the understanding the development of regional cultures before the urban phase and their contribution to the development of urban society in the Indus.

On the other hand, excavations at several sites in Central Asia and on the Iranian Plateau have revealed various archaeological evidence, which is contemporary with the Early Harappan and Harappan periods (see De Cardi 1970; Tosi 1983; Salvatori and Vidale 1997; P'yankova 1994; Hiebert 1994; Ligabue and Salvatori eds. 1990 and so

on). These cultures are also regional cultural manifestations but show similarities with those in the Greater Indus Valley in some aspects of the material cultures indicating cultural contacts with the Greater Indus Valley, especially with Balochistan. Although a simple diffusionistic idea of direct cultural influence from the west on the Indus Civilization must be discarded, it has been obvious that at least the cultures in Balochistan were inter-related with those on the Iranian Plateau and in Central Asia. At this point, it can be presumed that the Indus Valley was connected with the Iranian Plateau via Balochistan, whether directly or indirectly. This is not to say that the Indus Valley was always under the cultural influence from the west, but to emphasize that there might have been an extensive socio-cultural network covering the Greater Indus Valley, the Iranian Plateau and Central Asia, on which various commodities and socio-cultural information were exchanged. There is no reason to exclude the possibility of socio-cultural relations between the Indus Valley and the west.

The same view was presented by M. Tosi in the late 1970s (Tosi 1979). He stressed the significance of the cultural entity in eastern Iran. According to Tosi, this regional concept includes Balochistan as well. He attempted to link eastern Iran and the Indus Valley through Balochistan and to explain the urbanization of both regions in the later part of the third millennium BCE as a cultural interaction. As stated above, his viewpoint is still of significance, archaeological data that have steadily accumulated since his paper, renew the picture of the inter-relations between the Iranian Plateau and the Indus Valley based.

At present, it seems important to investigate the developmental processes of regional cultures in various parts of Southwest Asia, including the Indus Valley and the Iranian Plateau, before the urban phase and to know how those regional cultures were intermingled and inter-related with each other through time in order to elucidate the urbanization process in the Greater Indus Valley and its role in Southwest Asian civilizations in the third millennium, and to correlate both the indigenous or local developments and the inter-regional relations. In other words, the reciprocal relationship between local developments and inter-regional relations must be considered if one admits that there were cultural relations between them.

In this paper, the author attempts an overview of the possible inter-regional relations from the fourth millennium BCE to the early centuries of the third millennium BCE. It is a hypothesis which is presented by gathering available data and which is to be tested by further data from ongoing and future research.

2 Chronological Framework

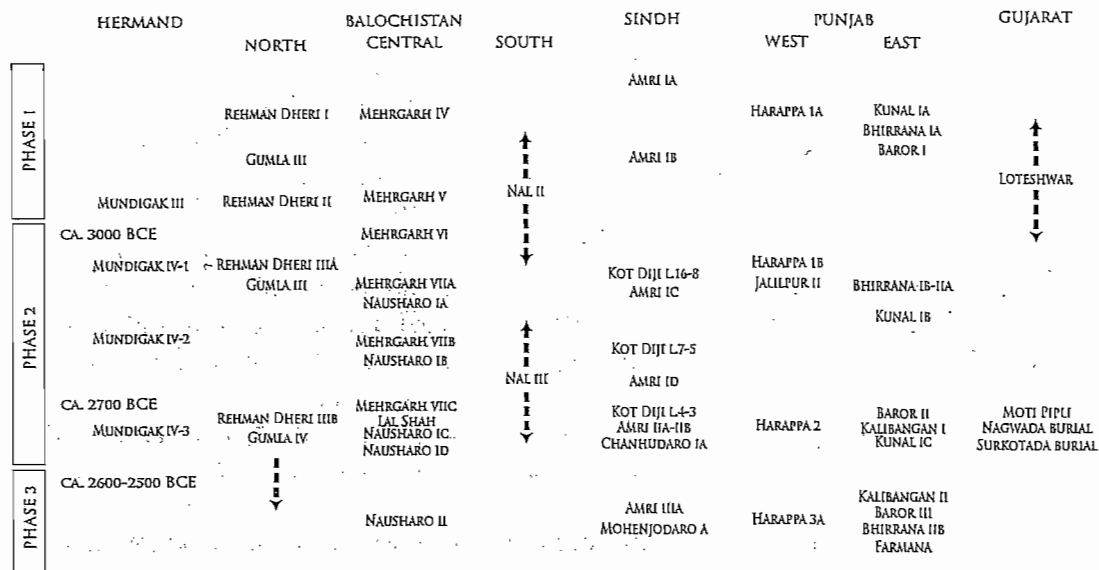
In this paper the author uses a chronological framework which enables us to trace the development of inter-regional relations through time. Although various chronological and cultural terms have been developed and used by archaeologists in Indus archaeology, the author divides the fourth and third millennia BCE into three phases as follows (Table 1).

Phase 1 The later part of the fourth millennium BCE is a period of development for the regional cultures of the Greater Indus Valley. Although the author admits that there were regional cultural developments before this time, it is during this period that the amount of archaeological evidence that defines the developments of regional cultures increases and we begin to see inter-regional relations.

Phase 2 The early part of the third millennium BCE. This time period corresponds to the Early Harappan period. It sees the development of inter-regional interaction over

the Greater Indus Valley as a foundation for the full-fledged urban society in the following period. In this paper, the author uses the term of 'Early Harappan' only to refer to a time period, not as having cultural genealogical meaning.

Phase 3 The middle and later parts of the third millennium BCE when the urban system developed in the Greater Indus Valley. It is called the Harappan period, the Mature Harappan period or the urban phase (e.g. Kenoyer 1998; Possehl 2002).



