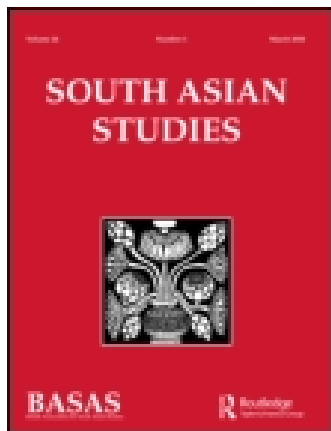


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Indus Components in the Iconography of a White Marble Cylinder Seal from Konar Sandal South (Kerman, Iran)

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This paper presents a detailed analysis of the iconography carved on a cylinder seal found in a metallurgical site within the archaeological complex of Konar Sandal South, near Jiroft, in the Halil river valley of the Kerman province, south-eastern Iran. This seal is made of a whitish marble and – even if heavily worn by use – it retains traces of different animal figures. These animals represent the translation into local style of a rare but characteristic iconography found in the seal production of the Indus Civilization. The merging into a single seal of different animals, some of which clearly belong to the standard animal series of the Indus seals, might have provided the owner with a special authority that allowed him/her to hold different administrative functions. Moreover, the discovery at Konar Sandal South of a cylinder seal bearing an Indus-related iconography might further testify to the direct interest of Indus merchants and probably craftsmen in trade exchanges with a major early urban site in south-eastern Iran.

Keywords: Seals; Multiple animals iconography; Indus Civilization; Konar Sandal South; Jiroft

Introduction

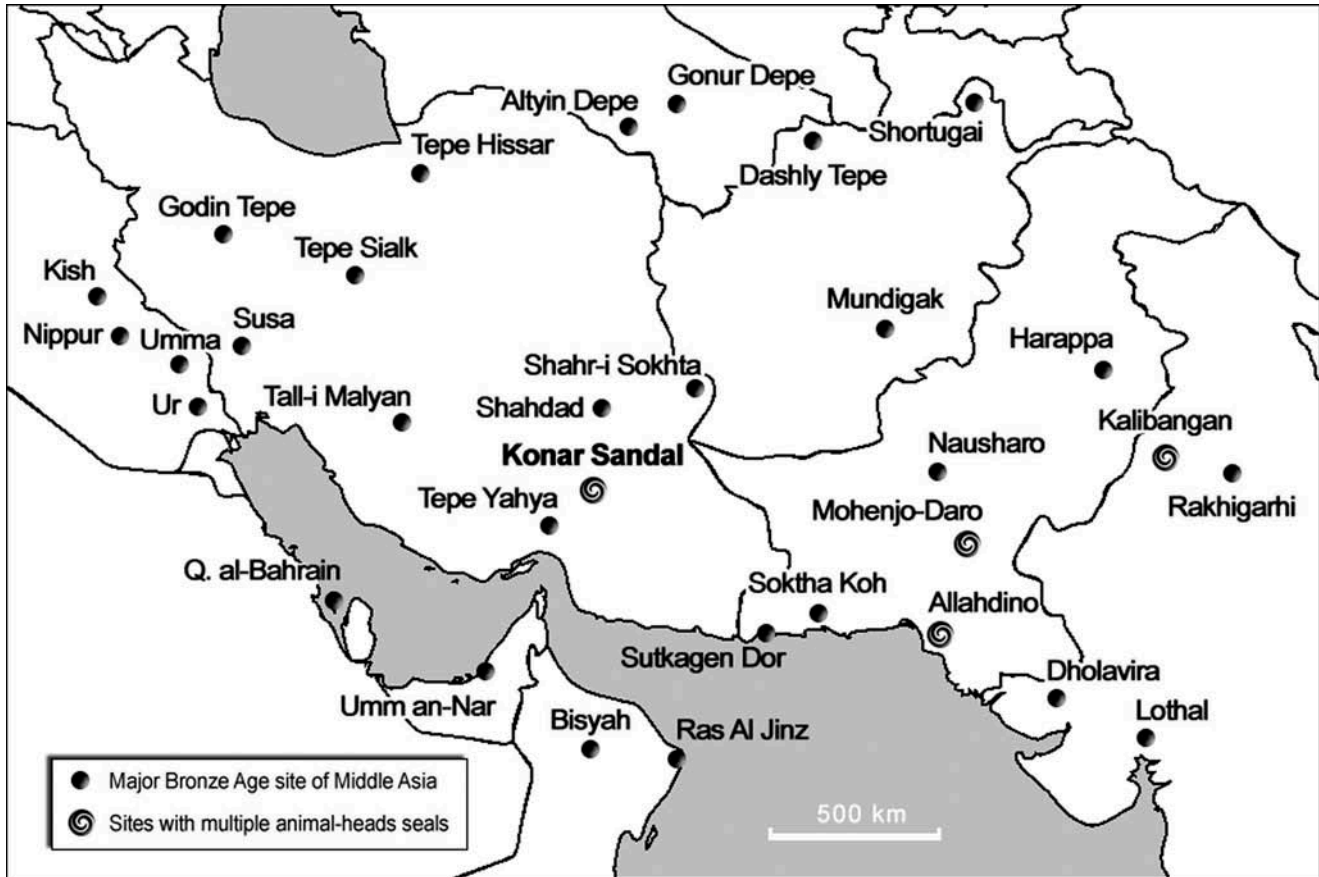
Holly Pittman has recently published a cylinder seal made of a white stone (Inv. No. 2006IX001, according to the caption of Figure 4.12)¹ found at the south-eastern periphery of the citadel mound of Konar Sandal South, one of the main mounds of the Jiroft sites complex.² She discusses the find in the framework of the interaction between south-eastern Iran and the Indus cultural area (Figure 1), ascribing it to a series of cylinder and stamp seals that she called the ‘whitestone group’. The seals of this group, found at Konar Sandal South, Tepe Yahya, and Shahdad, but also in southern Turkmenistan and eastwards at Mohenjo-Daro, have diverse iconographies, but share the use of a similar white stone, a carving technology employing drills to carve crucial points of the figures, and the characteristic of being strongly worn after a prolonged use. According to Pittman, this group of finds originated in central Iran and marks a wide network of Middle-Asian cultural connections.³ Among these ‘whitestone’ seals, the cylinder specimen from Konar Sandal South deserves a specific description and discussion, enhancing its cultural and historical implications – besides Middle Asian interactions – from the more specific viewpoint of Indus seal imagery.

