

Mythological functions of Indus inscriptions



Eight conclusions arising
from the nonlinguistic model
of Indus symbols

Steve Farmer saf@safarmer.com

Sixth Harvard Indology Roundtable
8-10 May 2004

For related files and articles, go to: <http://www.safarmer.com/downloads>.

Conclusion #1

**Indus signs were symbolic and mythological in character
— not linguistic**

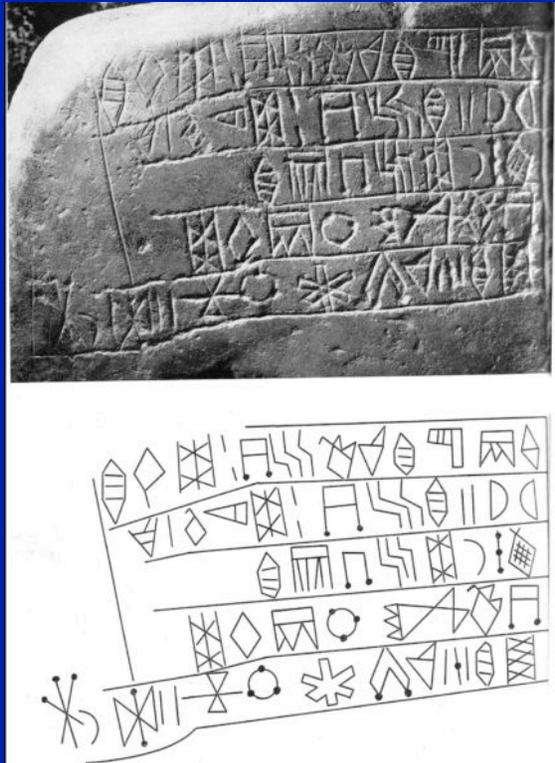
Five arguments (out of many others) vs. the old linguistic model of Indus signs

1. The inscriptions (found on over a dozen different media) average under 4.6 signs each in length, with the longest containing 17 signs — unparalleled in corpus of inscriptions even 1/50th this size.
2. All expected archaeological markers of manuscript production are missing, providing no way around the brevity problem (no ‘lost Indus manuscripts’);
3. All inscriptions consist mainly of high-frequency signs that rarely repeat even in the longest inscriptions — impossible in any phonetic script;
4. Not one of 4-5,000 known inscriptions contains even a suggestion of the quasi-random types of sign repetition expected in semi-syllabic scripts.
5. The number of unique signs (‘singletons’) and low-frequency signs is rising and not declining over time — the opposite of what we expect in true scripts.

For detailed discussion of these points, see the related files at:

<http://www.safarmer.com/downloads>

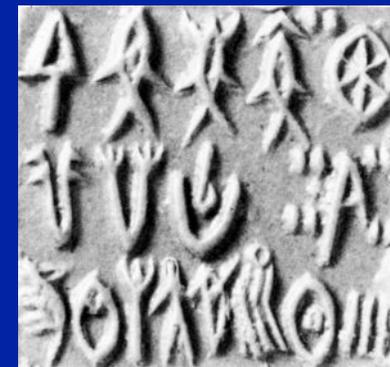
The quickest way to show that Indus inscriptions can't be linguistic is to compare them with contemporary inscriptions written in known scripts. Below left is the first Linear Elamite inscription ever found. Like most of the 21 (or 22) inscriptions known, it is far longer than the longest of all Indus inscriptions (below right).



Like all true scripts, this Linear Elamite example contains much quasi-random sign repetition:

1 sign repeats 5 times, 2 signs repeat 4 times, 8 signs repeat 2-3 times each

(M-314 a)



The longest Indus inscription on one surface is typical in consisting predominantly of non-repeating high-frequency signs — impossible for a phonetic script.

Actual size: .9 x 1 inch (2.41 x 2.54 cm)!

The minority of Indus inscriptions in which we do see sign repetition never repeat signs in a quasi-random fashion. Instead, we get the kinds of sign repetition seen in other nonlinguistic sign systems — mainly involving symmetrical sign placements or multiple repetitions of a small class of signs two or more times in a row (there are a few other types).



Could Indus symbols have been whole-word (logographic) symbols, as sometimes claimed, instead of being phonetic?

If so, the semantic range of the system would be so limited that it could hardly be claimed as a serious 'script': Koko the signing gorilla would have a much larger vocabulary (ca. 1,000 words) than the Indus 'literate elite'

4 Indus symbols = over 21% of the Indus corpus

8 Indus symbols = over 31% of the Indus corpus

20 Indus symbols = over 50% of the Indus corpus

These figures apply to all types of inscriptions (on over a dozen media) in all periods of Harappan history, showing that the system wasn't even evolving in phonetic directions after 700 years of development. Indus sign frequencies are similar to those we find on nonlinguistic systems elsewhere (see below).