BHIRRANA I

Table 1. Chronological framework in this paper

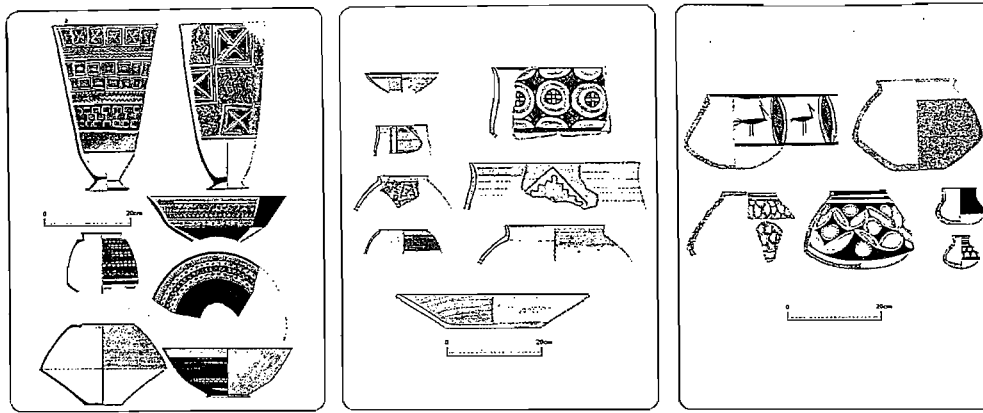
3 Inter-regional Relations before the Early Harappan Period: Phase 1

As stated above, it is in the later part of the fourth millennium BCE that regional cultures make their appearance in a clearer form. Although there are several archaeological sites all over Balochistan, such as Sheri Khan Tarakai (Khan et al. 1991), Jhandi Babar I (Ali and Khan 2001), Mehrgarh Period III (Jarrige, C. et al. 1995), Anjira (de Cardi 1965) and Sohr Damb/Nal Period I (Franke-Vogt 2005a-b), which have yielded pottery with the so-called Togau-style painting, it is not clear whether they were related to each other or not. It is worthwhile to note that some traits from these sites, for example animal-row motifs, have comparable counterparts in the Iranian Plateau and that precious raw materials like lapis lazuli, turquoise.

Marine shell, etc., were circulated in Balochistan (Frake 2008). However, due to the scarcity of data, it is unknown how these early ceramic cultures made their appearance in Balochistan. Another example is the site of Rana Ghundai where an unique ceramic style that shows stylistic similarities with the Iranian style has been attested (Ross 1946), although the distribution of this ceramic in Balochistan is unknown. Thus further excavations are necessary regarding this period.

In the later part of the fourth millennium BCE, regional cultures have been located all over the Greater Indus Valley (Figure 2). In northeast Balochistan, there is Tochi-Gomal ceramic style (Dani 1970-71; Durrani 1988; Khan et al. 2000). This ceramic style consists of painted pottery, mostly bowls, but also a limited number of dishes and vases, and pottery with a black band represented by vases and jars. The former contains polychrome paintings which are dominated by geometric designs, among which there are motifs common to the other parts of Balochistan, the Iranian Plateau and the southern Central Asia, like the stepped motif. During this period, southeastern Balochistan is characterized by the Nal ceramic style (Hargreaves 1929; Franke-Vogt 2005a-b). This ceramic style is characterized by an unique polychrome painted pottery. Most of the painting occurs in bowls and consists of animal and geometric motifs. In addition its colorization of polychrome painting, there are some common traits with the Iranian Plateau and southern Central Asia, like the stepped motif. In central Balochistan, the Mehrgarh Period IV ceramic style or Kech Beg ceramic style made its appearance at this time (Jarrige, C. et al. 1995). The distribution pattern of this ceramic style is still vague, but some traits, like small canisters, are common between the Nal ceramic style and those of Mehrgarh Period IV. The tall beaker which is found in Mehrgarh Periods IV and V is one of the strong indicators of cultural connections between Balochistan and the Iranian Plateau as it has been attested in Makran and southeast Iran. All of these ceramic styles are characterized by profuse painting and some motifs indicate connections with the Iranian Plateau and southern Central Asia (Biscione 1973; Tosi 1979). It is obvious that an inter-regional interaction system was formed between the Iranian Plateau and Balochistan during this period, as has been argued by various scholars (see Biscione 1973; Tosi 1979; Jarrige 1981; Franke 2008, etc). However it must be kept in mind that each ceramic style has its unique traits as well. This fact indicates that direct migration or direct borrowing of cultural traits did not occur. However cultural contacts made it possible that some cultural traits, especially painting motifs, were transmitted and transformed into regional styles. Thus it is very significant that Balochistan had contact and interaction with the Iranian Plateau by this time.

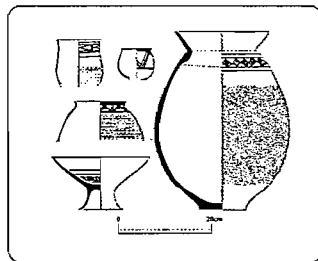
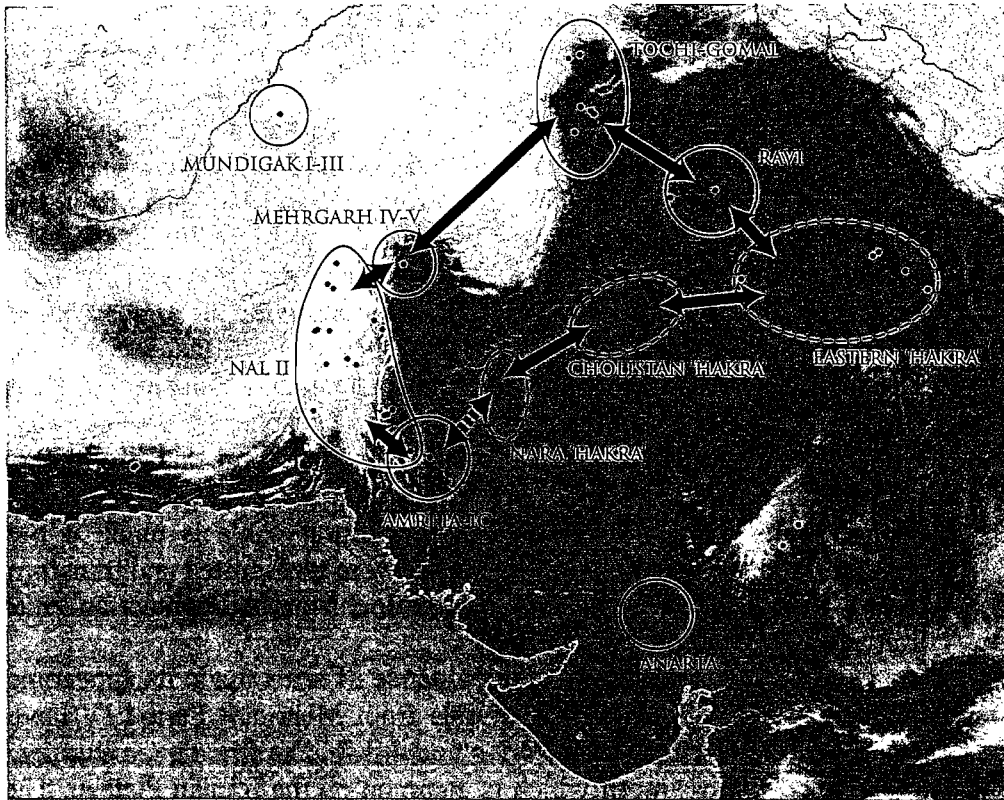
It is in this period that the evidence of seals made its appearance in Balochistan for the first time. Two terracotta seals from Mehrgarh Period IV have been illustrated (Jarrige, C. et al. 1995: Figure 4.9-e and 4.8-f). The first one is circular in shape and has a double criss-cross motif which is common on the Iranian Plateau. The other seal from Mehrgarh Period IV has a square shape and a geometric motif which consists of a combination of linear lines. Both have two holes in the centre, making them button-type seals, a type which is also common in Iran, especially in the sites of the Helmand Valley, i.e. Shahr-i Sokhta (Tosi 1983) and Mundigak (Casal 1961). An ivory seal with two holes on top from Rehman Dheri Period IB (Durrani 1988: Plate XVIII) is also dated to this period. It is carved with a pair of scorpions on one side and a pair of goats or ibexes on the other. These motifs are also commonly found on the Iranian Plateau.