Konar Sandal South and the archaeology of the Halil river valley (Kerman, Iran)

The Halil river (or Halil Rud) valley in the Kerman province of south-eastern Iran stretches from north-west to south-east for about 400 km. Starting from the southern slopes of the Zagros it ends in the great depression of the Jazmurian.⁴ The valley is surrounded by hills and crossed by many tributaries, dotted with palm trees and natural wells. As widely reported, in 2001 following a disastrous flood the Halil river cut its banks, exposing thousands of graves full of precious artefacts. Local inhabitants and antique dealers immediately started to systematically loot these treasures until Iranian security forces put an end to the illegal excavations and seized some of the artefacts. Thereafter Iranian archaeologists have recorded hundreds of archaeological sites dating to Chalcolithic, Bronze and Iron Age, and some late Neolithic sites have been also found in the northern mountain valleys.⁵

The archaeological complex of Konar Sandal South was the centre of a large urbanized district and was connected to the looted graveyard of Mahtoutabad, located about 800 metres east of the citadel mound. Even if the actual extension and settlement history of this area is still largely unknown, the first occupation dates back at least to the late fifth millennium BC.

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1. Map showing the main sites of Middle Asia in the third millennium BC (whorls indicate the presence of Indus and Indus-like seals bearing multiple heads of different animals arranged in whirl-like motif).

Excavation of the early Chalcolithic levels at Mahtoutabad brought to light the remnants of a large hut-like structure, fragments of a distinctive polychrome pottery, evidence of leaded copper processing and manufacturing of different types of semi-precious stones, including calcite-alabaster, chlorite, and lapis lazuli.⁶ A later settlement dating to the last centuries of the fourth millennium BC consumed large amounts of bevelled rim bowls, flowerpots, nose-lugged jars, elongated jars with downwards-flected spouts, and other ceramic types closely comparable with the ceramics assemblages of Susiana (Susa, Acropolis, level XVIIa), Choga Mish, and other sites of the central and south-western Iranian Plateau.⁷

The main mound of Konar Sandal South was originally a citadel enclosed at the base by a monumental wall of large mud-bricks, reinforced by semi-pillars regularly spaced to create architectural motifs, perhaps similar to the ones represented on some famous chlorite vessels carved in the local Halil Rud style. The citadel included an administrative unit in use between 2500 and 2200 BC, as testified by some radiocarbon dates and by the hundreds of clay sealings found inside one of the

rooms.⁸ The discovery of three tablets and a fragmentary specimen bearing lines of an unknown geometric writing, accompanied by shorter inscriptions belonging to the Linear Elamite family, add further evidence to the cultural complexity of this early urban civilization.⁹

The discovery of Mesopotamian seal impressions on clay tags dating to EDIII A-EDIII B horizons (but also earlier), of Indus-related seals, and compartmented metal seals imported from Bactria and Margiana emphasizes the centrality of the Halil river valley in the exchange routes that crossed the Iranian plateau during the second half of the third millennium BC. Several scholars consider the Halil river valley, and the region of Kerman in general, to have been the seat of the ancient nation and state of Marhashi/Parahshum, and they locate here the origin of the carving style that had been incorrectly called 'intercultural'.¹⁰ The cuneiform texts tell about violent and persistent clashes between Akkad and Marhashi for the control over Elam and the southern Zagros. Rimush eventually claimed to have defeated Marhashi and its allies before having invaded and annexed Elam and plundered the rich Marhashi itself.¹¹ At the time of the conflict between Rimush and Marhashi, the city of Konar Sandal

