Sarasvati Civilization, script and Veda culture continuum of Tin-Bronze Revolution

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Introduction

The locus of Veda culture and Sarasvati Civilization is framed by the Himalayan ranges and the Indian Ocean.
The Himalayan range stretches from Hanoi, Vietnam to Teheran, Iran and defines the Ancient Maritime Tin Route of the Indian Ocean – āsetu himācalam, ‘from the Setu to Himalayaś. Over several millennia, the Great Water Tower of frozen glacial waters nurtures over 3 billion people. The range is still growing, is dynamic because of plate tectonics of Indian plate jutting into and pushing up the Eurasian plate. This dynamic explains river migrations and consequent desiccation of the Vedic River Sarasvati in northwestern Bhāratam. Intermediation of the maritime tin trade through the Indian Ocean and waterways of Rivers Mekong, Irrawaddy, Salween, Ganga, Sarasvati, Sindhu, Persian Gulf, Tigris-Euphrates, the Mediterranean is done by ancient Meluhha (mleccha) artisans and traders, the Bhāratam Janam celebrated by Ṛṣi Viśvāmitra in Ṛgveda (RV 3.53.12). Meluhha/Mleccha is the spoken form, parole of Proto-Indic.

The users of Mlecchita vikalpa (Meluhha cipher, i.e. Indus or Sindhu-Sarasvati Script) created the Meluhha Tin-Bronze revolution reaching tin from the largest tin belt of the globe (Ancient Far East) to the rest of Asia through an ancient Maritime Tin route which predated Silk Road by 2 millennia.

1. Originality & context: Veda culture and Indus Script, Bronze Age. Evidence for the civilization having been a link between the Ancient Near East and Ancient Far East in the tin/bronze age. Ancient Far East is the tin belt of the globe. Ancient Near East is a major region which used tin alloyed with copper to create bronze artifacts during the Bronze Age creating an urban revolution, the birth of civilization, a leap from chalcolithic, ‘copper-stone’ phase of human evolutionary, cultural itihāsa.

2. Approach/Methods: Cracking the code of Indus Script cipher by calling it Sarasvati Script and using tantra yukti तंत्र युक्ति research methodology of Ancient Bhāratam.

A hypertext is a written document (cyphertext) with pictures and symbols (together called hieroglyphs or sacred signs). Ganeśa is an example of a hypertext signified orthographically with an elephant trunk as head on a human body.
Tantra Yuktì is a comprehensive review of hypertexts (cyphertexts) to derive plain texts, together with ‘meaning’ – for e.g. vākyārtha ‘meaning or understanding of a sentence’ using 40 language categories such as adhikarana (subject matter), yoga (arrangement). The subject matter of all 8000+ inscriptions relates to metalwork in manufactories called phadā. The arrangement is a combination of ‘pictorial motifś and ‘signś which are signifiers of messages and metallurgical experties and products are the signified wealth, metalwork.

3. Key results & conclusions: Sarasvati Script is a hypertext writing system which was invented ca. 3300 BCE evidenced by a potsherd with script discovered by Harvard Archaeology Project (HARP) team. The hypertexts of over 8000 inscriptions are Vākyapadiya (Sentence-Word) formations related to the metal-/mint-work of artisan guilds, seafaring merchants. Over 80% (i.e. over 2000) of the 2600 archaeological sites of the Sarasvati civilization are on the river basin of Vedic River Sarasvati. The present-day Bhāratīya are Sarasvati’s children and constituted a Bhāratīya sprachbund (speech union) of what are today over 25+ Bhāratīya languages. The spoken language (lingua franca, parole) was called Meluhha (mleccha) and constitutes the language base for inscriptions of the Sarasvati Script detailing the technological competence achieved to catalyse the Tin-Bronze Revolution from 5th millennium BCE. The Sarasvati civilization people constituted the key link between Ancient Far East (AFE) and Ancient Near East (ANE). Evidences of Sarasvati Script have been found in AFE (e.g., over 200 Dong Son Bronze drums with script hieroglyphs such as frog, peacock, elephant, markhor, fish) and based on the Tin (cassiterite) resources of the Mekong, Irrawaddy, Salween Himalayan river deltas.
which created the largest tin belt of the globe. The discovery of tin to create Tin-Bronze alloys was a brilliant discovery which overcame the shortage of naturally occurring Arsenical Bronzes all over Eurasia. Evidences of Sarasvati Script have been found in ANE (e.g. cylinder and circular seals of Persian Gulf, Mesopotamia, Bactria-Margiana Archaeological Complex, Fertile Crescent -- evidence of 3 pure tin ingots found in a shipwreck of Haifa and Nahal Mishmar bronze artefacts), all evidencing use of Sarasvati Script.

