

Proto-Historic Engraved Seal Pendants from Gandi Umar Khan, Gomal Plain, Northern Pakistan: A typological cross-comparative study

Ayesha Hina

Abstract

The seal pendants from the Proto-Historic site of Gandi Umar Khan, which date from the early Bronze Age (3400-2900 BC) to the mature Harappan Phase (2600-1900 BC), are thoroughly examined in this study. Through a typological cross-comparative analysis, this paper explores the significance of early Indus-type engraved seal pendants discovered at the site. The early Indus-type seal pendants discovered in Gandi Umar Khan are critical for understanding the evolution of sealing practices and their administrative, social, and cultural implications for the region's rising early elite and human populations. The study reveals that the development of protohistoric centers in Pakistan, particularly the Gandi Umar Khan site in the Gomal Valley, was largely influenced by the emergence of technologically advanced inhabitants. The presence of intricately carved Indus-style seals suggests a sophisticated socio-economic structure and ethnic identity system that supported trade, symbolism, and communication networks in the region. This research contributes to the broader discourse on the material culture of the Indus Valley Civilization while proposing new interpretative frameworks for assessing seal-based iconography across early urban centers of South Asia.

Keywords: Seal pendants, engraved seals, Indus Valley Civilization, protohistory, Gandi Umar Khan, Bronze Age, Gomal Plain.

1. Introduction

The primary traits of ancient people's culture, habitation, and social behaviour provide a foundational context for this study. One of the main topics of this study is how individuals and seal pendant designs relate to one another. This investigation highlights the significance of engraved seal pendants, which first emerged during the Bronze Age in the 3rd millennium BC, and traces the cultural development of the region's inhabitants from the Neolithic period into the advanced Bronze Age. These objects offer valuable insights into the evolution of socio-economic systems, cultural expressions, and ethnic identity among early agricultural communities on the Gomal Plain.

The early Indus-type seal pendants discovered at Gandi Umar Khan are of particular importance. These artifacts enhance our understanding of how seal pendants relate to the emergence of a sophisticated culture, one that incorporated writing traditions, trade networks, and symbolic expressions akin to those found in contemporary civilizations and the broader Harappan realm.

2. Seal Pendants

Artifacts commonly associated with self-identification, such as seal pendants, have been utilized to convey personal and social identity through their engravings or inscriptions. There are several types of inscriptions on items, each with its characteristics, purposes, and meaning. The early concepts regarding seal pendants aesthetically reflect broader social, financial, and cultural processes in the Indus Valley. The early Harappans employed art and design, which included the usage of seal pendants with particular floral and geometric themes, to represent various views about how the realm or civilization as a whole was organized. A variety of such symbols are seen on painted pottery as well as various ivory, bone, shell, metal, and stone ornaments. These several types of preserved materials offer a wide range of insights into that society's cultural and administrative practices, as well as primitive art history (Kenoyer 2006-2007: 7).

These several pendant seal types found at the site might have acted as visual elements to convey ideas or concepts to the viewer, whether as ornaments or as tools for creating designs, and they could have also been used as a way to communicate on various other mediums. The seals have inscriptions, representations of creatures and godlike entities, and specific geometric designs. A number of certain seals could have been utilized to emblazon clay on goods traded. Such graphic symbols are used to promote and authenticate a society's social system and beliefs, in addition to the various language interpretations of them (Kenoyer 2000: 90-112, Kenoyer 1995: 87-131). A Chinese tradition is to mark goods with letters and pecked symbols that signify ownership and wish the owner success and prosperity (Voss 2005: 424-439). Seal pendants establish a connection between a person and a piece of property that enables the owner to fabricate and display one's own identity that appears to be organized and secure, while in actual fact it is "an enacted fantasy or incorporation." Particularly in comparison to how seals were utilized for a range of

purposes at the Gandi Umar Khan's site, seals were also employed for economic growth, the rise of prestige envy, higher reputation measures, and technical progress in production techniques.

The significance of the Gandi Umar Khan's Indus Valley seal pendants possesses a fascinating aptitude to capture the interest of researchers. Carrying them may have served to advertise one's occupation or loyalty in addition to the Indus maritime connections and networks. These seal pendants might be referred to as "ethnic marker pendants" due to their distinctive decorative forms and design as well as their constrained geographic and chronological range in the Indus Valley. Although different people may have different interpretations of them (Kenoyer 1998). From a broader perspective, these seal pendants serve as a testament to the centuries-long cultural and ethnic identity of the Indus Valley.