South must have been at the climax of its prosperity. Carved chlorite objects from Marhashi have been found from Mari to the Indus Valley, and from the southern shores of the Gulf to the interior of Uzbekistan. Therefore, the latest discoveries and the emergence of Marhashi on the archaeological scenario of the Iranian Plateau indicate that the label of 'secondary state' hastily applied to the first urban formations of south-eastern Iran may be completely wrong.¹²

The white marble cylinder seal from Konar Sandal South

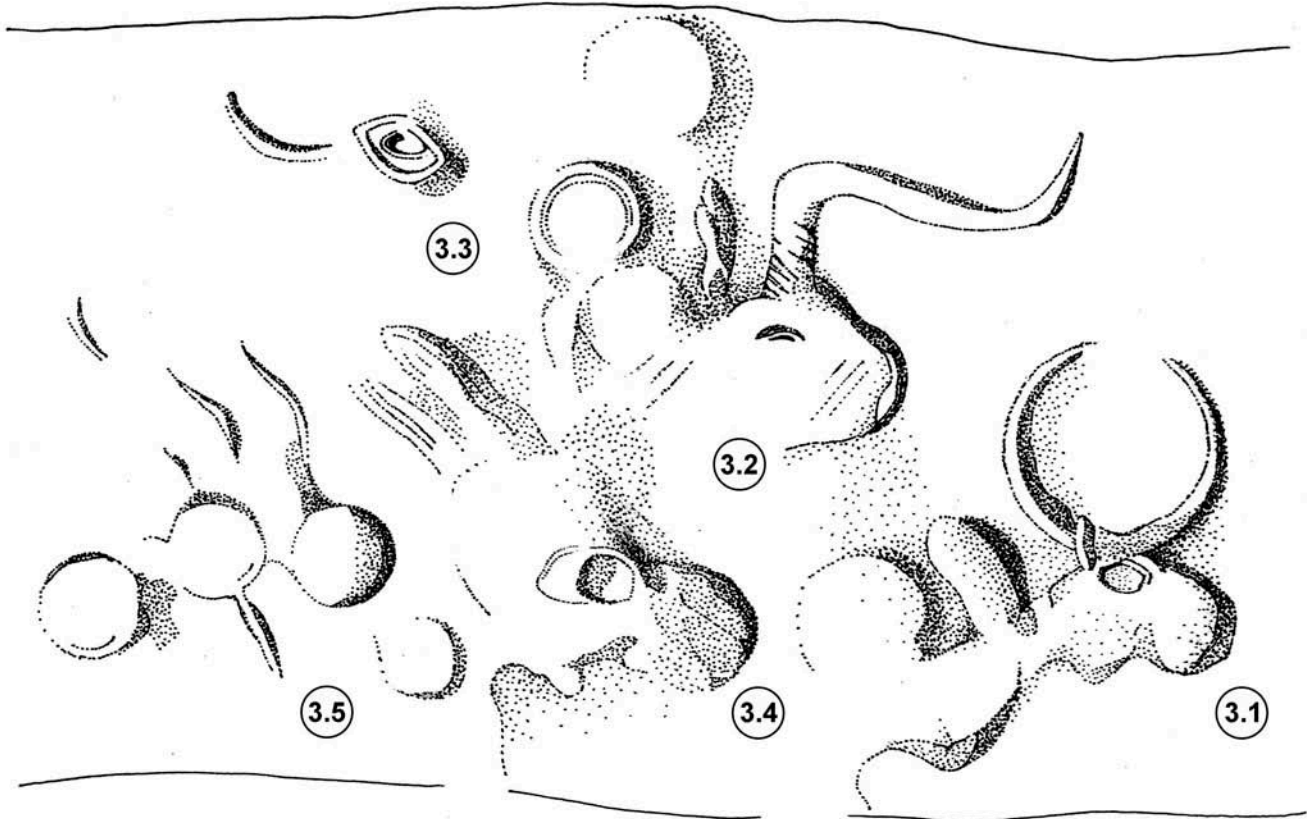
The cylinder seal published by Pittman is 23.97 mm long and has a maximum diameter at the base of 12.42 mm (Figure 2). It is made of a whitish marble with pale brown shadows (Munsell Colour System: 10YR 7/4). Its surface, as observed by Pittman, is heavily worn by use, to the point that entire parts of the figures engraved are almost effaced. In three animal heads, only the details more deeply incised, such as horns and eyes, are still recognizable. The drill hole also shows a heavy wear caused by strings. Seen from above, it looks almost sub-triangular instead of being uniformly rounded at the extremities, proving that the seal hung for a long time in a horizontal position,

almost certainly worn at the wrist, ready to be rolled onto clay lumps and tags.