Section 1. **Tantra yukti** deciphers Indus Script

*Tantra can be termed as that which discusses and details subjects and concepts; yukti is “… that which removes blemishes like impropriety, contradiction, etc., from the intended meaning and thoroughly joins the meanings together.”*

*Tantra-yukti* thus denotes those devices that aid the composition of a text in a systematic manner to convey intended ideas clearly. *upamānām* (or *drśṭāntā* or analogy), *vākyaviśeṣa* (completion of a sentence meaningfully even in the absence of a word which is understood), *pūrvapakṣa* (objections, primafacie or provisional view), uttarapaksā (correct view or answers) are included as among 32 devices in *Arthaśāstra* list of *Tantra yukti*.

स्फुटता न पदेरपकृता न च न स्वीकृत मर्थौरवम् ‘Crispness (of an expression) is not obliterated by verbosity, nor is the depth of meaning that is intended to be conveyed is compromised (to attain crispness).

Caraka notes: तत्रेः समासव्यासोिे भवन्त्येता हि क्रत्स्नशः एकदेशने हः समासाहिते तथा ‘all these tantrayuktis occur in a scientific work in brief and in detail. But only some of them occur in a work written in brief.”

Forty tantrayukti devices are elaborated by decipherment of Indus Script Corpora.

1. **Adhikaraṇa** (subject matter) The subject matter of Indus Script Corpora relates to metalwork in the Bronze Age across Eurasia, from Hanoi, Vietnam to Haifa, Israel
2. **Yoga** (arrangement) The Corpora is arranged in about 8000 inscriptions presented on seals, tablets, copper plates, metal implements, ivory rods, potsherds or as writing on pendants or sculptures in the round (e.g. gold pendant with inscription painted and statue of ‘priest’ with Indus script hieroglyphs of dotted circle and uttarIyam)
3. **Hetvārtha** (extension of argument) The purpose achieved by the Corpora is to convey messages about the technical specifications of products (packages or cargo) which are authenticated by the messages
4. **Padārtha** (import of words) The import of words conveyed by the hieroglyphs read rebus is to specify the resources used: e.g. minerals, furnaces or smelters used in creating the product (either an ingot or alloy of minerals or implement or weapon or a cire perdue casting in metal)
5. **Pradeśa** (poetic adumbration) Some inscriptions are composed of narratives as semantic determinants (e.g. a tiger looking backwards connotes *kola* ‘tiger’ rebus: *kol* ‘working in iron’ PLUS *krammara* ‘look backwards rebus: *kamar* ‘artisan, smith’; thus signifying an artisan working in iron).
h1973B h1974B Harappa Two tablets. One side shows a person seated on a tree branch, a tiger looking up, a crocodile on the top register and other animals in procession in the bottom register. Obverse side (comparable to h1970, h1971 and h1972) shows an elephant, a person strangling two tigers, an elephant, a person strangling two tigers (jackals or foxes) and a six-spoked wheel.

6. **Uddeśa** (concise statement) Some inscriptions are just composite heads of animals joined to an animal or bovine body. The concise statement intends to signify three minerals which compose the product or package or cargo (e.g. combined animal with bovine body and heads of antelope, one-horned young bull, ox each signifying ranku ‘antelope’ rebus: ranku ‘tin’ PLUS konda ‘young bull’ Rebus: kondar ‘turner’ kuda ‘nidhi’ kundaṇa ‘fine gold’ PLUS barad, barat ‘ox’ rebus: bharat ‘alloy of pewter, copper, tin’).