It can also be shown in several ways that most apparent numbers in the inscriptions were also symbolic (numerological). Except in one minor case involving counts of sacrifices (discussed later) they had nothing to do with accounting mathematics, unlike proto-cuneiform and proto-Elamite.

One piece of evidence for this view lies in analysis of number frequencies, where we find that the majority of number signs that dominate in the inscriptions are those with magical or celestial connotations — 7's, 3's, 12's, etc. — while many other apparent numbers rarely or never show up.



Many 'numbers' in the inscriptions show up without anything to qualify except other 'numbers.' You might argue that they are used for their phonetic values, but the lack of quasi-randomness in sign repetition undermines this argument.



Not '7' and '3' but 'The Seven,' 'The Three'



Three lessons from the Indus case

1. The discovery of a random seal or inscription with a small chain of symbols on it (or even 4-5,000 of them) isn't necessarily evidence of a 'new writing system.'
2. Massive multi-city urban civilizations can form and remain stable for long periods without writing: in multilingual civilizations, the use of nonlinguistic inscriptions may in fact be *more* effective than writing in promoting cultural and social cohesion.
3. Fluctuations in Indus sign frequencies aren't epiphenomena of language encoding: studies of these fluctuations can provide detailed information about social and religious developments in Indus society.

Conclusion #2

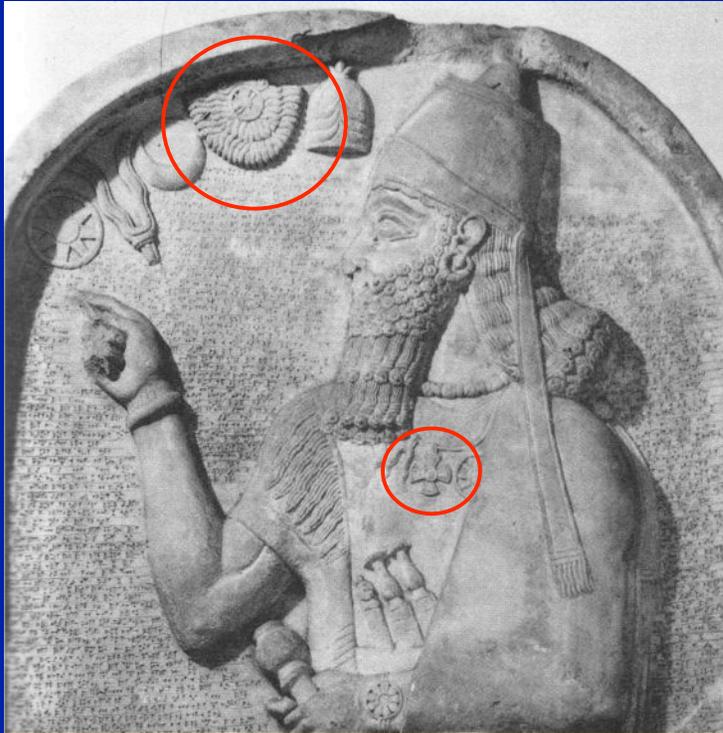
Like other nonlinguistic sign systems, Indus symbols have multiple and not single referents ('multivocality')

We can learn here from the nonlinguistic inscriptions in the Middle East found on seals, stelae, and boundary stones (*kudurru*) — which ranged from a few to several dozen symbols in length.

Symbol frequencies here are similar to those found in Indus inscriptions: a handful of very high-frequency signs show up repeatedly; signs only repeat in the inscriptions in special cases; and hundreds of rare or unique signs are known that complement the high-frequency signs.



Illustration of the principle of multivocality

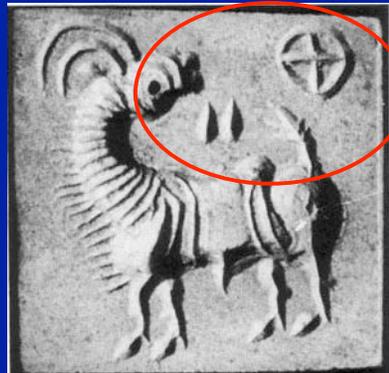


Ashurnasirpal II (9th cent. BCE) pointing to a few signs of his patron gods. From left to right: Istar, Ashma, Adad, Sin, Ashur