The seal impression was drafted in detail and in the illustration the individual animal figures are numbered 3.1 to 3.5, from right to left (Figure 3). As already noted by Pittman, the cylinder was engraved combining the use of drills, both solid and tubular, and fine carving tools. The trace left by a hard and tiny copper point was still recognizable in the deeper details, for example in the horn of animal 3.2, also visible in Figure 2. The use of drills for outlining the bodies or critical points of animals and other images is a distinctive feature of other seals with Indus-related images made in the Iranian Plateau. A bronze stamp seal found on the surface of Konar Sandal South¹³ bears a standing caprid or antelope with long wavy horns and a gharial (*Gavialis gangeticus*) of indisputable Indus inspiration, if not origin,¹⁴ but engraved connecting drill-holes with deep carvings. Moreover, couples of holes seem to have been drilled in front of and below the caprid. A similar seal, even if made from a dark brownish chlorite instead of copper, comes from an Umm an-Nar type grave excavated at Bisyah, in the interior of the Sultanate of Oman.¹⁵ This seal has a zebu depicted in front of a small round object, while two enigmatic motifs are carved above it. The main subject of this seal and its iconographic arrangement are clearly Indus, but the engraving technique based on drill-holes links it to the



2. Photographs of the cylinder seal in white marble found at Konar Sandal South in the excavation of Trench IX. Courtesy of Halil Rud Archaeological Project.



3. Drawing of the animals carved on the cylinder seal found at Konar Sandal South.

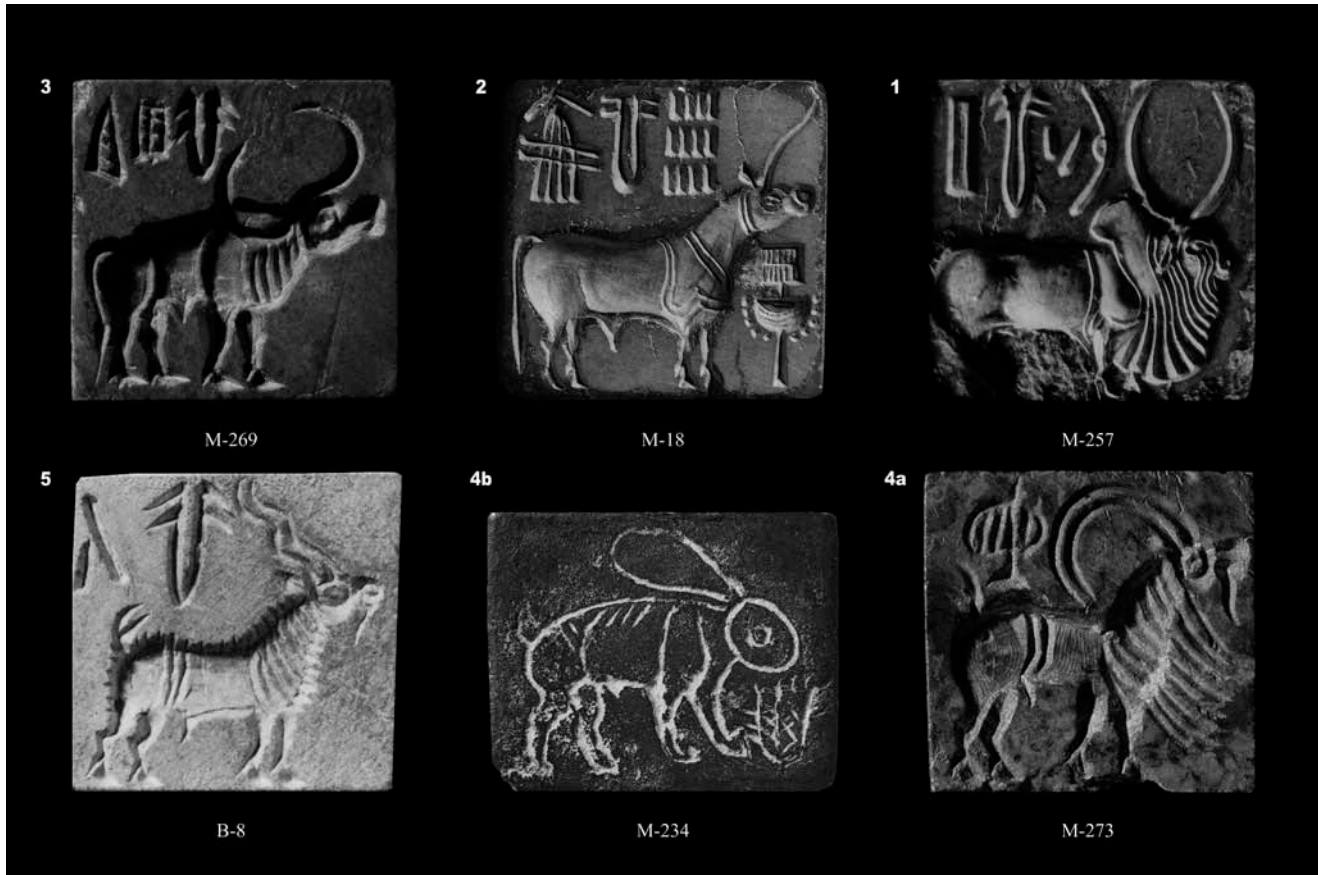
copper seal from Konar Sandal South and with other stamp seals found in Oman, further stressing the intense cultural interactions that occurred between Eastern Arabia, Iran, and the Indus Valley during the second half of the third millennium BC.