7. **Nirdeśa** (amplification) Some inscriptions contain phonetic or semantic orthographic determinatives to amplify the message conveyed (e.g. body of a person with legs spread out signifies two rebus renderings: med ‘body’ rebus: med ‘iron, copper’ karnika ‘legs spread out’ rebus: karni ‘supercargo, engraver, scribe, account’ A Supercargo is a representative of the ship’s owner on board a merchant ship, responsible for overseeing the cargo and its sale. Thus, the Supercargo is signified as in control of iron/metal merchandise on a seafaring ship.

8. **Vākyaśeṣa** (supply of ellipsis -- the omission from speech or writing of a word or words that are superfluous or able to be understood from contextual clues.) Some inscriptions signify ‘fish’ as a hieroglyph. In the context of Supercargo’s responsibility, the ‘fish’ hieroglyph may have orthographic accent on ‘fin’ of fish which signify: ‘khambhaṛa’ ‘fish fin’ rebus: kammaṭa ‘portable furnace to melt metals, mint, coiner, coinage’ PLUS ayo, aya ‘fish’ rebus: aya ‘iron’ ayas ‘metal’.

9. **Prayojana** (purpose) The purpose of the entire Indus Script Corpora is to document the products which are merchandise for exchange with contact areas and provide explanatory messages to the trade representatives such as Meluhha colonies in Ancient Near East or along the Persian Gulf metalwork sites.

10. **Upadeśa** (instruction) An example may be cited to explain how the instruction is achieved on Indus Script Corpora. A statue of a priest of Mohenjo-daro is shown wearing a fillet (dotted circle PLUS string) on the forehead and on right-shoulder. The message signified is: dhāvāḍ ‘iron-smelter’ with Indus script hieroglyphs signifies पोतृ, ‘purifier’ of dhāū, dhāv ‘red stone minerals’. The compound phrase is broken up into two segments: hieroglyph dhāv ‘strand’ rebus: dhāv, dhātu ‘mineral’ PLUS hieroglyph -vāḍ ‘string’ rebus: स्थोः ‘clever, skilful’ i.e., a person skilled in smelting minerals, hence an iron (red ore) smelter.

11. **Apadeśa** (advancement of reason) The choice of hieroglyphs in Indus Script Corpora is to avoid ambiguities in expressions. Thus, hieroglyphs such as elephant, rhinoceros, tiger, buffalo, fish are incorporated in inscriptions to signify: karibha ‘trunk of elephant’ rebus:

Hieroglyph: dhāv ‘strand of rope’ Rebus: dhāv ‘red ore’ (ferrite) ti-dhāv ‘three strands’ Rebus: ti-dhāv ‘three ferrite ores: magnetite, hematite, laterite’. Thus, Gaṇeśa is dhāvad ‘iron-smelter’.

मेढा [mēdhā] A twist or tangle arising in thread or cord, a curl or snarl (Marathi). Rebus: mēdhā yajña, dhanam.

Gaṇeṣa

Dantewada, Chattisgarh.
12. *Atideśa* (indication or application) On some inscriptions, an additional orthographic device is used to indicate that a metal implement is the product being managed by a Supercargo. Thus, on a Chanhudaro seal, the double-axe signifies a metal axe.

Double-axe found in a Mesopotamian site. Comparable to the double-axe shown on Chanhudaro seal C-23. Pictorial motif of a double-axe is a Sarasvati hieroglyph (Pict-133).

13. *Arthāpatti* (implication)
The fact that these hieroglyph compositions occur on bronze artifacts imply that the bronze metalwork is signified.

14. Nirṇaya (decision)

A simple seal of Daimabad which merely shows the ‘rim of jar’ hieroglyph is a decisive signifier of the rebus message: *kanka, karnika* ‘rim of jar’ rebus: *karnika* ‘Supercargo’.

15. Prasaṅga (restatement) A remarkable device in orthography on Indus Script Corpora is duplication. For example, a markhor is reduplicated back-to-back on a gold artifact.