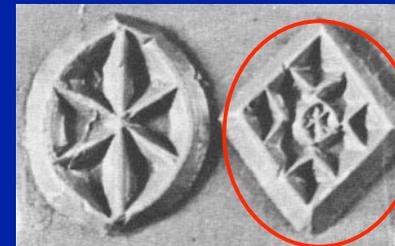
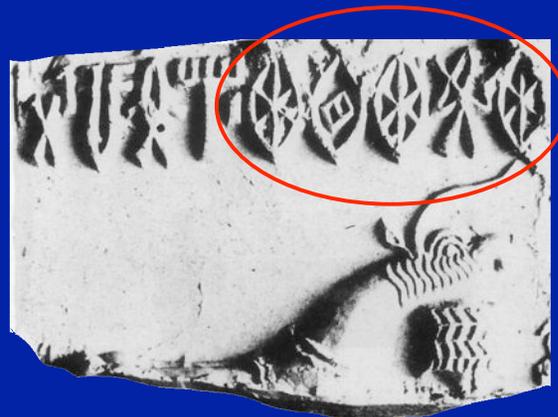
The abstract symbols of Ashma (two are circled here) in Middle Eastern emblem inscriptions could stand in different contexts for:

- The god Ashma or his reflection in the earthly king
- The sun in the celestial realm, or its fertilizing power
- The idea of cosmic order or justice
- The idea of terrestrial order or justice
- Illumination, divination, wisdom
- Priesthood or worship of Ashma
- Other meanings depending on the mythological contexts or other signs combined with these symbols.

The suggestion that multivocality existed throughout the Indus system is illustrated most clearly in the sun/cosmological sign — which in different contexts apparently functioned as a cosmological sign, celestial body, political symbol, fertility sign (sun + rain compound), magical talisman, etc.



N. American petroglyph for 'rain.'



Detail from M-6 a (Cosmic Power in the City or Citadel?)

The sign shows up 4 times in the 10 signs of the badly deteriorated Dholavira 'signboard' (not shown), which apparently once hung over the main gate to the city's inner Citadel

Conclusion #3

The oldest and most persistent use of Indus signs shows up in agricultural magic and rituals — not in accounting contexts, as in Mesopotamia or Iran

The vast majority of Indus signs can be directly or indirectly related to agriculture: typical signs include seeds, fruits, sprouts, grain plants, pulses, millet, trees, sun + rain signs, farm instruments (hoes, ards or primitive plows, mortar and pestles, rakes, harvesting instruments, etc.), seasonal/celestial or astral signs, and even at times anthropomorphized plowed fields.

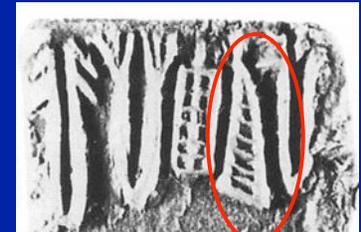
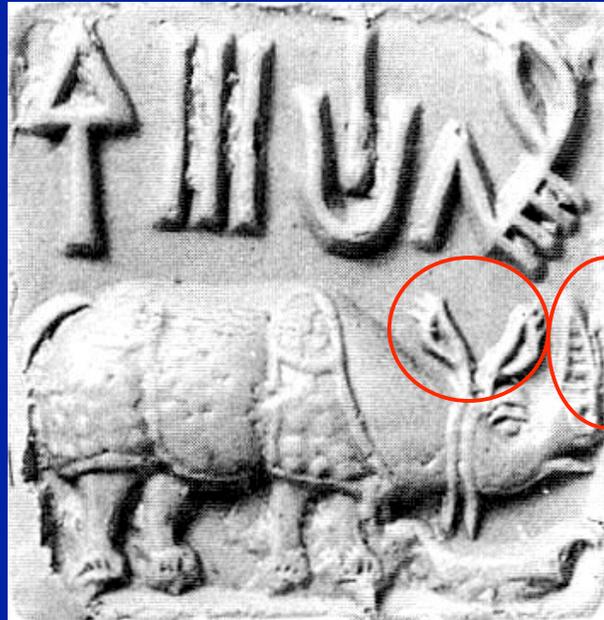
Just as in the Mesopotamian case, multileveled referents should normally be assumed for each symbol in the divine, celestial, and terrestrial worlds.

Every sign in M-66 (with the exception of the single 'fish' sign — and maybe even that one) can be tied in some way to farming or fertility. (That doesn't mean that these seals couldn't have additional administrative functions independent of agriculture, however.)



M-66 A (flipped horizontally)

Seeds, plants, and other signs show up in odd places



'The Three' and a grain crop

The nature of the **Ritual Stand** in front of the unicorn has long been in dispute. In line with the agricultural origins of the signs, evidence suggests that it is a stylized pipal/fig tree — associated mythologically with the unicorn and fertility (see M-296 at right). In many variants of the Ritual Stand, we even see the bottom section bearing fruit (**red circles**)!

A Tree Sign is also the most common Indus sign, making up over 10% of the entire Indus corpus - **blue circles**).