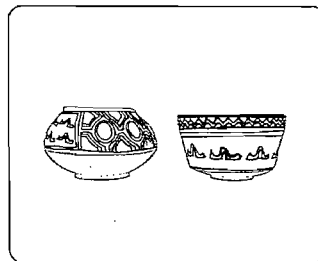
MEHRGARH IV-V

TOCHI-GOMAL

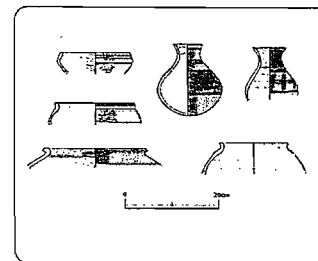
RAVI



AMRI IA-1C



NAL II



ANARTA

Figure 2. Cultural network in the later part of the fourth millennium BCE

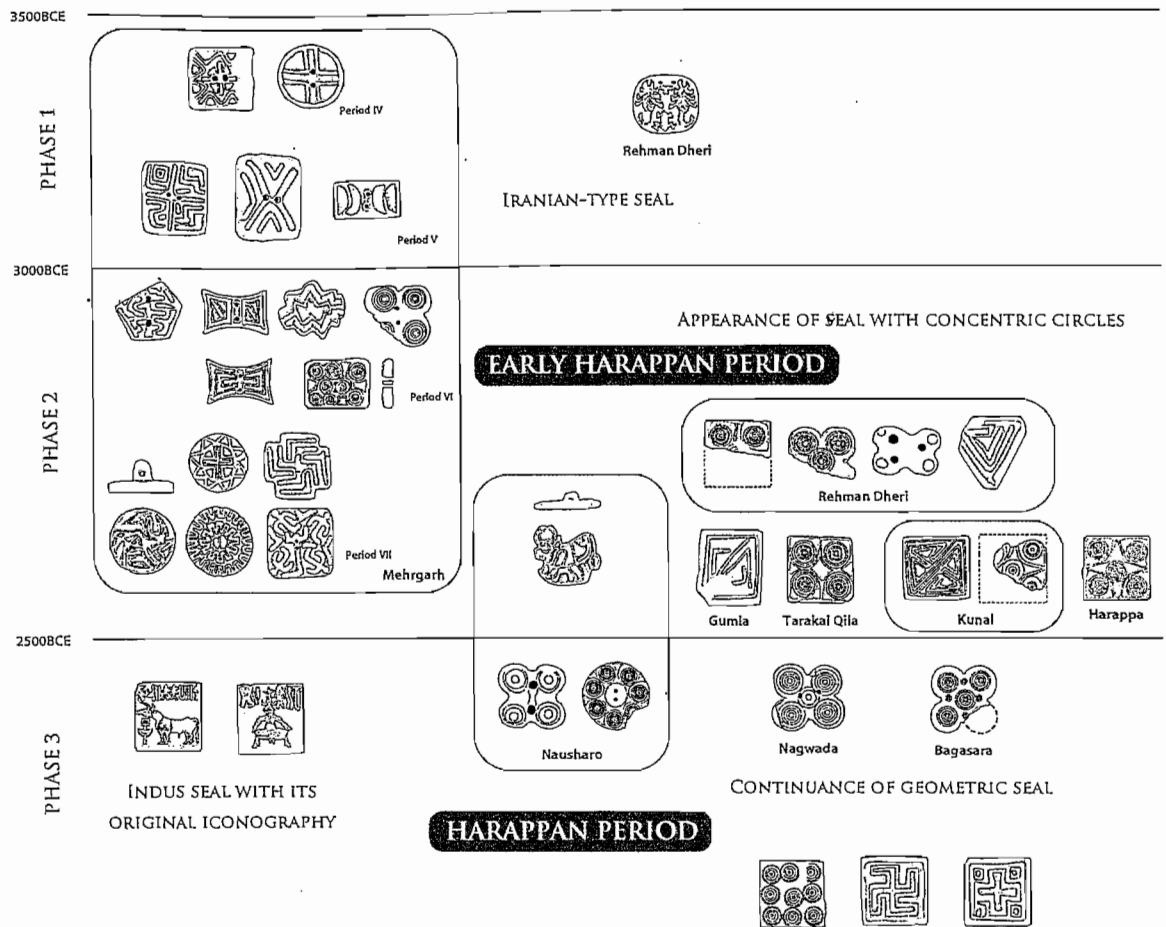


Figure 3 Seals in the pre-/Early Harappan period (not to scale)

Iranian seals which are related to the Balochistan seals are found in Tepe Hissar Periods I and II and in Shahr-i Sokhta Period II. The seals from Mundigak may also be added to the list of Iranian seals. The Iranian seals are generally characterized by geometric designs which consist of linear lines, like crisscrosses, stepped patterns, triangles, T-shapes, etc. Their shape can be in circular, square or stepped, the last one indicating a connection with southern Central Asia. While the seals from Tepe Hissar have a knob with a perforation on the back side, those from Shahr-i Sokhta and Mundigak are dominantly equipped with two holes in the centre. These differences may indicate the regional variation of seal forms on the Iranian Plateau. It is interesting to see that most of the Mehrgarh seals have two holes in the centre and no knob through time, indicating a connection with southeastern Iran. The Rehman Dheri seal can be regarded as of the same type.

The existence of seals is more important than the stylistic similarity of ceramic evidence since the seals are most probably connected with inter-regional interaction systems including trade. The seals are used not only for sealing traded materials but also for certifying its owner as a member of that activity. It is a matter of course that a trader visits a remote place far from his hometown and that he is required by merchants in a remote town to show some identification. In this occasion, the seals with a common design may be used to identify his affiliation. This may be the reason why designs and forms common to those from the Iranian Plateau were adopted in the seals from Balochistan. Thus the seals from Balochistan in this time period indicate that

Balochistan was involved in an interaction system which covered a vast area of eastern Iran, southern Central Asia and Balochistan.