Fig. 96f: Failaka no. 260 Double antelope at the belly in the Levant similar doubling occurs for a lion. Readings, meanings: *miṇḍāl* ‘markhor’ (Tōrwālī) *međha* a ram, a sheep (Gujarati) (CDIAL 10120) Rebus: *mēṛhēt, međ* ‘iron’ (Santali.Munda.Ho.) *međ* ‘copper’ (Slavic) *međh* ‘merchant’ PLUS *dula* ‘duplicated’ rebus: *dul* ‘metal casting’. Thus, a metal caster, merchant of metal castings.
16. Ekānta (categorical statement or invariable rule) On this pectoral, the categorical emphasis is on the overflowing pot (in addition to other hieroglyphs such as standard device and one-horned young bull). The categorical message relates to lo ‘overflowing’ kaṇḍa ‘pot’ rebus: lokhanda ‘metal implements’ The invariable rule of Indus Script Corpora is that inscriptions are metalwork catalogues, metalwork proclamations.

17. Naikānta / anekānta / anekārtha (comprising statement) Using the pectoral example this tantrayukti can be demonstrated. The message conveyed: kan.d. kan-ka ‘rim of jar’ (Santali) karn.aka ‘ear or rim of jar’ (Sanskrit) kan.d. ‘pot’ (Santali) Rebus: karaṇika ‘writer’ (Telugu). kaṇḍa ‘fire-altar’ (Santali). কারণিক [karaṇika] n an office-clerk, a clerk. কারণিক [karaṇika] a pertaining to cause, causal; ex amining, judging. n. an examiner; a judge; a clerk (Bengali). খনক [Monier-Williams lexicon, p= 336,3]m. one who digs, digger, excavator MBh. iii, 640 R.

18. Apavarga / apavarja (exception or restriction of a pervasive rule) While many seals and tablets are incised, the writing also occurs in paint (perhaps ferrous oxide on metal) on a gold pendant.

19. Viparyaya (opposite) I would not to elaborate on the objections raised by over 150 decipherment claims. My submission is that the orthography is NOT intended to signify syllables but full words, hence the script is logographic. Second point is that it is an error to exclude pictorial motifs from the decipherments and focus only on ‘signś. Both signs and pictorial motifs have to signify TOGETHER a message of the Bronze Age. Most decipherments prejudge that names or titles should be signified by ‘signś. This prejudgement leads to erroneous results. The possibility that all hieroglyphs (both signs and pictorial motifs) signify metalwork catalogues should NOT
be ruled out because of the imperative created by the Bronze Age revolution which resulted in surplus goods which were bartered by seafaring merchants.

20. **Pūrvapakṣa** (objection) The previous arguments also relate to this device of tantra yukti. There are, in Indus Script Corpora words which signify functionaries like Supercargo and also minerals such magnetite (polā ‘zebu’ rebus: polā ‘magnetite ferrous ore’).

21. **Vidhāna** (right interpretation) The right interpretation should relate to the Bronze Age economic imperative. Wealth was created by metalwork and mintwork and artifacts were created like the Nahal Mishmar cire perdue artifacts which were proclaimed in processions (as evidenced by Jasper cylinder seal).

22. **Anumata** (concession or agreement) There is general consensus that Indus Script Corpora is related to trade since many seals also had exact replicas as seal impressions. So, the logical extension is to review the Corpora as metalwork catalogues for trade transactions.

23. **Vyākhyāna** (explanation) The explanation is provided in the decipherment of almost all 8000 inscriptions in 16 volumes which also include explanations of some pictorial motifs as Indus Script hieroglyphs/hypertexts on Ancient Near East and Persian Gulf (Dilmun) seals.

Hieroglyphs on Dongson and Karen bronze drums and Meluhha rebus readings of metalwork catalogues:

*maraka* 'peacock' Rebus: *marakaka* loha 'copper alloy, calcining metal'*

*karibha, ibha* 'elephant trunk' (Pali) rebus: *karba, ib* 'iron' *ibbo* 'merchant'

*kanga* 'heron' rebus: *kang* 'portable brazier' (Kashmiri)

*ranku* 'antelope' rebus: *ranku* 'tin'


Santali gloss:
ayō 'fish' rebus: ayas 'alloy metal' (Ṛgveda) aya 'iron' (Gujarati)

kāmsako, kāmsiyo = a large sized comb (Gujarati) Rebus: kamsa,kancu=bronze (Telugu)