M-296 A bis, flipped horizontally



M-66 A, flipped horizontally



Nd-1 A flipped horizontally

Conclusion #4

We find both male and female imagery in Indus agricultural mythology, but in the inscriptional evidence (as opposed to other sources), male imagery prevails

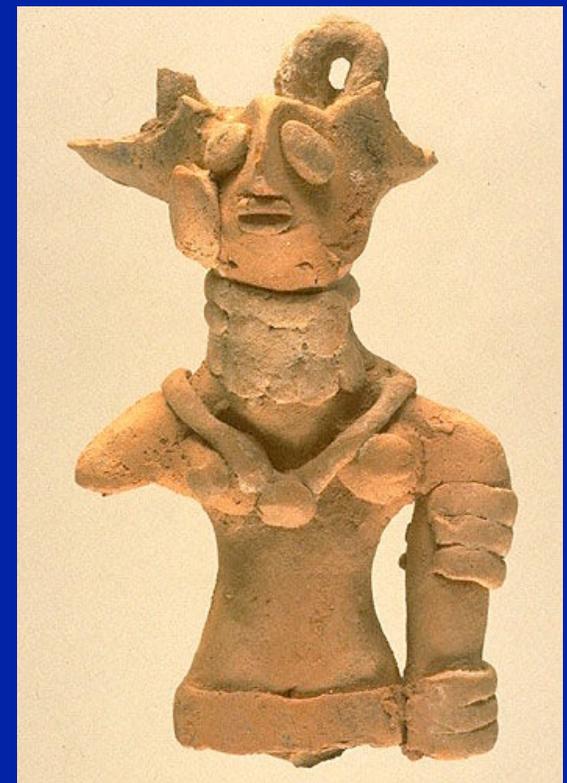
One suggestion of a possible Mother Earth myth turns up in Indus inscriptions (H-180 A-B below). But the evidence is slim compared with the abundant data found in terra-cotta ritual figurines. How do we explain the imbalance in evidence?



H-180 A-B

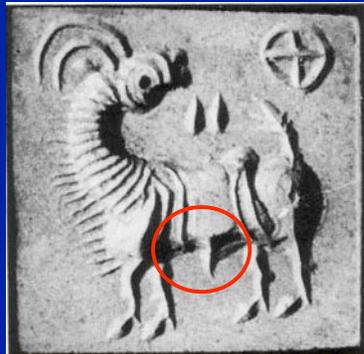


For the earliest discussion, see Marshall, *Mohenjo-daro and Indus Civilization* 1931 I: 49-52

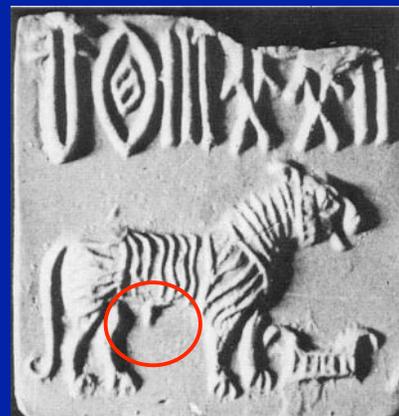


S. Clark, [article at www.harappa.com](http://www.harappa.com)

In general when you turn to the inscriptions, you find that the imagery is male with a vengeance. All apparent totem/clan animals on 'classical' Indus seals are male, as are most identifiable agricultural deities (for example the figure with a bow and arrow we often see guarding plowed fields, seeds, and plants — sometimes dressed in leaves.)



The rare clan/totem animal seen with a human face below is regularly seen at seasonal sacrifices: sign of a priestly clan?



The Tree People

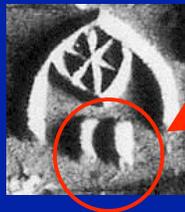
‘Tree antenna’
in the symbol
world, bangles
on his arms
symbolizing
‘leaves,’ etc.



‘Double Tree-Branch Phallus’

Open questions and some speculation:

1. Does the different emphasis on male/female imagery in the terra-cotta pieces and inscriptions reflect the different cultural origins of these two types of mythological symbols?
2. Does the predominant maleness of the ritual imagery in the inscriptions have something to do with agricultural conditions in the Indus Valley that would favor the development of male insemination myths?



The second most common Indus sign



'The Three' sign, often shown with seeds, plants, and plowed fields, typically has a suggestive slant, as seen here.

On the latter point, note that winter rain and winter run-off (required for the main winter Indus crop, barley and wheat, along with peas, lentils, and other crops harvested in spring) and summer monsoons (needed for millets, melons, dates, fiber plants and other summer crops) could be highly unpredictable in different Indus regions (Steven Weber, personal communication). Thus we would expect to find weather/rain gods — in most civilizations male seminal powers — in a central position in Indus myths.

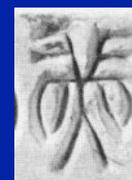
There is no doubt that rain/weather/river gods played a big role in the Indus symbol system. Steven Weber (U. of Wash. at Vancouver) and I are currently looking for regional differences in the symbol record in late Indus inscriptions (especially in the long bar inscriptions) — correlating these findings with Steven’s seed records from Harappa and similar data from other Indus regions (for background, see Weber & Belcher, eds., *Indus Ethnobiology* [2003]). We know that interesting things occur with water signs— including the merger of one of the most important of these signs with the most common Indus symbol (the Tree sign):



+



=



Most common symbol in the Indus corpus in all periods = a schematic tree, which can be considered the central symbol of the society.