3. Gandi Umar Khan's Seal Pendants

Gandi Umar Khan, located in the Gomal Plain of southern Khyber Pakhtunkhwa, Pakistan, is one of the most significant Proto-Historic sites associated with the Indus Valley Civilization. Discovered in 1997 and excavated in 2003 and 2004, it revealed continuous occupation from the end of the 4th millennium BC to the early 2nd millennium BC. Archaeological layers at the site include the Tochi-Gomal phase, a transitional phase, the Kot Diji phase, and a thick Mature Harappan cultural deposit. Strategically located near ancient trade routes connecting South Asia with Central Asia, the site enhances its role in regional exchange networks. Gandi Umar Khan has produced an extraordinary range of cultural materials, including terracotta and steatite seal pendants, steatite and carnelian beads, ornaments of ivory, shell, and semi-precious stones, as well as copper and gold jewelry. These findings indicate the site's role as a regional craft production center and suggest advanced social, economic, and technological development. The variety and richness of the material culture found at Gandi Umar Khan make it an important site for learning about the growth of early cities and how people expressed their identities in the larger Indus Valley Civilization.

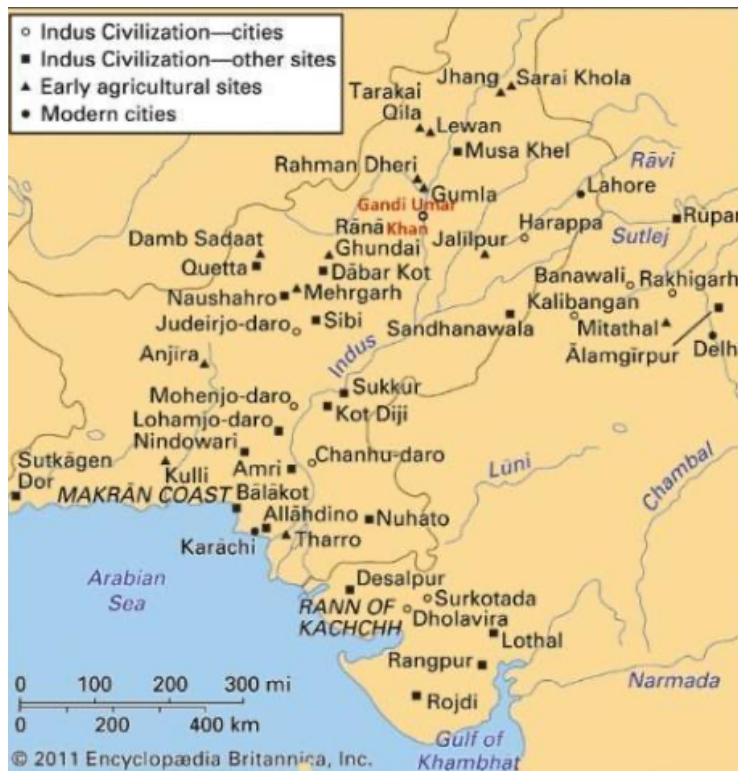


Fig. 1 - A map illustrating the major sites of Indus Valley Civilization.

The main focus of this study is the examination of seal pendants that showcase geometric patterns. Gandi Umar Khan features a limited number of pictographic seals that exhibit both animal depictions and pictographic inscriptions, in addition to geometric design seals (Jan Durrani and Qazi 2011). The geometric design seal pendants frequently display ring-and-dot incisions. These pendants are commonly organized in columns along the sides. Each of the images presented below portrays a comprehensive illustration of the seal, of which a segment portion has been identified. The seal pendants found in this study featured a knob on the back that had a hole made into it. Gandi Umar Khan's seals were typically constructed of soft materials like steatite or terracotta. Examples of this particular style of engraving can be observed on seal pendants made of terracotta and steatite, where the engravings consist of geometric patterns and numerous concentric circle motifs. One of the Indus-style cone-shaped seal pendants at the site is a 14-compartmented seal with axial perforation horizontally

laid out on the tapering end (Fig. 6).¹ Such seal pendants were prevalent in the Indus Valley during the Bronze Age, typically crafted from steatite and occasionally from terracotta. Macalister believed that the number of ring-and-dots on each pendant, which varied from 6 to 64, was significant at Gezer (Macalister 1912: 452-453). Whereas, during the Middle Bronze Age, the ring-and-dot motif was frequently employed in the decoration of bone/ivory and different stone items, and it may indicate a schematic portrayal of an 'eye' (Platt 1978: 23-28).