Elephant. Peacock. Dongson bronze drum cire perdue
 Sites of Đong Sơn type drum findings

“The use and manufacture of bronze drums is the oldest continuous art tradition in South Asia. Carbon-14 analyses have established that bronze drums were used before the sixth century BCE in North Vietnam, where in recent years several archaeological excavations have unearthed many new examples. The advanced technique and design of these early drums indicate that they are the product of a prior development and therefore the use of bronze drums probably began at an earlier date... At present, bronze drums have been found in all the countries of Southeast Asia except the Philippines. It has been proposed that the drums found scattered throughout the island world of Indonesia (p.107) See: http://sealang.net/sala/archives/pdf8/cooler1986use.pdf Cooler, Richard M., The use of Karen bronze drums in the royal courts and Buddhist temples of Burma and Thailand: a continuing mon tradition, pp. 107 - 120

Karen drum cire perdue tympanum

Burmese Karen drum.
Pinnow-map of Austro-Asiatic language speakers:
http://www.ling.hawaii.edu/faculty/stampe/aa.html

northeastern Bhāratm and Ancient Far East. Hawaii Univ. scholars opine that Munda is the root of Austro-Asiatic languages.

Stannifrous areas of the world (From RG Taylor, Geology of Tin Deposits, Amsterdam 1979, 6, fig. 2.1)

24. *Samśaya* (doubt) There are linguistic arguments which raise doubts about the Meluhha (Mleccha) language. It is possible that this was the spoken version of Prakrtam or Proto-Indic which co-existed with the *chandas* which is the metrical, literary version of Samskrtam or Vedic diction. There is general consensus that Ancient India was a *sprachbund* (language union or linguistic area) which evinces many common features of languages of ancient Bharatam Janam ‘metalcaster folk’ as self-identification by Viśvāmitra in Ṛgveda (3.53.12). One example of common feature is the feature of reduplication to convey semantics, e.g. *kaṇḍānmundān* ‘metal bits and pieces’.

25. *Atītāpekṣaṇa / atītavekṣaṇa* (retrospective reference; *atikrāntāvekṣaṇa* ‘reference to a past statement’) The occurrence of Indus Script hieroglyphs on Dong Son bronze drums is also explained by the occurrence of Yupa inscriptions in East Borneo and occurrence of Śivalingas in the Ancient Far East. This suggests the possibility of a Maritime Tin Route from Hanoi to Haifa because the largest tin belt of the globe is in the Far East, along the Mekong delta.

26. *Anāgatāvekṣaṇa* (prospective reference) The continued use of Indus Script hieroglyphs on early punch-marked coins from Takṣaśila to Karur to Anuradhapura are indicative of an Age of Symbols coterminous with the Bronze Age. The hieroglyphs signify metalwork catalogues and in many cases together with Brāhmī or Kharoṣṭhī inscriptions which signify names or titles using the syllabic scripts which are distinct from the logographic Indus Script hieroglyphs/hypertexts.

27. *Svasamjñā* (technical nomenclature) The entire Indus Script Corpora of about 8000 inscriptions provide many examples of technical nomenclature such as *polā* (zebu) ‘magnetite ore’, *maraka* (peacock) ‘a type of steel’, *rango* (buffalo) ‘pewter, an alloy of copper, zinc and tin’, *sattva* ‘svastika hieroglyph’ rebus: *sattva, jasta* ‘zinc’
Three tin ingots found in a shipwreck, Haifa. Indus Inscriptions are: ranku ‘liquid measure’ ranku ‘antelope’ rebus: ranku ‘tin’ mūh ‘face’ rebus: mūh, muhā ‘ingot’ or muhā ‘quantity of metal produced at one time in a native smelting furnace.’ dāṭu ‘cross’ rebus: dhātu ‘mineral’.

28. Ūhya (deduction or what is understood) When a string of, say, five hieroglyphs signify minerals and operations in a furnace, the inference is that the signified is the metalworker or artisan working with such minerals and furnaces (in a workshop or mint).

29. Samuccaya (specification or combination, collection of ideas) A typical example of collection of related messages occurs in hieroglyph-multiplexes or hypertexts, say, of a composite animal.
Orthographic components explained by Dennys Frenez and Massimo Vidale. In this composition, each hieroglyph is a component of the hypertext message.