In our cylinder seal, the fore parts of the animals seem to stand for the whole bodies. Circles were drilled to form the muzzle (as for Animal 3.1), the back or hump (as for 3.1 and 3.2), or other less recognizable parts of the animal figures (as in 3.4). Two other circles are drilled above animal 3.2, but they cannot be easily ascribed to the contour of any animal part due to the strong wear in that area of the seal. The large horns of animal 3.1 were probably made with a tubular copper drill. In spite of the loss of many details, overall the carving appears competent, fast, and rather expedient. Even considering the limited curved surface available to the carver, the proportions among the body parts of a single animal are quite realistic.

Pittman correctly identifies the two better-preserved figures (Animals 3.1 and 3.2) as disembodied fore parts, respectively of a humped zebu and a bovid with a single horn, a raised ear, and a rear hump. The first animal to the right (3.1) is evidently a humped zebu represented without the usual dewlap and with its prominent,

crescent-like horns made using a tubular copper drill. In Indus seals the large horns of zebus were never made with such tubular tools, but carved separately by means of sharp-cutting points (Figure 4.1). Consequently, they never appear as arcs of the same circumference.¹⁶ A narrow hump-like prominence, which may represent a disproportionate ear, projects vertically from the long neck. The actual hump of the zebu raises behind it, carved with a drill. The eye is a lozenge, well carved with a tiny-pointed tool.

The second creature (3.2) is an Indus unicorn with a large ear raised on a short, bulky muzzle and the characteristic single, sinuous horn departing from the nape.¹⁷ The horn and the ear were carved, while the muzzle was made by two partially overlapping drill holes and the shoulder and the hump were made by a single hole each. Like in the Indus seals, the animal has a goat or antelope-like rounded muzzle and the ear is pointed and turned up, but it has a zebu-like hump that never appears in the Indus unicorns (Figure 4.2). The horn was marked by a series of oblique hatchings, largely worn but still partially visible at the base. The only other unicorn-like animal so far discovered in the typical Halil style appear on two chlorite carved vessels and a hand-bag weight. The creature, always represented standing among palms,



4. Examples of Indus steatite stamp seals and copper tablets with single animal icons of the types represented on the cylinder seal found at Konar Sandal South. Courtesy of A. Parpola.

has the hump as the unicorn in the cylinder seal found at Konar Sandal South, but a long, straight horn covered with segments or ridges clearly indicating a spiral-like twisting.¹⁸ The horn of the Indus unicorn is instead rarely represented with inner hatchings.¹⁹

Image 3.3 is almost completely effaced. However, considering also the presence of a zebu and an Indus unicorn, the finely carved oblique eye, slightly inclined, and the nearby crescent-like feature probably belong to the head of an Indus buffalo (Figure 4.3).²⁰ The rest of the muzzle, neck, and back are completely effaced, but given the geometry and proportions of the original Indus design, we may exclude that the two circles drilled above the unicorn were part of the same animal.

Image 3.4 is as ruined as mysterious. What remains of the muzzle retains a modified circle at the right end, a larger egg-shaped feature for the head, and a poorly preserved but very large lozenge as the eye. Two scarcely visible long parallel features might indicate the lunate horns of some large wild caprids or antelopes, such as the ones depicted on some Indus seals (Figure 4.4a).²¹ Thin parallel inner lines are barely visible inside their contour and might render some

pattern of the horns. Alternatively, they may represent the long ears of a large, evidently disproportionate, hare or rabbit. These animals, although not very common on Indus stamp seals,²² are quite frequent on copper tablets found at Mohenjo-Daro and on fired steatite tablets found at Harappa (Figure 4.4b).²³

Image 3.5 is also almost completely effaced. It is reduced to an arch of three circles made by drillings. Two parallel wavy features, now almost completely worn, departed upward from the space between the first two circles. A line extends downward from the second circle on the left. If these almost-disappeared lines represented wavy horns, following the same pattern as animals 3.1 and 3.2, the three circles might have outlined the head, chest, and back of a markhor wild goat (*Capra falconeri*) or a blackbuck antelope (*Antelope cervicapra*) like those represented on some Indus seals (Figure 4.5).²⁴

Discussion

Although the meanings of images 3.4 and 3.5 remain almost completely undisclosed, the identification of the

first three animals is certain. The stonecutter was probably a skilled local artisan who adapted a series of standard Indus animal iconographies and their symbolic-cognitive background to the long, independent seal making traditions of the south-eastern Iranian Plateau.