Early form of the Water Carrier. The symbol by itself nearly disappears in late-mature Harappan inscriptions (e.g., no cases at all are found in the long bar inscriptions!).

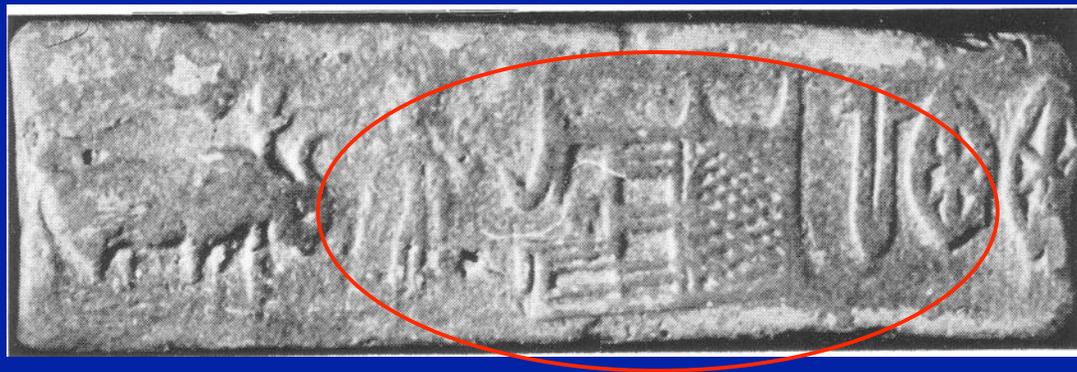
The most common version of the Water Carrier, especially in the late-mature period: a syncretic merger of The Tree and Water Carrier.

The fact that these signs sometimes formed compounds has been known for a long time, but in the old script model it was pictured as an example of linguistic ‘ligaturing’ — not a case of the syncretic fusion of divinities arising from ecological needs.

Conclusion #5

Much of Indus mythology was apparently reenacted in outdoor rituals involving mass-produced inscriptions and sacrifice in front of Holy Trees — implying the use of Indus inscriptions in some type of communal indoctrination

The mass-produced terra-cotta pieces often show outdoor scenes, suggesting that some rituals may have existed outside the city walls (there are also suggestions of sacrificial centers inside the city that I won't discuss here)



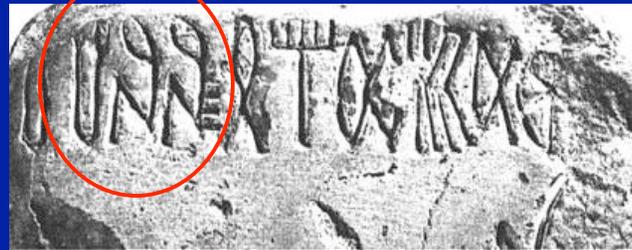
H-176a

Outdoor ritual hut

(not similar to S.E. Iranian huts, despite occasional claims to the contrary)

One mythological figure that repeatedly shows up on these mass-produced molded pieces is known from well over 100 inscriptions. The figure is normally shown hunched in front of the Holy Tree (the most common Indus sign). In a few cases, we see two such figures (male & female?) hunched down before the Tree.

Egyptian determinative/
icon for
foreigner,
enemy



H-742 A



H-696 A



One of many Indus terra-cotta male figures in stereotypical sitting positions. Any link?

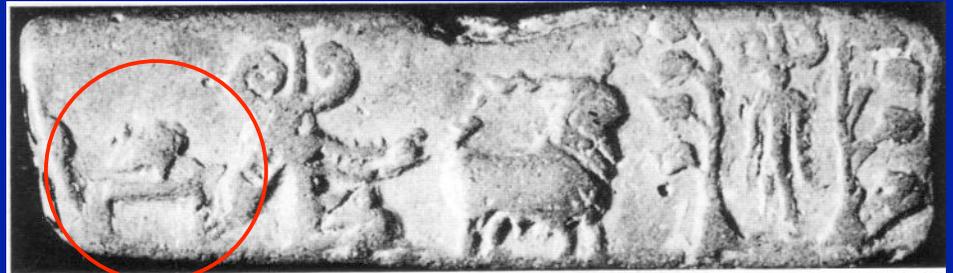
S. Clark, [article at www.harappa.com](http://www.harappa.com)



**Apparent human heads were presented to 'The Tree' on ritual stools
(we also see suggestions of animal heads on such stools as well)**



M-1186 a



M-488 C

#6 ‘Sacrificial tithe system’?