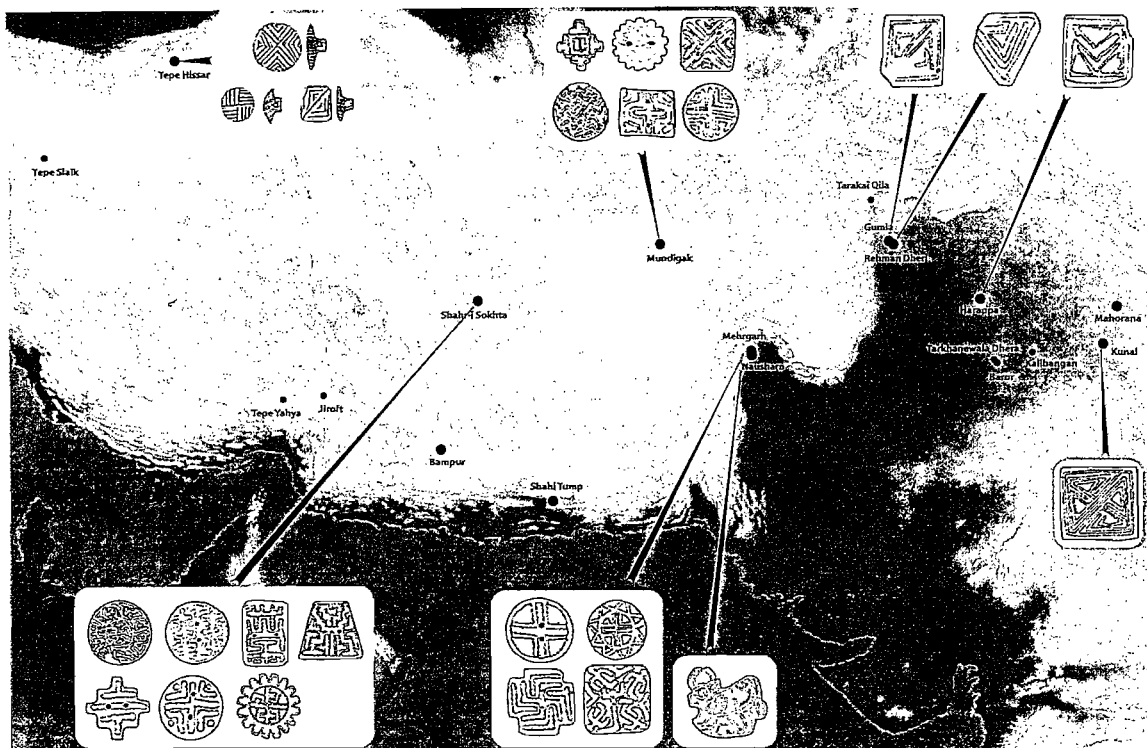


Figure 4 Distribution of the Iranian-type seals

In the Indus Valley and its eastern neighbouring regions, the so-called Hakra culture is relevant to this time period. Although the beginning of the Hakra culture has been dated to the early part of the fourth millennium BCE, it is included in this time period as it has also been evidenced that this culture continued until the later part of the fourth millennium BCE. This culture was first attested by M.R. Mughal in his exploration of the Cholistan Desert on the basis of ceramic evidence (Mughal 1997). This ceramic evidence includes various features which are categorized by Mughal into nine groups. They include both handmade and wheel-made wares and are decorated with incised and painted designs. The painting consists of geometric designs, some of which seem similar to motifs in Balochistan, though this is not definite. Jars are executed with thick slurry on the exterior.

In the 1990s, the term Hakra ware came to be used for pottery from sites in the Ghaggar Valley in the Indian territory and it is quite commonly adopted in India nowadays. The site of Kunal in Haryana is the first reported site where the term of Hakra ware was adopted, although it was in a brief form (Khatri and Acharya 1995). Unfortunately the ceramic evidence which was reported as the Hakra ware has not been published. After Kunal, the same term was used in preliminary reports of Rakhigarhi (Nath 2001) and Bhirrana (Rao et al. 2004, 2005, 2006), both in Haryana. Although the evidence from Rakhigarhi has not been illustrated, representative sherds from Bhirrana have been published. In the preliminary reports of the Bhirrana excavations, they are classified into eight groups. The excavators argue that the pottery from Bhirrana is very similar to the Hakra ware in Cholistan although they admit some differences which indicate regional variations. The pottery from Girawad in Haryana is also termed as a regional variation of the Hakra ware (Shinde et al. 2008a). The present author has had a

chance to work on the pottery from this site and found that it is characterized by almost the same set of features as those from Bhirrana. This indicates that there is a single ceramic style in the Ghaggar-Chautang Valley in the later part of the fourth millennium BCE. Although this ceramic style definitely has some stylistic and technical similarities with the Hakra ware in Cholistan, such as mud appliqué or thick slurry, the use of incised technique, and the dark slip which covers the wide area of the vessels, the differences must be kept in mind as well. The presence of handle on vases and the absence of painted geometric patterns in the Ghaggar-Chautang Valley are clear differences from the Hakra ware in Cholistan. The patterns of incised decorations are not entirely the same between Cholistan and the Ghaggar-Chautang Valley. These differences should not be ignored in considering the cultural entity in the archaeological record. In this sense, it is at least admitted that there was cultural contact and interaction between the Ghaggar-Chautang Valley and Cholistan since they constituted a single river system.

The term Hakra pottery is also adopted at some sites in Sindh (Mallah 2008a-b). According to my personal observation at the Shah Abdul Latif University, Khairpur, they are characterized by coarse fabric and lack any painting. It seems quite difficult to regard them as belonging to the same ceramic style as the Hakra ware in Cholistan, even if they may be dated to the same time period. In Figure 2, three groups of the Hakra pottery are shown with separate names in order to define their regional differences.

In the meantime, the Indus Plain during this period was not isolated from the Balochistan-Iran network. Some similarities have been pointed out between the Ravi pottery and pottery from Sheri Khan Tarakai in Bannu and Rehman Dheri in Gomal (Kenoyer and Meadow 2000: 62-63). The pottery from Jalilpur (Mughal 1972, 1974) in the Indus Plain also shows a similarity to the Tochi-Gomal ceramic style. A fragment of a seal from Harappa Period I also corroborates the possibility of inter-regional interaction between northeast Balochistan and the Indus Plain.