Regardless of its manufacturing tradition, this seal from Konar Sandal South seems in fact to re-elaborate and adapt to the local style an original and peculiar iconography of the Indus Civilization, respecting also a series of rules at the basis of the Indus seal production. In the impression, all animal images face (in this case, one could also say ‘rotate’) right, as they are normally arranged in the Indus seals once stamped on clay. Interestingly, zebu 3.1 is the first animal of the procession. This order seems to match the prominence that most scholars ascribe to the seals showing zebus in the standard Indus stamp seals.²⁵

Even if the depiction of a zebu bull would not necessarily imply a Harappan affiliation of the complex imagery of this seal, this animal being physically present in south-eastern Iran at the time and well-represented also in the local art tradition,²⁶ the association of three distinctive Indus animal icons – zebu, unicorn, and buffalo – almost certainly does.

Moreover, the *pars pro toto* synoptic principle fully belongs to the Indus iconographic tradition, as demonstrated by the several composite animal figures present in the corpus of Indus stamp seals. Considered all together, these animals may symbolize something more than a simple list or procession, representing instead the physical disembodiment of a concept represented on two similar Indus whirl-like images on stamp seals. The first motif was carved on a few Indus square seals – a relatively high number of which bear only the animal icon and no inscription – and sees the necks and heads of different animals, usually a bull, a unicorn, and an antelope, projecting from a single animal body (Figure 5).²⁷ The second one was carved on a round seal and composes the necks and heads of different animals, among which are recognizable a zebu, a bull, a unicorn, and possibly a tiger, in a whirl-like motif arranged around a womb-shaped central element (Figure 6).²⁸ Less direct and consistent are the connections with two other square stamp seals from Mohenjodaro, respectively showing a whirl made with three interlocked tigers²⁹ and a six-arm whirl with a single unicorn head (Figure 6).³⁰

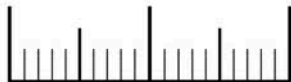
In general, the Halil Rud animal imagery more directly linked to the iconography of the Indus civilization



5. Examples of Indus steatite stamp seals with heads of different creatures (usually a bull, a unicorn, and an antelope) projecting from a single animal body. Courtesy of A. Parpola.



M-417



M-297



M-295



6. Examples of Indus steatite stamp seals with heads of different animals arranged in a whirl-like motif (Courtesy, A. Parpola).

suggests a precise knowledge of very important eastern symbols, but also a strategic will of subverting their original implications, adapting them to the local style and tradition.³¹ Most likely, the cylinder seal found at Konar Sandal South bears the linear translation of a similar rotatory template. If in the Indus stamp seal the heads of the different creatures ideally rotate on the same spatial plan around their central hub, in the seal from Konar Sandal South they rotate three-dimensionally around the axis of the cylinder seal, leaving on clay the same conceptually similar group movement.

The uncommon iconographies with multiple animal heads present in Indus seals production are still a mystery, but the most reasonable assumption is that animals and fantastic creatures represented different identities, social roles, and/or social segments of the developing urban universe.³² In this light, these seals might have provided the owner with a special authority that allowed him/her to hold different administrative functions.³³ Of course, this is just one of the many possibilities and – even if reasonable – it cannot be firmly demonstrated.

Conclusion

The white marble cylinder seal on study was found in the excavation of Trench IX, a large trench (15 x 20 m) dug in a low mound c. 500 m south-east of Konar Sandal South. In the same area, eight furnaces built on ceramic jars operated on massive mud-bricks platforms. As stated by the excavator:

Close to the furnaces, clear evidence of craft activity was found including nearly five kilos of copper slag, fragments of ingots, and open molds. In addition, a number of copper and bronze objects and tools such as chisels, stone vessels in marble, and steatite/chlorite, microlithic tools, and a large number of clay objects possibly connected with pyrotechnical activities have also been recovered.³⁴

It was evidently a neighbourhood occupied by a community specialized in roasting and smelting copper ores and casting various types of artefacts in moulds and thorough lost-wax processes.

According to Y. Madjidzadeh,³⁵ Indus-like bleached carnelian beads have also been found in this open-air metallurgical site.³⁶ The presence of a cylinder seal bearing a distinctive – even if rare – Indus iconography supports the hypothesis of a specific interest and actual frequentation of Indus merchants and craftsmen, or of families maintaining formal ties with the Indus communities, in the copper ore deposits of the Kerman-Halil river region.³⁷ The strong wear of the seal might indicate that it was worn and used by the same family or kin group for a long time and (presumably) for thousands of impressions on clay, perhaps across the time span of generations. This evidence suggests that the social identity and/or occupational specialization could be transmitted or inherited along family or kinship lines even in a foreign social context.