**Possible functions of mass-produced miniature steatite tablets
and one class of molded terra-cotta and faience inscriptions**

We know nothing about how economic transfers between the farmers who sustained Indus civilization and Indus urban elites were effected, nor do we have evidence that the Harappans used formal accounting methods. (Not all ancient urban societies developed formal accounting methods, and the proto-cuneiform and proto-Elamite cases may in fact be anomalous).

But there is one type of mass-produced inscriptions at Harappa that may have been involved in some sort of economic exchange system — let's call this a sacrificial tithe system for short. The suggestion is conjectural, but it provides a plausible explanation for how several types of mass-produced inscriptions were used.



We find a many crudely made miniature steatite pieces at Harappa (not at other Indus sites so far) — often with many duplicates found together — incised with ritual inscriptions on one side and apparent counts of sacrifices on the other. Our real or mythological (or both) sacrificial victim in front of ‘The Tree’ is the most common (but not only) motif found on these pieces.



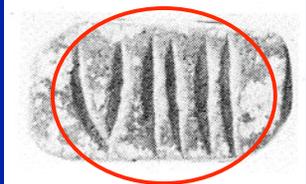
H-309 A



H-309 B



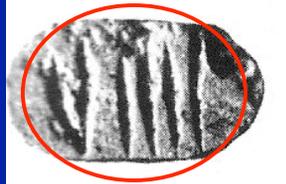
H-314 A



H-314 B



H-313 A



H-313 B



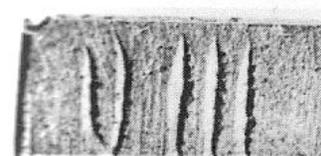
H-308 A



H-308 B



H-306 A



H-306 B



H-311 A



H-311 B

We also find a number of mass-produced molded pieces (terra-cotta or faience) of the same sort — this time showing up in a suggestive range of shapes that may be related to different monthly or seasonal festivals/sacrifices. Note that crescent-moon shapes, fish signs, and the sign shown in H-819 A-B (a heart? leaf? 3/4 moon, as Kenoyer & Meadow 1997 suggest? all the above through a *bandhu*-like equation?) are familiar Indus symbols.



H-248 A



H-248 B



H-233 A



H-233 B



H-329 A



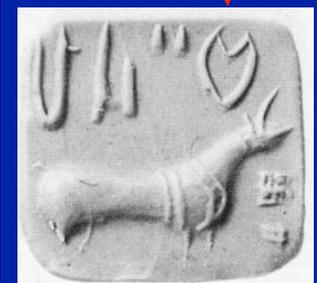
H-329 B



H-819 A



H-819 B



M-204 a



H-329 A



H-329 B

One plausible use for these mass-produced pieces that fits all the evidence — including the fact that many duplicates show up in single find spots and their suggestive shapes — their function as ‘vouchers’ for offerings presented (mandated?) in seasonal communal festivals.

The result would be the Indus equivalent of oblation rituals or formal tithes, which provided one common way to effect economic transfers between farmers and political-religious elites in many ancient societies.

Leviticus 2:8 ff. ‘You must bring to Yahweh the oblation that has been thus prepared,...The remainder of the oblation will revert to Aaron and his sons [i.e., Levite priests], a most holy portion of Yahweh’s burnt offering.’



H-314 A



H-314 B



H-313 A



H-313 B



H-233 A



H-233 B

Conclusion #7

High levels of standardization — in both inscription types and myths — imply significant political integration, at least in the mature Indus period (III C, ca. 2200-1900 BCE)

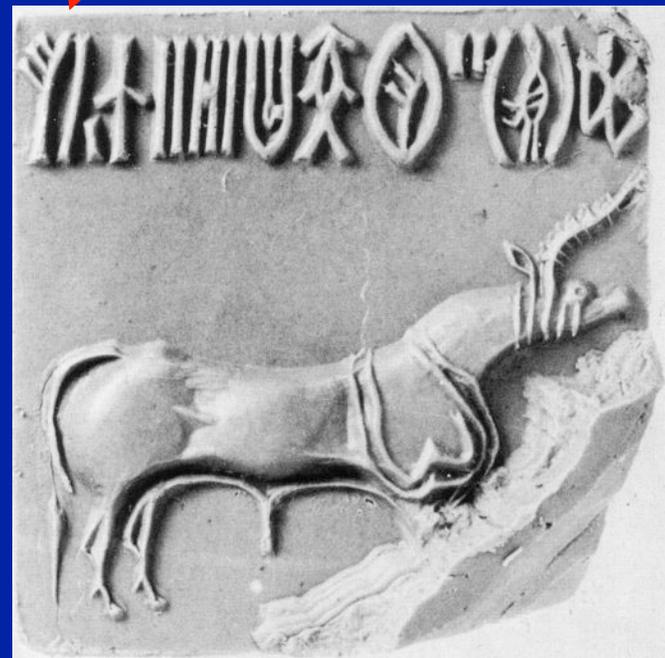
We find a higher level of standardization in Indus seals than in *any* other known 3rd-millennium civilization

Harappa



The longest inscription (carrying 13 symbols) ever found at the urban site of Harappa. Object H99-3819 from the 1999 excavation season; color photo (flipped horizontally) courtesy of Richard Meadow. The seal is unusually high quality and over twice the size of the average Indus seal — suggesting that it belonged to a member of the Indus elite.