Another prehistoric culture dated to this period is the Amri culture in southern Sindh (Casal 1964). The Amri ceramic style is characterized by an unique painting style which differs from those in southern and central Balochistan. The distribution pattern of this culture is still obscure, but it may be regarded as belonging to the Balochistan ceramic tradition in that it has some painting motifs common in Balochistan. On the other hand, the relations with the Hakra ceramic style are a matter to be investigated further.

In Gujarat, a ceramic style which is termed the 'Anarta ceramic tradition', may have appeared in the early fourth millennium BCE and continued into the third millennium BCE (Patel 2008; Ajithprasad 2002). It also has an unique painting style on vases and bowls. In terms of manufacturing technique, it is characterized by hand-built technique with a slow rotation and a streak-burnishing technique for the surface finish. At present it is difficult to define its relations with neighbouring ceramic styles.

To summarize the discussion above, by the end of the fourth millennium there appeared various regional cultures throughout the Greater Indus Valley. Some were connected as evidenced by traits like the decoration and surface treatment of pottery. However, it is worthwhile to note that the distribution area of each culture remains limited even though some traits spread over a vast area. In the meantime, it is also noteworthy that Balochistan came to be involved in the interaction network linking the Iranian Plateau and southern Central Asia and that the Indus Valley and its eastern neighbouring regions seem to be connected this interaction network via Balochistan though this connection is limited in nature as far as the material culture is concerned.

4 Aspects of the Inter-regional Interaction System in the Early Harappan Period: Phase 2

The early third millennium BCE or the Early Harappan period witnesses a quite different picture of the development of interaction networks from that of the preceding period. The regional societies became more complex and the network expanded in space and depth.

Seals become more common in Balochistan as attested by the evidence from Mehrgarh. Although the exact number of seals from Periods V-VII is not available, it clearly increases compared to Period IV. Various motifs are seen on them but they are mostly variations from the Iranian prototypes. They consist of geometric patterns and stylized figurative motifs, for example a combination of stylized human motifs. They have correspondents in eastern Iran. The swastika motif is also found. This may indicate that Balochistan was still connected with the Iranian Plateau.

This observation is corroborated by ceramic evidence as well. The Faiz Mohammad ware is a dominant ceramic style in Mehrgarh Periods VI and it is reported from the Quetta Basin as well (Fairservis 1956). The painting style of the animals in the pottery from Mundigak Period IV (Casal 1961) resembles with the animal motifs in the Faiz Mohammad ware, having a posture facing right, a large eye and a hatched body, although different animal species are depicted in each. Shallow bowls with a pair of fishes painted on the inner side of the bottom from Shahr-i Sokhta are similar to bowls from Mehrgarh. This evidence clearly indicates the ties between central Balochistan and Helmand Valley.

Another aspect of the interaction network in this time period is the connection between Sindh and central Balochistan. Evidence of this connection is provided by the ceramic evidence from Lal Shah, a pottery-manufacturing site near Mehrgarh.

At this site, a Sindh-style flanged jar was manufactured. This type of flanged jars which is characterized by a geometric motif drawn over the body of the vessel and has been found from Kot Diji (Khan 1965), Lal Shah (Pracchia 1985), Mehrgarh Period VIIC (Jarrige, C. et al 1995), Nausharo Period ID (Jarrige 1986, 1988; Quivron 1994) and Shahr-i Sokhta Phase 2 (Biscione 1990). The painting motifs on this type of flanged jar differ from those on flanged jars in the northern part of the Indus Valley, including the Gomal Plain and western Punjab. This fact indicates that Sindh was also incorporated into the interaction network between the Iranian Plateau and central Balochistan.

Interesting evidence of this connection has been found at Bhandu Qubo, a site located on the western side of the Indus River near Sukkur. This small mounded site was excavated by the Shah Abdul Latif University, Khairpur at the time when a part of site was destroyed by road construction. The section cut by the road was investigated by the university team bringing out a well-stratified materials. In the Kot Dijian levels, Balochistan-style objects were found in addition to Kot Dijian pottery (Shaikh and Veesar 2000-01; Mallah 2008a).