30. **Nidarsana** (illustration) The illustration of the devices of *tantra yuktī* used is seen on a cylinder seal from Ancient Near East, the seal of Sharkali-Sharri.


31. **Nirvacana** (definition or derivation or etymology of terms) An Indian Lexicon provides etyma which include most of the 25+ ancient languages of Indian sprachbund. Many metalwork terms used in Indus Script Corpora as hypertexts are traceable to one or more of the etyma of the sprachbund. [IndianLexicon.pdf](file://HP-PC/Users/HP/Google%20Drive/IndianLexicon.pdf)

32. **Niyoga / sannyaoga** (injunction) The occurrence of Indus Script hieroglyphs on 21 stoneware ceramic bangles is a pointer to the 21 types of functions identified during the Bronze Age for metalwork and trade. This bangle becomes the standard.
The bangle Eelamite standard is comparable to the dharma samjna ‘ceramic stoneware bangles’ found in Mohenjo-daro and Harappa with Indus Script inscriptions detailing the responsibilities assigned to artisans of the metalwork/merchant guild. The dharma samjna (responsibility badge) on this Elamite standard signifies the responsibility related to a merchant trading metalcastings of copper/metal. karə n. pl. wristlets, bangles:’ rebus: kh ār ‘blacksmith’ See: All Bronze Age standards of Ancient Near East are Indus Script hypertext proclamations of metalwork
https://tinyurl.com/y776fjdc

33. Vikalpana (option) It is possible to indicate alternative rebus readings for some select inscriptions. Thus, a standing person may signify med ‘body’ rebus: med ‘iron’ and also karṇika ‘legs spread out’ rebus: karṇī ‘Supercargo’ or karṇaka ‘scribe, engraver’

34. Pratyutsāra / pratyucāra (rebuttal) The decipherment of Indus Script Corpora as metalwork catalogues is a rebuttal of arguments spuriously made that the people who created the writing system were ‘illiterates and hence, suggesting that the hieroglyphs are indicative of some rituals. The stronger argument is that the writing system was necessitated by the Bronze Age revolution which resulted in the production of surplus metal artifacts for exchange or barter transactions to create wealth. A dramatic demonstration of the wealth of ancient Bhāratam is provided by the bar chart of Economic Historian of OECD, Angus Maddison who demonstrated that this nation contributed to over 32% of world GDP in 1 CE. The decipherment of Indus Script Corpora is a demonstration of the wealth created by Bhāratam Janam who were Bronze Age artisans and merchants from 8th millennium BCE to 1st millennium BCE accounting for and validating the Economic History charted by Angus Maddison.

35. Uddhāra (reaffirmation) Inscription after inscription continue to refer to technical terms of metalwork, furnace/smelter work, mint work. This rebus rendering occurs for over 500 hieroglyphs (called signs) and over 100 hieroglyphs (called pictorial motifs). These 600
hieroglyphs śabdāṣpaṭa ‘word sound meanings’ are composed as hypertexts vākyāṣpaṭa ‘message meanings’ to create vākyāṛtha ‘document archives of metalwork wealth.’

36. Sambhava (possibility) The Indus Script Cipher as rebus reading of ancient Prākṛtam words points to the possibility that the Vedic Sarasvati River Basin was the epicenter of trade and production activity along the Maritime Tin Route from Hanoi to Haifa which predated the Silk Road by over 2 millennia.

37. Paripṛśaṇa (question and answer) A paripṛśaṇa is: why would even wild animals be shown in front of feeding troughs, unless both the animal and the trough are hieroglyphs to be pronounced, read and understood rebus? Why was the water-carrier shown in parenthesis together with star hieroglyphs on a circular Gadd seal?