These bleached beads and cylinder seal from the copper-processing area can be added to a consistent series of other Indus-related artefacts discovered at Konar Sandal South: animal figurines with human faces on exhibit at Jiroft Museum,³⁸ one cubical and twelve spherical weights related to the metrological system of the Indus Valley,³⁹ the metal stamp seal with typical Indus animal icons already discussed for its manufacturing technique,⁴⁰ fired steatite disk-beads found in both the settlement area and the pilfered graveyard of Mahtoutabad,⁴¹ and the local processing of a limited amount of unmistakable chert from the Rohri Hills in Pakistan, including an over-exploited ‘bullet’ core reduced by indirect pressure techniques.⁴² Most probably, a systematic editing of the excavation reports of Konar Sandal South will add more evidence of the direct presence of Indus traders in the most important civilization core of south-eastern Iran.

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14. For examples of Indus stamp seals with caprid or deer with long wavy horns, see *Corpus of Indus Seals and Inscriptions (CISI) Volume 1: Collections in India*, ed. by J. P. Joshi and A. Parpola (Helsinki: Suomalainen Tiedeakatemia, 1987), Cat. No. B-8, B-11. For examples of Indus stamp seals with gharial, see *ibid.*, Cat. No. M-292, M-293; *Corpus of Indus Seals and Inscriptions (CISI) Volume 3: New Material, Untraced Objects, and Collections Outside India and Pakistan. Part 1. Mohenjo-daro and Harappa*, ed. by A. Parpola, B. M. Pande, and P. Koskikallio (Helsinki: Suomalainen Tiedeakatemia, 2010), p. 387, [Figure 5](#). For examples of Indus molded terracotta tablets with gharial, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. M-482B, H-173B, H-174B; *Corpus of Indus Seals and Inscriptions (CISI) Volume 2: Collections in Pakistan*, ed. by S. G. M. Shah and A. Parpola (Helsinki: Suomalainen Tiedeakatemia, 1991), Cat. No. M-1429C; *Mohenjo-daro and Harappa*, ed. by Parpola, Pande, and Koskikallio, Cat. No. H-1962B, H-1963B, Figures 48, 50.
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16. For examples of Indus stamp seals with zebu, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. M-256 to M-265, H-83 to H-86, K-32, K-66; *Collections in Pakistan*, ed. by Shah and Parpola, Cat. No. 1101 to M-1123, H-585, H-586, p. 417, [Figure 1](#); *Mohenjo-daro and Harappa*, ed. by Parpola, Pande, and Koskikallio, Cat. No. M-1893 to M-1902, pp. 372–73, Figures 19–21.
17. For general discussions about the Indus unicorn, see A. Parpola, 'The Harappan Unicorn in Eurasian and South Asian Perspectives', in *Linguistics, Archaeology and the Human Past Occasional Paper 12*, ed. by T. Osada and H. Endo (Kyoto: Research Institute for Humanity and Nature, 2011), pp. 125–88; J. M. Kenoyer, 'Iconography of the Indus Unicorn: Origins and Legacy', in *Connections and Complexity: New Approaches to the Archaeology of South Asia*, ed. by S. Abraham and others (Walnut Creek: Left Coast Press, 2013), pp. 107–25; D. Frenez and M. Vidale, 'Harappan Chimaeras as "Symbolic Hypertexts": Some Thoughts on Plato, Chimaera, and the Indus Civilization', *South Asian Studies*, 28.2 (2012), 107–30.