The distinctively carved steatite seal fragments found at Gandi Umar Khan, which could have been used as seal pendants engraved in multiple ring designs with parallel lines, represent a well-known carving style of the Indus Valley Civilization (Fig. 2). Figure 3.1 depicts a fragmentary circular seal pendant exhibiting a singular compartment that has been engraved with grooved concentric circles on a side of its surface. The depicted artifact in Figure 3.2 is a square seal pendant, crafted from fired steatite. The artifact displays four ring-and-dot motifs at each corner, separated by a four-ray star. Additionally, there is one more ring-and-dot motif located at the center of the star. The present design has been recorded on identical early seals that were discovered at Kabul Bazaar in Bactria (Frenez and Vidale 2020: 54). Archaeological evidence also suggests their existence at Harappa and Taraqai Qila in the local region (Shah and Parpola 1991: 414; Kenoyer 2001: 9). These artifacts exhibit a central circle and dot surrounded by four additional circles and dots, which are separated by a four-engraved star pattern. Steatite seal pendants with comparable features have been unearthed at the Rehman Dheri archaeological site in Pakistan (Durrani and Erdosy 1995a: 15-81) also from Kunal and Haryana in India (Khatri and Acharya 1995: 84-86; Khatri and Acharya 2005: 104-117).

Figure 3.3 depicts a fragment of incised seal pendants that exhibit a whorl design composed of concentric circles and were crafted from fired steatite. It is plausible that the original pattern of the seal featured ring-and-dot motifs, along with a geometric floral decoration consisting of concentric circles that were encompassed by imbricate rosette petals or triangular knobs, which filled the intervening space. The design of the petal rosette may also potentially depict a species of fig tree or the pipal tree, which holds significant religious importance in the Indus cultural tradition (Kenoyer 1998). The seal exhibits a geometric pattern that bears

¹ All the Figures and drawings are not to scale.

resemblance to the prevalent floral motif observed on the ceramic artifacts of the proto-historic Harappan pottery. The archaeological record indicates that the aforementioned design originated during the Tell Halaf period in Mesopotamia. Typically, this design consists of a series of interconnected four-petal rosettes. The pottery discovered at Tell Halaf and Tepe Gawra exhibits a prominent decorative motif featuring a stylized flower with multiple petals, which is encircled by concentric geometric designs (Dhiman 2023: 111).

Figure 4 depicts the central fragment of a fired steatite seal pendant. The engraved decoration on the seal pendant consists of a grooved concentric circle design. One surface of the object exhibits a certain feature, while the opposite side is characterized by the presence of a knob. The artifact appears to be a circular pendant, possibly featuring multiple ring-and-dot motifs that are separated by square-shaped surroundings at each circular motif. This seal pendant exhibits a distinct resemblance to circular specimens found in the early Indus levels of Bactria, as well as in Harappa, Taraqai Qila, and Kunal (2800-2600 BC) (Frenez and Vidale, 2020: 54) (Durrani and Erdosy 1995b; Kenoyer 2001: 9; Konasugava 2012: 32; Shah and Parpola 1991: 414).

Figure 5 depicts a steatite seal pendant that bears an incised design of concentric triangles. This design exhibits stylistic and geometric similarities to the seals discovered at Bactria, as well as the early Harappan seals found at Harappa, Kunal, and Gumla. Additionally, the same design has been observed on clay sealings of Lewan Dheri (Frenez and Vidale 2020: 55; Konasugava 2012: 32; Kenoyer 2005; Shah and Parpola, 1991: 394). Seal pendants exhibiting comparable ring and dot motifs have been discovered at Tarakai Qila (Frenez and Vidale 2020: 54) and Harappa, dating back to the period between 2800-1900 BC (Kenoyer 2013: 7). The prevalent belief among researchers is that the ring-and-dot symbolize a motif related to stars or the sun (solar motifs) (Parpola 1994).