Mohenjo-daro



There are a number of very similar oversized high-quality seals, like this one (M-10 a) from Mohenjo-daro. The striking resemblances between the two seals suggest a high level of political integration in the Indus Valley not long before the symbols were abandoned. (It is doubtful that the sign system could have disappeared so rapidly if such integration *didn't* exist.)

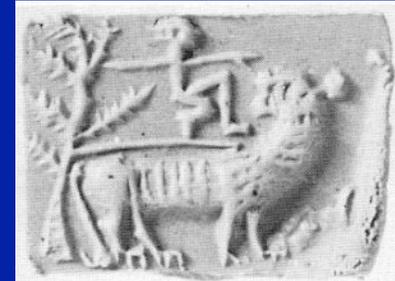
Highly repetitive myth set: an ‘official’ mythology?

Just as we find a small number of Indus signs repeated endlessly in Indus inscriptions, so too we find a small number of myths reflected in the accompanying iconography. One such myth which can be partly reconstructed from many pieces is the story of the man in the tree, who is part of a complex myth cycle. (On other evidence I won't discuss here, I think that suggestion exist that this is part of a comprehensive **Indus founder's myth**.) Note the similarities in the way that one part of the story is portrayed in four distant cities (e.g., the crossed legs of the man in the tree, etc.).

Chanhujo-daro
C-27 a



Harappa
H-163a



Kalibangan
K-49 a



Mohenjo-daro
M-309 a



'Lord of Beasts' = 'Lord of Clans'?

All animals on Marshall's supposed 'proto-Siva' inscription (a badly anachronistic reading that just won't die) show up as emblems on 'classical' Indus seals.



rhinocerus



buffalo



goats



M-304A



elephant



tiger

The unicorn and a few other putative clan/totem animals are missing: significance?

The composite animals found in many inscriptions also suggest that the clan/rank distinctions implied by these animals on classical Indus seals were perceived as part of a unified system



Mohenjo-daro M-1169 a



Amri A-6 a



Kalibangan K-43 a

Other suggestions of attempts to transcend whatever social divisions were involved in use of 'classic' Indus seals displaying clan/totem animals show up in administrative uses of the inscriptions: when clay tags were 'countersigned' by several seals, the totem animals were covered up in the countersigned impressions (below left).

We also have evidence from the mature period that the clan system was in decline: in this era 'classic' seals carrying clan animals begin to disappear (the only exception is in oversized/elite seals that exclusively carry unicorn signs). But even these these are in the minority: the most common seals from the this period — bar inscriptions without iconography — drop the old clan/totem animals entirely.



L-211 A 1-3



M-391 a
(Mohenjo-daro)



H-130 a
(Harappa)

Highly standardized bar inscriptions from the late-mature Harappan period reflect apparent attempts to overcome older clan distinctions.

Conclusion #8

We find surprisingly few intrusive myths or iconography in most periods, and then many (reflecting Central Asian/BMAC influences) just before the Indus symbol system disappeared

Certain very old mythological influences from Mesopotamia and other points NW certainly show up in iconography associated with Indus inscriptions — e.g., in pervasive images of horned gods (below) or the Gilgamesh-like figure (with odd bird-like? facial features) holding off two animals (tigers and not lions in the Indus case).



But these motifs (and others like them, including the dot-in-circle motif) were so widely disseminated from Mesopotamia to the Gulf and Iran to India that it is difficult to ascribe them to specific influences. Moreover, the Indus cases are unique in many ways, implying that the influences were very old. (I can't think of any Mesopotamian or Iranian gods with trees and plant signs on their heads as well as horns!)

The sense you get from comparing Indus materials with those from points West and NW is that the Harappans had a tightly organized and unusually closed society throughout most of their history — quite possibly (as I've argued elsewhere) by intention:

- 1. We find a deep imbalance in Indus and Mesopotamian artifacts, as is well known: many Indus seals show up in Mesopotamia, but no evidence of any Mesopotamian seals or inscriptions (and little else Mesopotamian) has ever been found in the Indus Valley.**
- 2. Only a handful of minor Intercultural Style chlorite pieces have ever been found in the Indus Valley, compared with the abundance of these artifacts in the Gulf and Mesopotamia.**
- 3. It is impossible to identify any clear iconographical elements associated with the recent finds at Jiroft in the Indus Valley, except for those (especially eagle/raptor signs) that came extremely late, through the BMAC (see *infra*).**

At least so far, we also have found virtually no evidence of Indus contact in Southeastern Iran — implying that Indus trade with Mesopotamia almost exclusively involved travel by sea through the Gulf.