18. Madjidzadeh, *Jiroft*, p. 36.
19. For examples of Indus unicorns with hatched horns, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. H-4 to H-11, H-21, H-26, H-27, H-29, K-2, B-1, B-2; *Collections in Pakistan*, ed. by Shah and Parpola, Cat. No. M-631 to M-633, M-635, M-734, H-271; *Mohenjo-daro and Harappa*, ed. by Parpola, Pande, and Koskikallio, p. 367, 555 Figure 7.
20. For examples of Indus stamp seals with buffalo, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. M-266 to M-270, H-87, K-33; *Collections in Pakistan*, ed. by Shah and Parpola, Cat. No. M-1126 to M-1128; *Mohenjo-daro and Harappa*, ed. by Parpola, Pande, and Koskikallio, Cat. No. M-1903, p. 374, Figures 23, 24.
21. For examples of caprids or antelopes with lunate horns, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. M-272, M-273, L-48, K-37, and B-12; *Mohenjo-daro and Harappa*, ed. by Parpola, Pande, and Koskikallio, Cat. No. M-1905.
22. For examples of hares or rabbits on Indus seals, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. H-95.
23. For examples of hares or rabbits on copper tablets, see *Collections in India*, ed. by Joshi and Parpola, pp. 134–36; *Collections in Pakistan*, ed. by Shah and Parpola, p. 210. On steatite tablets, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. H-333, H-334; H-335; H-336; *Mohenjo-daro and Harappa*, ed. by Parpola, Pande, and Koskikallio, Cat. No. H-1329.
24. For examples of goats or antelopes with wavy horns, see *Collections in India*, ed. by Joshi and Parpola, Cat. No. B-8, B-11.
25. A. Parpola, *Deciphering the Indus Script* (Cambridge: Cambridge University Press, 1994), p. 116; J. M. Kenoyer, *Ancient Cities of the Indus Valley Civilization* (Karachi: Oxford University Press, 1998), p. 84.
26. R. H. Meadow, 'Faunal Exploitation Patterns in Eastern Iran and Baluchistan: A Review of Recent Investigations', in *Orientalia Iosephi Tucci Memoriae Dicata*, ed. by G. Gnoli and L. Lanciotti (Rome: Istituto Italiano per il Medio ed Estremo Oriente, 1987), pp. 881–916; C. Grigson, 'Early Cattle Around the Indian Ocean', in *Indian Ocean in Antiquity*, ed. by J. Reade (London: Kegan Paul, 1996), pp. 66–74.
27. *Collections in India*, ed. by Joshi and Parpola, Cat. No. M-298, K-42, K-43, C-25; *Collections in Pakistan*, ed. by Shah and Parpola, Cat. No. M-1169, M-1170, M-1171, Ai-6.
28. *Collections in India*, ed. by Joshi and Parpola, Cat. No. M-417.
29. *Ibid.*, Cat. No. M-295.
30. *Ibid.*, Cat. No. M-297.
31. Another exceptional artefact supports the existence in the Halil river valley of a process of selection and transformation of some specific motifs of the Indus imagery. It is a rectangular tile in brownish chlorite originally embellished by polychrome geometric inlays in semiprecious stones, found during illegal excavations and presently lost in some unknown private collection (D. Frenez and M. Vidale, 'Translated symbols. Indus reminiscences in a carved chlorite artefact of the Halil Rud Civilization', *Rivista di Archeologia* 38 (2015)). The panel shows a standing female zebu attacked on the hump by a beast of prey, while its calf suckles from below. Leftside, in front of the animals, stands what looks like a big pedestalled cup that closely resembles some ceramic and chlorite forms well known in the repertoires of the Halil river valley (for examples, see Madjidzadeh, *Jiroft*). The image engraved on this object seems intimately connected to Indus iconography, but at the same time it is also deeply non-Indus. The general scene, including the female zebu and the pedestalled cup represented in front of it, is doubtless a literal citation of the basic compositional model of the famous unicorn icon depicted along with the so-called ritual filter on the steatite stamp seals of the Indus civilization. On the other hand, this image shows an impressive series of inversions respect to the Indus prototype.
32. Frenez and Vidale, 'Harappan Chimaeras'.
33. Beyond the functional association, the evident similarity between the radial and whorl motifs of these Indus seals and some of the later circular stamp seals found at Failaka/Dilmun remains merely visual. The Dilmun seals with whorl motifs always bear the same animal repeated many times. Therefore, these Dilmun seals cannot have represented the merging of different roles and functions into a single icon. For examples of Dilmun stamp seals, see P. Kjarum, *Failaka/Dilmun Second Millennium Settlements. Volume 1:1 The Stamp and Cylinder Seals* (Aarhus: Jutland Arch Society, 1983), pp. 14–23, Cat. No. 1-30.
34. Madjidzadeh, *Jiroft*, p. 86.
35. Y. Madjidzadeh, personal communication.
36. The association between carnelian beads and a seal with a multiple-head creature was found

also at Altyn Depe, in Margiana (south-western Turkmenistan). In Burial No. 60, V. M. Masson discovered among the grave goods a metal (silver?) stamp seal shaped in the form of a three-headed animal, which 'together with the beads was part of a lace'. Considering the ascription of the three animals to the Bronze Age iconography of Bactria and Margiana, this evidence can hardly be univocally related with what was discovered at Konar Sandal South. The cognitive model might be similar, but the icons are different. See V. M. Masson, *Altyn-Depe* (Philadelphia: University Museum, University of Pennsylvania, 1988), p. 38.

37. Originally put forward in S. Ashtana, 'Harappans Interest in Kirman', *Man and Environment*, 3 (1979), 55–60. See also S. Ashtana, 'Harappan Trade in Metals and Minerals: A Regional Approach', in *Harappan Civilization: A Recent Perspective*, ed. by G.L. Possehl, 2nd edn (New Delhi: Oxford & IBH, 1993), pp. 271–86.
38. Specimens in Madjidzadeh, *Jiroft*; M. Vidale, 'New Evidence of Cultural and Trade Contacts Between the Indus Civilization and South-Eastern Iran in the Second Half of the 3rd Millennium BCE', paper given at the 39th Annual Conference on South Asia (Madison, 15 October 2010), slide 17; further preliminary discussion by R. P. Wright, 'The Jiroft, the Kulli and the Indus', paper presented at the Conference South Asian Archaeology 2012, 21st EASAA Conference (Paris, Ecole du Louvre, 2–6 July 2012).
39. Pittman, 'New Evidence', p. 65.
40. *Ibid.*, p. 67.
41. Unpublished materials excavated by M. Vidale.
42. J. Rafifar, personal communication.