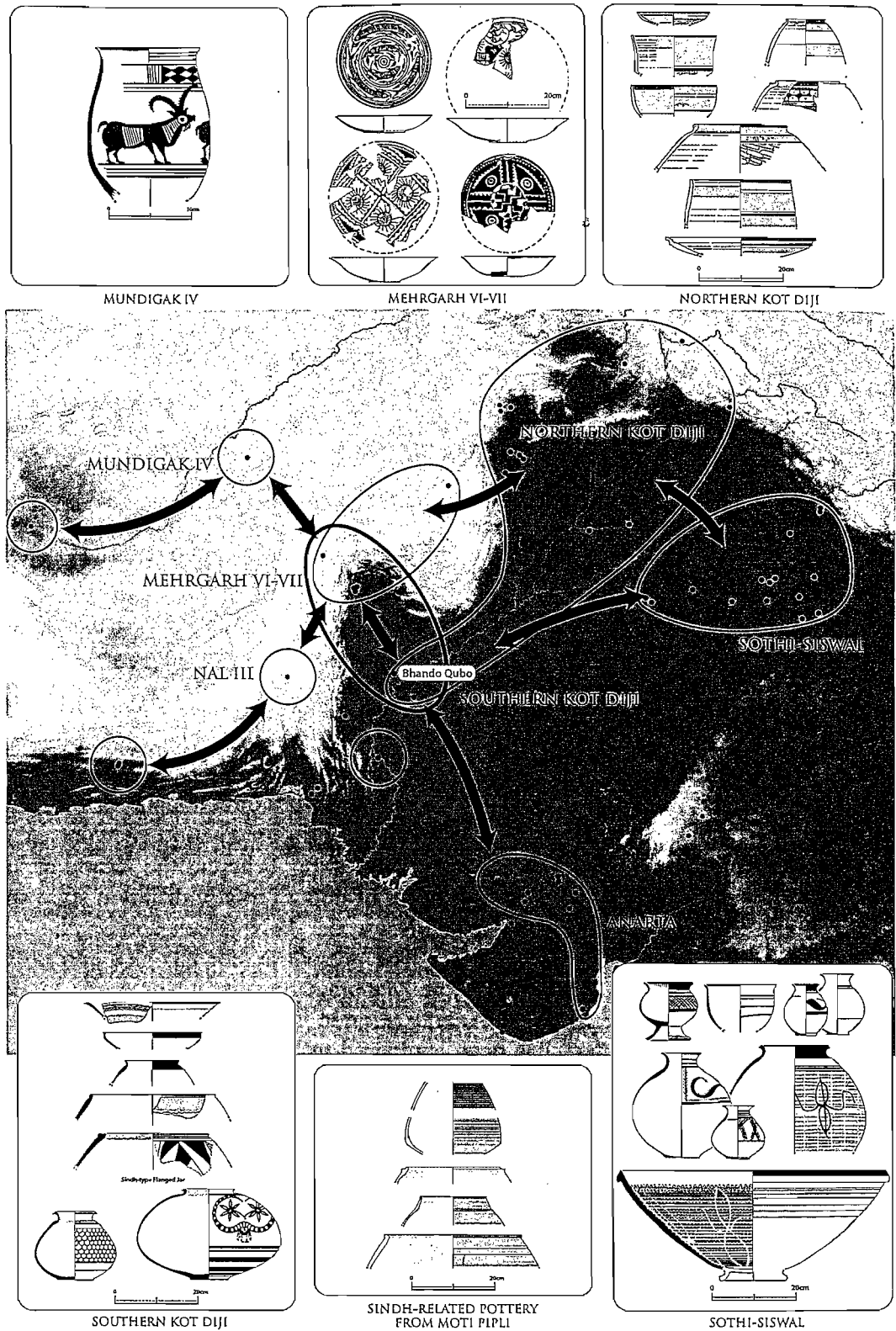


Figure 5 Interaction network in the Early Harappan period

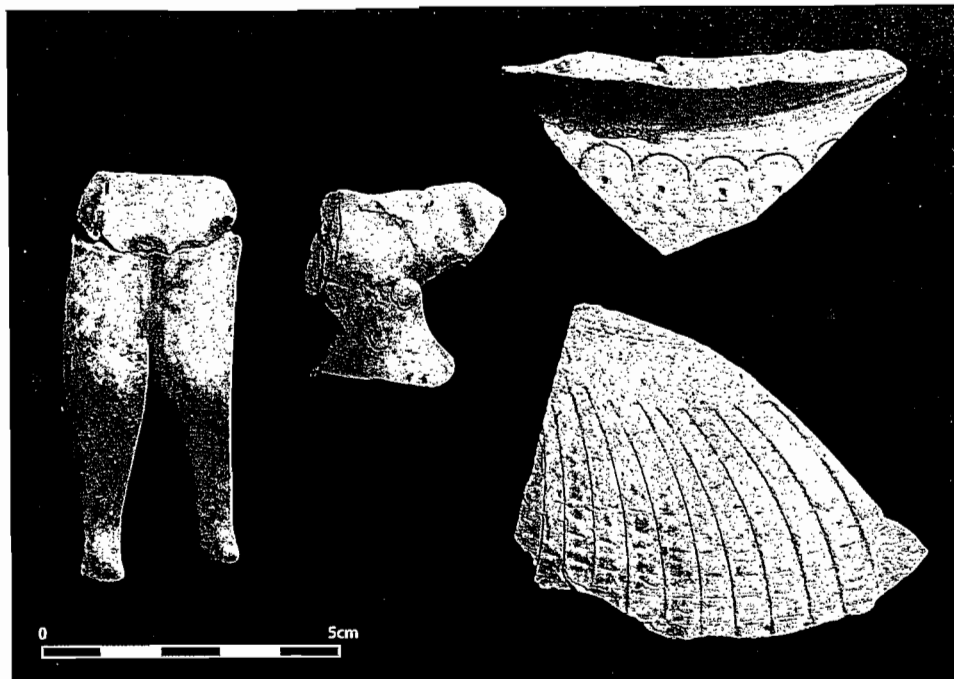


Figure 6 Balochistan-style objects from Bhando Qubo (courtesy: Shah Abdul Latif University)

They consist of sherds of Wet ware and Zhob-type terracotta figurines which are distinctive traits of central Balochistan and dated to the later part of the Early Harappan period on the basis of the Mehrgarh sequence. This evidence corroborates the connection between Sindh and central Balochistan during this period. As the evidence indicates, the connection was not one-sided but bidirectional.

In relation to the formation of a new interaction network in this period, the evidence from north Gujarat is also interesting. Whereas the Anarta ceramic style seems to have continued into this time, a set of pots of totally different style appeared at some sites like Moti Pipli, Santhli-2 and Nagwada. At Nagwada and Santhli-2, they have been found in association with burials. The present author has also confirmed based on his observations of the pottery at the Maharaja Sayajirao University of Baroda that they differ completely from the Anarta ceramic tradition in terms of formal and technical features. This pottery has been compared to that from southern Balochistan and Sindh based on its formal features (Hegde et al. 1988; Ajithprasad 2002). Among them, flanged jars from Moti Pipli can be associated with Sindh. Based on close comparison of this pottery with that from Sindh and Balochistan, it is not likely that these pots were manufactured in either Sindh or southern Balochistan, but rather that they were manufactured under the influence from those regions.

Turning our eyes towards the Indus Valley proper, this period sees the development of a unique type of seal in this region. It is a type of seal with a design of concentric circles on square, circular and quatrefoil shapes, some of which have a serrated edge. A criss-cross with sharp ends is carved in the centre of the seal in some instances, with concentric circles placed in each quadrant. There are variants of this type with concentric circles and geometric patterns as well. Some of them have a motif of concentric circles on one side and a pair of animals on another side. This type of seal has been found from Rehman Dheri (Ali, T. 1994-95) and Tarakai Qila (Shah and Parpola 1991) in NWFP, Harappa Period 2 (Kenoyer and Meadow 2000) in Pakistan Punjab, Mehrgarh Period VI (Jarrige, C. et al 1995) in Balochistan, Tarkhanewala Dhera (Joshi

and Parpola 1987) and Baror Period I (Sant et al. 2005) in Rajasthan, Kunal (Gupta 1996; Acharya 2008) in Haryana, and Mahorana in Indian Punjab. All of the seals listed above are dated to the Early Harappan period except for the Rehman Dheri examples which cannot be dated as they were found on the surface, although they may be dated to the Early Harappan period on the basis of the site chronology. There are some examples which were found in Mature Harappan levels at some sites like Baror Period II, and Nausharo Period II (Jarrige ed. 1988: Plate XIX) in Balochistan, as well as Bagasara and Nagwada in Gujarat. These examples may indicate that this type of seal continued into the Mature Harappan period.

In relation to this type of seal, it is noteworthy that they are found in association with other geometric seals. Rehman Dheri, Harappa, Mehrgarh and Kunal have all yielded seals with geometric patterns which are similar to the Iranian geometric designs. This indicates that the seals with concentric circles appeared in the region where the traditional Iranian geometric seals had not been used, although they were used side by side in the region. Although the present state of our information does not permit us to conclude that this type of seal was created in the Indus Valley, it is certain that this type of seal spread over the northern part of the Greater Indus Valley when the traditional Iranian-type geometric seal expanded its distribution zone into the region. The distribution pattern of this seal clearly indicates the connection and interaction in the northern part of the Greater Indus Valley.