Figure 6 displays a terracotta pendant in the shape of an extended pear, featuring an ovoid cross-sectional structure. The pendant is adorned with carved decorations, including a conical point engraved in a spiral line pattern that covers the entirety of the bead's profile. Similar seals/amulets featuring multiple circle and dot motifs have been documented at Harappa.

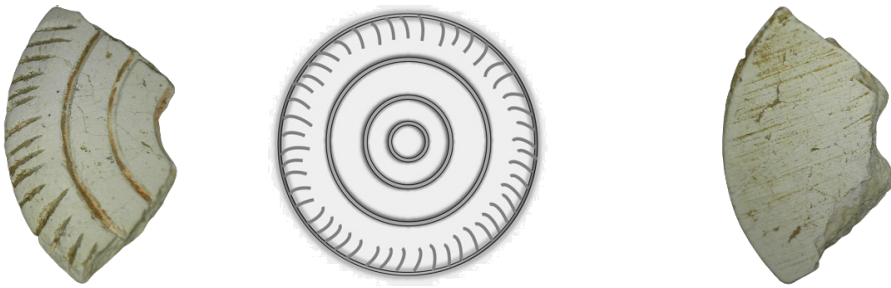


Fig. 2 - Fragment of a circular steatite seal pendant.

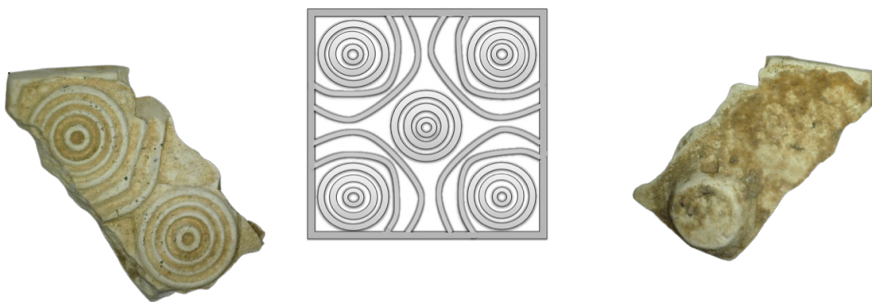


Fig. 3.1 - Fragments of a square steatite seal pendant with a dot within a five concentric circle design. Engraved steatite seal pendant fragments.

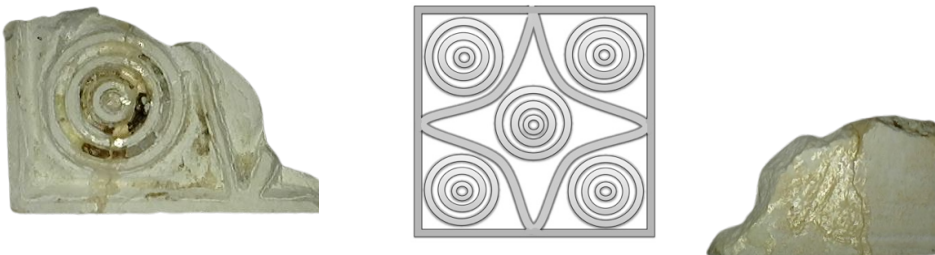


Fig. 3.2 - Steatite seal fragment with a dot and circles arranged in a star pattern. Engraved steatite seal pendant fragments.

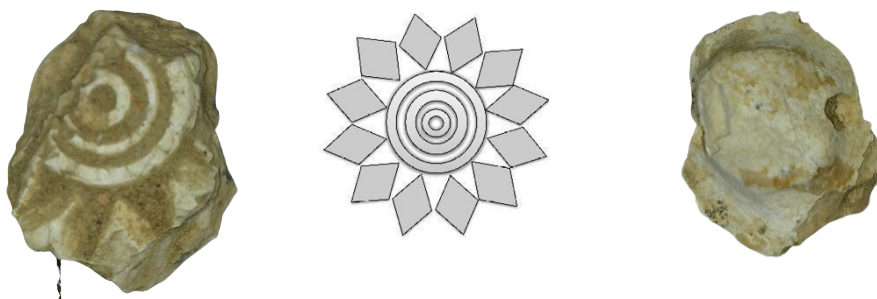


Fig. 3.3 - Fragment of a seal that has a dot-in-circles motif (concentric circles) surrounded by imbricate leaves.