Seal impression, Ur (Upenn; U.16747); dia. 2.6, ht. 0.9 cm.;

Gadd, PBA 18 (1932), pp. 11-12, pl. II, no. 12; Porada 1971: pl.9, fig.5; Parpola, 1994, p. 183; water carrier with a skin (or pot?) hung on each end of the yoke across his shoulders and another one below the crook of his left arm; the vessel on the right end of his yoke is over a receptacle for the water; a star on either side of the head (denoting supernatural?). The whole object is enclosed by parenthesis marks. The parenthesis is perhaps a way of splitting of the ellipse (Hunter, G.R., JRAS, 1932, 476). An unmistakable example of an 'hieroglyphic' seal. kuṭi 'water-carrier' rebus: kuṭhi 'smelter'; mēḍha 'polar star' rebus: mēḍhā yajña, dhanam'; Split ellipse or parenthesis is split of a bun ingot shape (rhombus): mūḥ, muhā 'ingot' or muhā 'quantity of metal produced at one time in a native smelting furnace'. Thus, the message is dhanam, wealth of ingots from smelter. See: Form and function of Egyptian hieroglyphs, Brāhmī script, Indus Script: hieroglyphic, syllabic scripts, hypertexts vākyapadiya
https://tinyurl.com/ydh7yww9

38. Vyākaraṇa (grammar) Since the writing system is logographic and composed of lists of 0 to 5 terms (glosses), there is no need for grammatical expressions in the writing system on Indus Script Corpora or on devices used on tens of thousands of early punch-marked and cast coins in an extensive Bronze Age civilizational area of Eurasia, from Bogazkoy to Karur and Rakhigarhi to Anuradhapura, from Amaravati to Angkor-Wat..

39. Vyūtkrāntabhidāna (transgression) The presence of trefoils on the base of a śivalinga is a transgression of the ādhyātmikā connotations of the divine iconography of linga as a fiery pillar of light and fire. The base with trefoil may signify tri-dhātu ‘three strands’ rebus: three mineralā which are subjected to smelting operations. The presence of a mukha ‘human face’ or Bhuteswar śivalinga atop a smelter is indicative of rebus: muha ‘quantity produced from a furnace, ingot’.
tri-dhātu 'three strandś rebus: 'three mineralś which is also a synonym of Gaṇeśa is explained in the context of his leadership of the gaṇa, 'hosts' working with metals.and rebus representation of karibha 'elephant' rebus: karba 'iron ore'. There are three types of iron, ferrite ores worked during the Bronze Age. magnetite ore, haematite ore, laterite ore. The signifiers are: pola 'zebu; rebus: pola 'magnetite'; bica 'scorpion' rebus: bicha 'haematite'; goṭa 'round pebble, stone' rebus: goṭa 'laterite'.

40. Hetu (purpose) The tantrayukti devices have demonstrated the purpose of the Indus Script Corpora. They are metalwork catalogues as proclamations to promote trade across diverse linguistic areas. Such proclamations also occur on procession tablets or on a monolithic signboard of Dholavira.
Ten hieroglyphs on Dholavira signboard

m0490At m0490B Mohenjodaro Tablet showing Meluhha combined standard of three standards carried in a procession, comparable to Tablet m0491. m0491 Tablet. Line drawing (right). This tablet showing three hieroglyphs may be called the Meluhha standard. Combined reading for the joined or ligatured glyphs.

Rebus reading is: *dhātu kōdā sangāḍa* ‘mineral, turner, stone-smithy guild’.

Dawn of the bronze age is best exemplified by this Mohenjo-daro tablet which shows a procession of three hieroglyphs carried on the shoulders of three persons. The hieroglyphs are: 1. Scarf carried on a pole (*dhātu* Rebus: mineral ore); 2. A young bull carried on a stand *kōdā* Rebus: turner; 3. Portable standard device (Top part: lathe-gimlet; Bottom part: portable furnace *sāgāḍ* Rebus: stone-turner *sangatarāśū*). *sanghāḍo* (Gujarati) cutting stone, gilding (Gujarati); *sangsāru karaṇu* = to stone (Sindhi) *sanghāḍiyo*, a worker on a lathe (Gujarati) *sangara* ‘proclamation, trade’.

The procession is a celebration of the graduation of a stone-cutter as a metal-turner in a smithy/forge. A *sangatarāśū* ‘stone-cutter’ or lapidary of neolithic/chalolithic age had graduated into a metal turner’s workshop (*kod*), working with metallic minerals (*dhātu*) of the bronze age.