This observation is corroborated by ceramic evidence as well. Gomal and western Punjab shared a similar ceramic style which may be termed the Northern Kot Dijian ceramic style. Although the pottery from this region shows similarities with the Kot Dijian pottery in Sindh in terms of the shape of short-necked jars with wide black band on their neck during the Early Harappan period, a close observation of the shapes and formal assemblage shows distinctive differences between the Kot Dijian pottery from Sindh and those from Gomal and western Punjab. One of the unique traits of the Northern Kot Dijian ceramic style is a depiction in painting of the frontal view of a water buffalo or a pair of horns which is depicted in an exaggerated manner on the body of the vase or jar. It has been reported not only from typical Northern Kot Dijian sites like Rehman Dheri and Hathala in Gomal and Sarai Khola (Halim 1972) in Potwar, but also from sites in neighbouring regions like Burzahom in Kashmir, Kalibangan (Lal et al. 2003) in Rajasthan and Kunal (Gupta 1996) in Haryana. The examples from Rajasthan and Haryana are quite unique in the manner of depiction, but they clearly depict the same motif. Although the typical Kot Dijian ceramic style did not expand over the Ghaggar-Chautang Valley on a full scale, the motif was shared due to the cultural contact and interaction. This glyptic and ceramic evidence shows the connection and interaction over Gomal, western Punjab and the Ghaggar-Chautang Valley in the Early Harappan period.

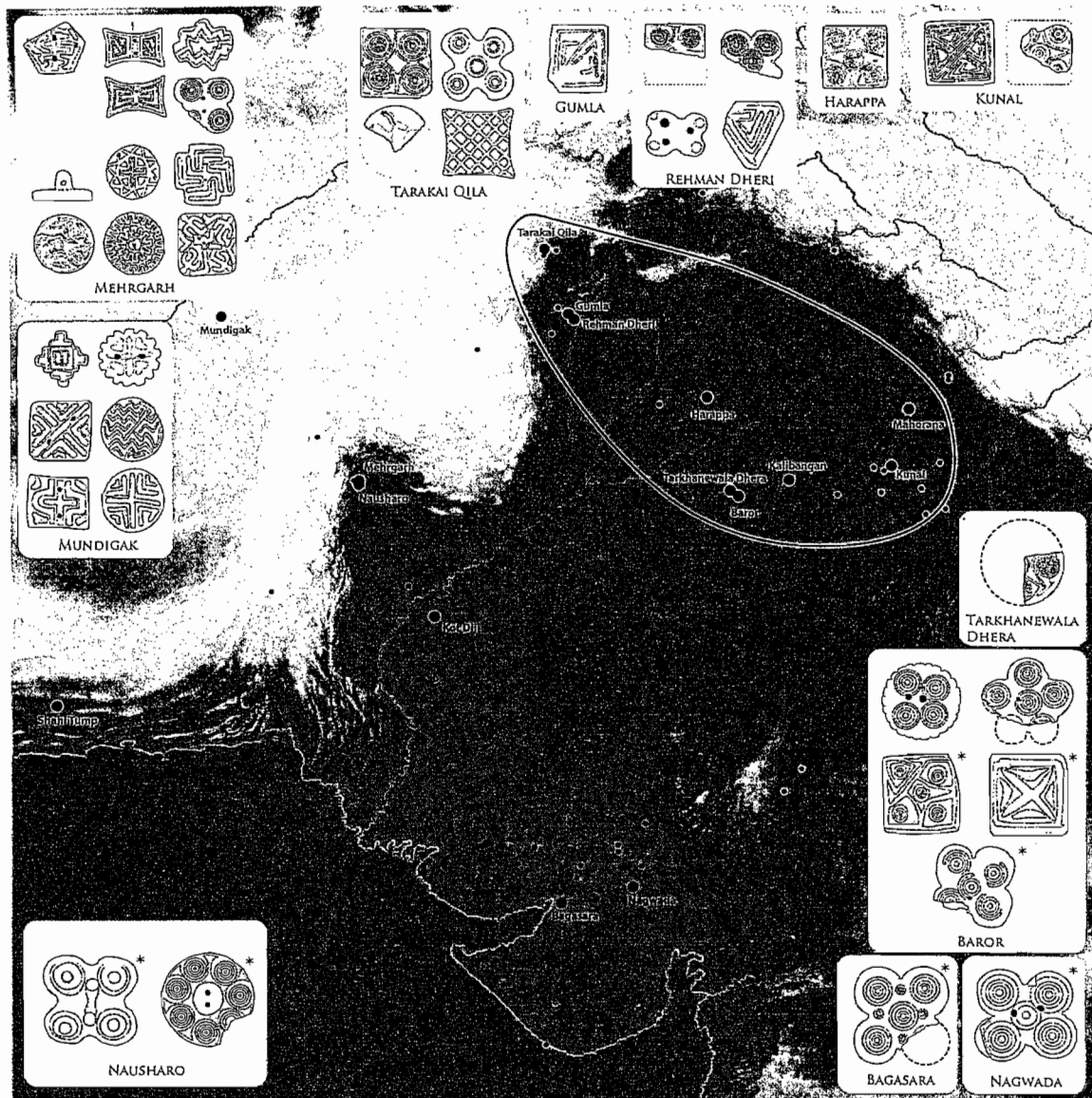


Figure 7 Distribution of geometric seals during the Early Harappan and Mature Harappan period. (Asterisk represents seals from the Mature Harappan period)

As shown by various evidence, the Early Harappan period witnesses an expansion of the interaction network and a socio-cultural integration over the Greater Indus Valley. The Indus urban society was founded on this intensive interaction network in the following period. The fortification of the settlement by massive brick walls in Harappa Period 2 also shows an increase in social complexity during the Early Harappan period. However there are still some missing links between the Early Harappan period and the Mature Harappan period in terms of various traits. The typical Indus seal with script did not develop in the Early Harappan period, although there are examples of writing in the form of potter's marks and graffiti. A fragment of seal from Harappa Period 2 depicting an elephant is most probably one of prototypes for animal motifs on Indus seals. The format of the typical Indus seal is completely different from those in the Early Harappan period. The creation of a new type of seal, in other words a new social ideology and communicative method, including the writing system, is a key factor for the better understanding of the birth of an urban society. In addition, the Harappan ceramic style also differs from the Early Harappan ceramic styles. The development of the Harappan

painting style is also crucial for our understanding as it is also a part of the Indus urban iconography. These traits are decisively important to understanding the developmental process of urban society in the Mature Harappan period; how they were originated and expanded over the vast region and how they were related to the interaction network in the Early Harappan period. It is necessary to locate the changes of various aspects of material culture in space and time, and to understand the dynamic process of urbanization in terms of the inter-regional interaction.