Fig. 4 - Fragment of a circular steatite seal pendant with concentric circles surrounding a central dot.



Fig. 5 - Fragment of square steatite seal pendant bearing an intersecting triangle spiral pattern.



Fig. 6 - Circular terracotta seal pendant in a cone shape. Early Indus-type compartmented seal.

4. The Evolution of the Engraved Seal Pendants

The wide dispersion of these designs suggests that their production can be traced back to the Kot Dijian and early Harappan phases, which represent the onset of urbanization preceding the expansion of the Harappan period. The utilization of these patterns on seal pendants, which are frequently associated with privileged societies, suggests that they play a crucial role in a prevailing ideology that was gaining momentum and expanding rapidly during that period.

The Dilmun type, which emerged in Bahrain circa 2000 BC, is characterized by the presence of concentric circles encircling a central dot/ring-and-dot pattern. (Olijdam and David-Cuny). The discovered seals in Gandi Umar Khan are believed to be inspired by the ancient Indus civilization and exhibit similar features to other Harappan sites, such as Harappa (Kenoyer and Meadow 2000: 55-76), Rehman Dheri, Mehrgarh (Jarriage, Meadow and Quivron 1995), Pirak, Mohenjo Daro dating to 1800-1300 BC (Jarrige and Enault 1976: 29-48), Dholavira, along with several other minor settlements (Bisht 1991).

The Gandi Umar Khan archaeological site holds great historical and cultural significance due to the presence of the seal pendants featuring a central dot and circle surrounded by four ring-and-dots and separated by a four-pointed star motif, which have also been documented at other Harappan sites such as Rehman Dheri, Pakistan (Durrani et al. 1995), as well as Kunal, Haryana, India (Khatri and Acharya 1995: 84-86; Khatri and Acharya 2005: 104-117). The preponderance of pendant seals during the Bronze Age appears to have been concentrated in the Indus Valley

region, indicating that this area served as the epicenter of this type of artifact.

The creation of specific patterns on seal pendants, particularly those incorporating geometric elements such as ring and dot motifs reflects a symbolic ideology potentially associated with elite or administrative identity. The concentration of such artifacts at various Indus Valley sites suggests a localized origin and production tradition, though their stylistic parallels with seal pendants found in regions to the west during the Late Bronze Age raise the possibility of cross-cultural exchange. These similarities may reflect either the diffusion of artistic and administrative practices or long-distance trade facilitated by intermediary cultures along interregional trade routes connecting South Asia with western Asia. For instance, numerous Indus seals have been recovered from urban centers in ancient Mesopotamia, notably at sites like Ur, Susa, and Tell Asmar. Some of these Mesopotamian seals even feature Indus script characters, offering credible evidence for the presence of Indus trading communities in Mesopotamia during the 3rd millennium BC (Marshall 1996: 425; Kenoyer 2005; Ratnagar 2004). Instead of implying that the Phoenicians were directly involved—since they became important in the Mediterranean much later, during the early Iron Age—the spread of similar seal designs is better understood through the trading connections and shared symbols of Bronze Age cities in the Greater Indus, Iranian Plateau, and Mesopotamia. The similar pendant seals found at places like Harappa, Lewan Dheri, and Tarakai Qila, which date from around 2800 to 1900 BC, indicate that the seal types discovered at Gandi Umar Khan are part of a larger style and belief system of the Indus Valley Civilization. The chronological alignment of these artifacts supports the hypothesis of regional cultural continuity and interaction during the Bronze Age.

The triangular motif design observed on the seal pendant fragment excavated from the site (as depicted in Figure 5) may be associated with the valknot, which comprises three interlocked triangles and is recognized as a symbol of the ancient Germanic communities. This symbol has been identified on one of the Nene River Rings found on the Osberg ship bedpost in contemporary Northern Europe (Davidson 1990: 147). The stamp seals found in the Early Levels (2800-2600 BC) of Kunal exhibit comparable instances of seal pendants (Frenez and Vidale 2020: 54). In addition, stamp seals related to the Indus civilization have also been documented in the regions of Bactria and Margiana (Frenez and Vidale 2020: 56-57).