On this point, it is interesting to note that neither of the signs found on the only Harappan-style seal impression so far claimed to have been found in Iran (at Tepe Yahya IV-A) are attested on any known Indus inscription. (The shape of the impression is right for a late-mature Harappan bar seal, however.)



After Pittman in Potts 2001: 267; Lamberg-Karlovsky & Tosi 1973: Fig. 137.



Compare



The closest match to the Tepe Yahya impression comes in **M-1274 a** (a modern impression of an Indus seal) from Mohenjo-daro. The sign on the far left of M-1274 shows up in a number of known variants in other Indus inscriptions. The orientation of the sign is never flipped horizontally in the way seen on the Tepe Yahya impression; moreover, all other cases have at least three or more ‘prongs,’ and the counterlateral arm not holding the ‘prongs’ is never raised. The partial sign to the right of this one in the Tepe Yahya impression has no Indus parallel.

The first large-scale evidence of foreign mythological motifs in Indus inscriptions comes immediately before the Indus symbol system as a whole disappears, and has a strong BMAC aura to it. One beautiful example from Mohenjo-daro (M-1390 A-B) has an Indus inscription on one side and a typical BMAC bird icon on the other. BMAC eagles (reflecting earlier Iranian influences) also begin to show up in late Indus seals, just before the sign system disappears.



Compare



M-1390 is unique in having a very late Indus inscription on one side (the figure marked by the red arrow is a highly stylized version of the 'captive' symbol — here shown without the usual Tree) and a BMAC image on the other side. Thanks to Bob Simpkins for pointing this piece out to me.

Bactrian seal. Ligabue & Salvatori, *Battriana* 1988?: 118 (Fig. 11, #1).

Eagle motifs, again reflecting BMAC influences (derived from earlier Iranian iconography), and unique birth-of-a-bird motifs, also play a big role in Indus inscriptions immediately before the symbol system disappeared.



We only know of four cases of this imposing bird symbol. Three of the four show up on oversized high-quality seals found both at Harappa and Mohenjodaro in the late mature period (Harappa 3C) — implying that they are elite insignias.

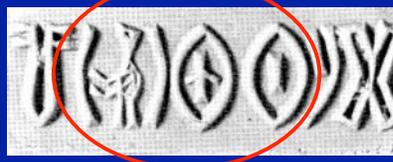


Late Harappan. Clear BMAC influence (or origin) again, closely related to earlier Iranian iconography (see below).

Compare

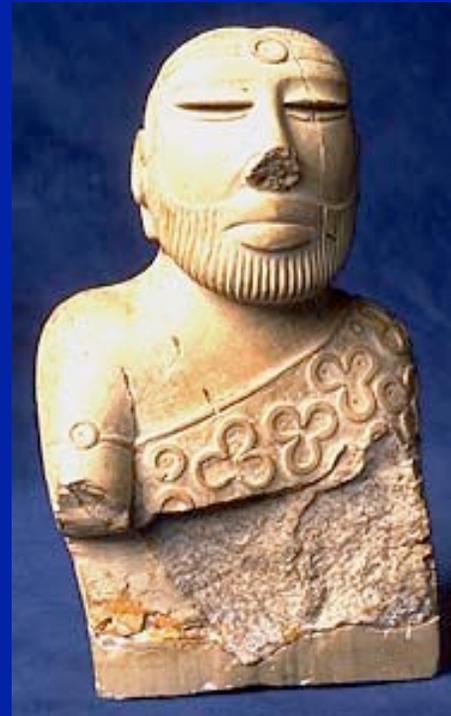


Incised eagle from Tepe Yahya (Kohl in Potts 2001: 218. fig 9.7)



Related signs? The birth of a bird is a common theme in the late-mature period in the Indus Valley.

Finally, it is interesting to note that the most famous statue from the Indus Valley — the famous ‘Priest-King’ from Mohenjo-daro, which is often viewed as the central icon of the civilization — was apparently Central Asian (Bactrian) and not Indus in origin. Compare the beard from the statue from Bactria on the left with that of the so-called Indus Priest-King on the right. (The differences in coloration are due to the types of stone used in the statues.) Both have little in common with the images of gods or god-imitators found on classical Indus seals (far right) — suggesting again BMAC involvement in the demise of the Indus civilization.



Ligabue & Salvatori, *Battriana* 1988?: 238;
cf. p. 176, Fig. 20c. Louvre, Paris.

The famous Priest-King differs
radically from anything seen in
classical Indus iconography.



For this and related files and articles, go to: <http://www.safarmer.com/downloads>