5 Tentative Conclusion

The arguments above are based on a very brief analysis by the author. Since there are currently a number of excavations being conducted in various parts of the Greater Indus Valley, the analysis of data from those excavations will bring a better picture of the role of inter-regional interaction in the urbanization process. It is still difficult to trace the development of regional cultures and the interaction among them, due to the lack of published data. Therefore this paper is only an attempt to draw a hypothetical picture for future researches and analyses.

There are some points which should be summarized for the future works. The later part of the fourth millennium BCE has been regarded in this paper as the time period when regional cultures started to develop in various parts of the Greater Indus Valley. The origins of some cultures have been dated to the early part of the millennium and even earlier. However, it is still uncertain how they developed from earlier cultures such as Mesolithic cultures in the region where an earlier culture has been attested. In other words, the process of transformation from the earlier cultures into the succeeding cultures has not been fully investigated. In some regions, the migration of people from other region must have played a role in the colonization of new regions. But it has not been traced in the archaeological record. In this sense, the later part of the fourth millennium BCE is a period when cultural interaction had been established, not an initial stage of development of regional cultures.

In the development of cultural interaction in this time period, relations with the Iranian Plateau seem to have been a key factor in Balochistan since there are various shared cultural traits. This is not to say that the regional cultures in Balochistan were utterly under the cultural influence of the Iranian Plateau, but to point out that the region was edged towards greater complexity by its involvement in the interaction network covering the Iranian Plateau, southern Central Asia and Balochistan.

The Indus Valley seems to be out of or in scarce contact with this socio-cultural interaction system during the later part of the fourth millennium BCE, although some regional cultures had contacts with those in Balochistan. This may be due to the distinctive differences of ecological setting between the highlands of Balochistan and the alluvial plains of the Indus Valley. Through history these two regions have maintained their own cultural traditions which differ from one to the other.

In this sense, the development of socio-cultural connections and interaction between the highlands and plains in the early third millennium seems significant in terms of the formation of the highly complex society of the Indus Civilization. It is probable that by connecting to the Balochistan highlands, the Indus Valley society strengthened its social integration and developed into an urban society. As even in the Indus Valley there were a number of regional cultures before the Mature Harappan period, the cultural connection and interaction among them was a key factor for the development of more complex society. In this regards, it is essential to see the formation

process of urban society from a viewpoint of inter-regional interaction. The Indus urban society is also an inter-regional interaction system of a sort which enabled it to achieve socio-cultural integration over a vast area. This paper is not aimed at emphasizing the decisive role of one regional culture in the development of the urban society but at tracing the inter-regional interaction system through time and assessing its significance in the urbanization process.

This kind of study should be based not only on stylistic observations of a limited number of artefacts like ceramics and seals as attempted in this paper but also on the utilization and circulation of raw materials and technologies used for the production of prestige goods. In this direction of study, the analyses on the technology of craft production (e.g. Kenoyer 2005; Vidale 2000; Bhan et al. 2002) and on the distributions pattern of specific raw materials (Law 2005, 2008) are highly relevant. This kind of study certainly contributes to our understanding of the role of the socio-cultural interaction systems during the formation process of the Indus Civilization.

Regarding the stylistic analysis itself, a defined differentiation and classification of artefacts should be further developed in order to compare the data from different sites in different regions. This would be followed by identification of traits which might have been transferred from one culture to another and shared among them. For example, the horn motif and the pipal motif are quite common in the pre-/Early Harappan pottery over the Greater Indus Valley, but they are painted in different styles and on different vessel forms. These may be good examples of the traits shared among regional ceramic styles on the interaction networks. As shared stylistic traits may represent some special socio-cultural meaning shared among regional societies, the identification of shared traits in space and time may lead to better understanding the temporal and spatial changes of inter-regional interaction systems.

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Sources of illustrations

Figure 1: Prepared by the author.

Figure 2: Prepared by the author with pottery drawings from Mehrgarh and Amri (Jarrige, C. et al. 1995) with permission from the French Archaeological Mission to Pakistan and from Harappa (Kenoyer and Meadow 2000) with permission from the

Harappa Archaeological Research Project. The pottery drawings from Gumla and Loteshwar are made by the author with permission from Department of Archaeology, University of Peshawar and Department of Archaeology and History, the Maharaja Sayajirao University.

Figure 3: Prepared by the author with seal drawings from Mehrgarh (Jarrige, C. 1995; Shah and Parpola 1991) and Nausharo (Parpola and Shah 1991) with permission from the French Archaeological Mission to Pakistan, Gumla (Dani 1970-71), Rehman Dheri (Ali, T. 1994-95), Tarakai Qila (Shah and Parpola 1991), Harappa (Kenoyer 2006) and Kunal (Acharya 2008).

Figure 4: Prepared by the author with seal drawings made from published photographs and drawings of Tepe Hissar (Schmidt 1939), Mundigak (Casal 1961), Shahr-i Sokhta (Tosi 1968), Mehrgarh (Jarrige, C. et al. 1995), Nausharo (Shah and Parpola 1991), Gumla (Dani 1970-71), Rehman Dheri (Ali, T. 1994-95), Harappa (Kenoyer 2006) and Kunal (Acharya 2008).

Figure 5: Prepared by the author with pottery drawings from Mundigak (Casal 1961), Mehrgarh (Jarrige, C. et al. 1995), Kot Diji (Khan 1965) and Kalibangan (Lal et al. 2003). The pottery drawings from Gumla and Moti Pipli are made by the author with permission from Department of Archaeology, University of Peshawar and Department of Archaeology and History, the Maharaja Sayajirao University of Baroda.

Figure 6: Photographed by the author with permission from Department of Archaeology, the Shah Abdul Latif University.

Figure 7: Prepared by the author with seal drawings made from published photographs from Mundigak (Casal 1961), Tarakai Qila (Shah and Parpola 1991), Gumla (Dani 1970-71), Rehman Dheri (Ali, T. 1994-95), Harappa (Kenoyer 2006), Kunal (Acharya 2008), Tarkhanewala Dhera (Joshi and Parpola 1987), Baror (Sant 2004), Bagasara and Nagwada (based on the photos taken by the author with permission from Department of Archaeology and History, the Maharaja Sayajirao University of Baroda).

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