The circular terracotta seal pendant, featuring a 14-compartment pattern as depicted in Figure 6, is a generic type that has been utilized across various locations and time periods. These pendants are indicative of local ownership and usage, and the motifs present on the seals could have been used to distinguish between various groups of traders. Regarding the prevalence of circular versus rectangular shapes in this category of seal pendant, it is noteworthy that the opposite pattern to that observed in Mohenjjo Daro has been identified in specimens retrieved from Babylonia. Specifically, Gulf-type seals lacking inscriptions have been discovered in significant quantities, specifically on Bahrain Island (Laursen 2010: 97).

5. Discussion and conclusions

The seal pendants of the Gandi Umar Khan offer an intriguing insight into the cultural and socioeconomic developments that occurred during the crucial Gandi Umar Khan mature Harappan era. The absence of inscriptions and animal figurine motifs on these seals signifies the beginning of a centralized and regulated societal structure, characterized by the rise of a ruling elite. This evolution signifies the emergence of the concept of a highly developed civilization. We observe that the motifs on stamp seal pendants, which show a tendency towards transformation, align with the development process of an established, organized community. The seal's inception and its evolution is evidenced by the presence of grooves, floral decoration, and Indus-style ring and dot designs, which are arranged in various ways on the seal's boss. Furthermore, it is noteworthy that rectangular steatite pendants displaying distinctive symmetrical designs lacking inscriptions and characterized by triangular intersecting lines, serve as a clear indication of the society's progress.

Currently, we can assume that both domestic and foreign merchants of the Indus civilization possessed seals. The practice of carrying a seal pendant enabled the local merchants to establish a visual connection with the foreigners who played an essential role in the economic growth of Gandi Umar Khan during its prominence in the Indus Valley. These pendants served as symbolic emblems, signifying the owner's affiliation with the esteemed and new identity of the Indus merchant. The participation in overseas trade had a noteworthy impact on the economic state of the Gandi Umar Khan community, and thus, it likely formed an essential component of their Indus identity. The presence of foreign motifs in seal imagery at Gandi Umar Khan—particularly

geometric patterns such as ring-and-dots patterns that closely resemble those from Bactria and Mesopotamia—suggests the possibility of cultural interaction or shared symbolic traditions. Archaeological evidence supports this interpretation, as similar motifs appear on sealings and artifacts in Mesopotamian contexts from the mid-3rd to early 2nd millennium BC, which broadly overlaps with the Mature Harappan phase at Gandi Umar Khan (circa 2600–1900 BC). While direct trade links between these regions remain debated, the stylistic convergence and overlapping chronologies lend credible support to the hypothesis of indirect contact or ideological diffusion through long-distance exchange networks. However, these interpretations remain provisional, given the limited number of comparative artifacts and the current gaps in stratigraphic resolution.

It is challenging to determine whether the curator of a seal was aware of the international associations of a particular motif, but the use of internationally related motifs indicates the impact of interaction on the society's economy, evolution, and cultural concepts.

The engraved seal pendants discovered at the Gandi Umar Khan site appear to have functioned as markers of individual or group identity, potentially reflecting ethnic affiliation or socioeconomic status. Their geometric motifs—such as ring-and-dot designs, concentric circles, and incised triangles—are consistent with iconographic traditions observed across the broader Indus Valley Civilization. Similar seal pendants and stamp-like objects have been documented at contemporaneous sites like Harappa, Dholavira, and Tarakai Qila, where they are often associated with personal adornment, administrative control, or ritual contexts (Kenoyer 1998; Bisht 1991; Frenez and Vidale 2020). A perforated knob on the reverse side of several Gandi Umar Khan pendants further supports their use as wearable objects associated with personal identity or clan affiliation.

Ethnographic and archaeological analogies suggest that the use of engraved symbols may have helped individuals assert ownership or secure roles within kinship or occupational hierarchies. Although these pendants might also have been used as stamping tools, similar to other ancient stamps, their main purpose in showing social structure is more connected to local Indus traditions than to faraway cultures. Comparative references to Mesoamerican clay stamps (e.g., Enciso 1953; Pasztory and Abrams 1983) may be useful as typological analogies but should be considered illustrative rather than evidentiary, as no direct cultural or chronological

connection to the Indus tradition has been established. The proposal suggests the classification of seals into distinct groups according to their intended purpose.

1. For commercial purposes.
2. Printing designs with stamps.
3. For the socioeconomic and administrative implications.
4. Ethnic identity.

In conclusion, determining from the motifs of the seal pendants, it is justifiable to infer that the choice of materials was influenced by various factors such as technological considerations, aesthetic preferences, economic considerations, and cultural influences. These artifacts held significant value as they served as a crucial medium for the inhabitants of Gandi Umar Khan to depict their social and economic status. By that time, the use of stamp seals featuring geometric and ring-and-dot concentric circles motifs, in both circular and rectangular shapes, had become closely linked with the Gandi Umar Khan society. Consequently, individuals who utilized such stamp seals were implicitly identifying themselves with the Gandi Umar Khan society.

These various phenomena are indicative of the belief systems, economic concepts, societal demands, and cultural ideas of the given social group. The emergence of certain technological and artistic characteristics could be attributed to local origins, thereby serving as distinctive markers of a particular group. On the other hand, such characteristics may be considered assimilated or borrowed from another culture. The correlation between the form of an object and its technological and material aspects has yielded new ideas on how seal pendants and their engravings could potentially signify modifying economic challenges.

The present study aims to construct a comprehensive depiction of the regional communities involved in the progression towards the formation of urban civilization at Gandi Umar Khan. This can be further enhanced by analyzing the provenance data of various seal pendants examined at each stage of the Gandi Umar Khan site. The future interpretative analysis structure that centers on the significance of local interaction and resource accessibility for determining the Indus Civilization can be enhanced by such studies, which depend on primary source information and methodical analysis of diverse categories of archaeological artifacts.

References

- Bisht, R.S. (1991) Dholavira: A New Horizon of the Indus Civilization. In *Purātattva*, 20: 71-82.
- Davidson, H. (1990) Gods and Myths of Northern Europe. London: Penguin Books.
- Dhiman, K. (2023) Indus Civilization Arts and Motifs. New Delhi: Kaveri Books.
- Durrani, F., I. Ali and G. Erdosy (1995a) Seals and Inscribed Sherds of Rehman Dheri. *Ancient Pakistan*, 10: 198-233.
- Durrani, F., I. Ali and G. Erdosy (1995b) The Beads of Rehman Dheri. *Ancient Pakistan*, 10: 15-81.
- Enciso, J. (1953) Design Motifs of Ancient Mexico. New York: Dover Publications.
- Frenez, D. and M. Vidale (2020) How Did a Chimaera Get Lost in Margush? Indus-Related Seals from Bronze Age Oases Along the Amu Darya and Murghab Rivers. In D. Usai, S. Tuzzato and M. Vidale (eds.), *Tales of Three Worlds: Archaeology and Beyond: Asia, Italy, Africa: A Tribute to Sandro Salvatori*. Oxford: Archaeopress, pp. 53-64.
- Frenez, D. and M. Vidale (2020) The Seal Assemblage of Tarakai Qila: Regional Typologies and Administrative Practices. In A. Hardy (ed.) *South Asian Archaeology and Art*, 14. Turnhout: Brepols, pp. 49-60.
- Jan, Z., Ali, I., Durrani, M., and Qazi, M. (2011) The Mature Harappan Occupation at Gandi Umar Khan in Gommal Plain. *Ancient Pakistan*, 22: 1-16.
- Jarriage, C., R. Meadow and G. Quivron (1995) *Mehrgarh: Field Reports 1974-1985, From Neolithic Times to the Indus Civilization: The Reports of Eleven Seasons of Excavations in Kachi District, Balochistan*. Sindh: Dept. of Culture and Tourism, Govt. of Sindh, Pakistan, Karachi.

Jarrige, J. and J. Enault (1976) Fondles De Pirak - Balochistan. *Arts Asiatiques: Annales Du Musee Guimet et Du Musee Cernuschi*, 32: 29-48.

Kenoyer, J.M. (1995) Ideology and Legitimation in the Indus State as Revealed through Symbolic Objects. *The Archaeological Review*, 4 (18a): 87-131.

Kenoyer, J.M. (1998) *Ancient Cities of the Indus Valley Civilization*. Karachi: Oxford University Press / American Institute of Pakistan Studies.

Kenoyer, J.M. (2000) Wealth and Socio-Economic Hierarchies of the Indus Valley Civilization. In J. Richards and M. Van Buren (eds) *Order, Legitimacy and Wealth in Early States*. Cambridge University Press: Cambridge, pp. 90-112.

Kenoyer, J.M. and R.H. Meadow (2000) The Ravi Phase: A New Cultural Manifestation at Harappa. In M. Taddei and G. Di Marco (eds.) *South Asian Archaeology 1997*. Naples, pp. 55-76.

Kenoyer, J.M. (2001) Early Developments of Art, Symbol and Technology in the Indus Valley Tradition. *INDO-KOKO-KENKYU Indian Archaeological Studies*, 22: 1-18.

Kenoyer, J.M. (2004) Culture Change during the Late Harappan Period: New Insights from Excavations at Harappa. In E. Bryant and L. Patton (eds) *The Indo-Aryan Controversy*. Routledge: London.

Kenoyer, J.M. (2005) Steatite and Faience Manufacturing at Harappa: New Evidence from Mound E Excavations 2000-2001. *Museum Journal (National Museum of Pakistan)*, (3-4): 43-56.

Kenoyer, J.M. (2006-2007) Indus Seals: An overview of Iconography and Style. *Ancient Sindh*, 9: 7-30.

Kenoyer, J.M. (2013) Eye Beads from the Indus Tradition: Technology, Style and Chronology. *Journal of Asian Civilizations*, 36 (2): 1-22.

Kenoyer, J.M., and R.H. Meadow (2008) Craft Production and Socio-Political Boundaries in the Indus Civilization. In Ellen M. Raven (ed.) *South Asian Archaeology and Art 1999*, 15. Brill

Khatri, J., and M. Acharya (1995) A New Indus - Saraswati Site. *Puratattva*, 25: 84-86.

Khatri, J., and M. Acharya (2005) Kunal Excavations: New Light on the Origin of the Harappan Civilization. In A. Agrawal (ed.) *In Search of Vedic Harappan Relationship*. Aryan Books: New Delhi, pp.104-117.

Konasugava, A. (2012) The Seals of the Pre-Indus Period in Light of the Seals Discovered at Kunal. *Bulletin of the Society for Near Eastern Studies in Japan*, 55: 22-35.

Laursen, S. (2010) The Westward Transmission of Indus Valley Sealing Technology: Origin and Development of the 'Gulf Type' Seal and other Administrative Technologies in Early Dilmun, c.2100–2000 BC. *Arabian Archaeology and Epigraphy*, 21: 96-134.

Macalister, R. (1912) *The Excavation of Gezer 1902-1905 and 1907-1909* (Vol. II). London.

Marshall, J. (1996) *Mohenjo-Daro and the Indus Civilization: Being an Official Account of Archaeological Excavations at Mohenjo-Daro Carried Out by the Government of India Between the Years 1922 and 1927*. Asian Educational Services.

Olijdam, E. and H. David-Cuny (2018) Dilmun-Meluhhan Relations Revisited in Light of Observations on Early Dilmun Seal Production during the City IIA-c Period (c. 2050-1800) BC. In Frenez et al. (eds) *Walking with the Unicorn: Social Organization and Material Culture in Ancient South Asia: Jonathan Mark Kenoyer Felicitation Volume*. Archaeopress, pp. 406-432.

Packard, V. (1959) *The Status Seekers*. New York: McKay.

Parpola, A. (1994) *Deciphering the Indus Script*. Cambridge University Press: Cambridge.

Pasztory, E. and H. Abrams (1983a) *Azetec Art*. New York: Dorset Press.

Pasztory, E. and E. Abrams (1983b) Aztec Art and Imperial Ideology. *Art Journal*, 43(2): 123-131.

Platt, E. (1978) Bone Pendants. *The Biblical Archaeologist*, 41: 23-28.

Ratnagar, S. (2004) *Trading Encounters: From the Euphrates to the Indus in the Bronze Age*. Oxford University Press: Oxford.

Shah, S., and A. Parpola (1991) *Corpus of Indus Seals and Inscriptions. Collections in Pakistan* (Annales Academiae Scientiarum Fennicae, Series B 240 and Memories of the Department of Archaeology and Museums, Government of Pakistan, 2).

Voss, B. (2005) The Archaeology of Overseas Chinese Communities. *World Archaeology*, 37: 424-439.

Wright, R.P. (2010) *The Ancient Indus: Urbanism, Economy, and Society*. Cambridge: Cambridge University Press.