Three professions are described by the three hieroglyphs: scarf, young bull, standard device *dhātu kōdāsāgāḍi* Rebus words denote: ‘mineral worker; metals turner-joiner (forge); worker on a lathe’ – associates (guild).

(Note: the terminology and citations are from M. Jayaraman, *The doctrine of tantrayuktiihttps://www.academia.edu/12132105/Tantrayuktii*)
Section 2. Momentous discovery of Soma samsthā yāga on Vedic River Sarasvati Basin

Archaeo-metallurgy (Ancient India’s contributions to the Bronze Age Revolution)

The recent discovery (2015) by ASI at a site called Binjor (near Anupgarh) on the banks of River Sarasvati points to two features: 1. Presence of yajna kunda in the Vedic tradition evidenced by an octagonal pillar indicative of Soma yaga as prescribed in ancient Vedic texts) and 2. Metalwork activity and presence of a seal attesting to mature period of the civilization (perhaps dated to ca. 2500 BCE). Further archaeo-metallurgical studies are needed to map 1) the resources from Khetri mines which seem to have sustained sites like Binjor, Kalibangan, Karanpura (see note below) on Sarasvati River Basin and 2) nature of contributions made by Bharatiyas to Bronze Age Revolution, with particular reference to mleccha ‘copper’.

म्लेच्छा* स्य = म्लेच्छ—मुख means ‘copper’ म्लेच्छास्यं, क्ली, (म्लेच्छे म्लेच्छदेशे आस्यमुत्पतिः—रस्य ।) ताम्रम्। इति हारावली। म्लेच्छास्यं, क्ली, (म्लेच्छे म्लेच्छदेशे आस्यमुत्पतिः—रस्य ।) ताम्रम्। इति हारावली॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पतिः—रस्य ।) इत्यमरः॥

https://sa.wikisource.org/wiki/शब्दकल्पद्रुमः
Terracotta cake. Kalibangan. With Indus Script hieroglyphs

*kamāṭhiyo* 'archer' rebus: *kammaṭa* 'coiner, mint'.
kola 'tiger' rebus: kolhe 'smelter', kol 'working in iron' is evidenced by terracotta cake of Kalibangan and copper plate inscriptions of Mohenjo-daro. Kalibangan terracotta cake also shows hieroglyph-multiplex of a 'tiger' dragged by a rope by a person to be tied to yupa 'pillar'
synonym: *mēḍha* मेठ Stake or post rebus: **mṛdu**, मेरहेट, meḍ 'iron' (Sanskritam. Ho.Mu.Santali) med 'copper' (Slavic languages)
In ancient texts like Atharva Veda, the metaphor of 'pillar, post' hieroglyph is expanded in a philosophical tractus called Skambha Sukta, venerating *vasti* or yupa a fiery pillar of light.
To place the work of the export processing zone of Binjor 4MSR in context, I also refer to two articles which appeared in the *Journal of Indian Ocean Archaeology*, No. 9, 2013.

See:


http://tinyurl.com/zldsszl
After Plate 8 in Kumar et al opcit. Sivalinga found in Vizhinjam 1st cent. CE? The octagonal shape of RudrabhAgā compares with the aSTAs'ri octagonal yupa found in Binjor Yajna kunda (ca. 2500 BCE).


2. KN Dikshit, 2013, Origin of early Harappan cultures in the Sarasvati Valley: Recent archaeological evidence and radiometric dates, *Journal of Indian Ocean Archaeology* No. 9, 2013, pp. 88 to 142 (Plates)

Addorsed zebu, Rakhigarhi. dula 'pair' rebus: dul 'metal casting' PLUS poḷa 'zebu' rebus: poḷa 'magenetite, ferrite ore'. Thus magnetite casting. (After Fig. 69 in KN Dikshit opcit)

The work at Binjor 4MSR was not only related to Soma SamsthA but indicate the work of seafaring merchants of Sarasvati Civilization who exported the metalwork products into Ancient Near East.
A terracotta figurine of a humped bull discovered in Binjor. poḷa 'zebu' rebus: poḷa 'magnetite, ferrite ore'.

The find of a zebu figurine is significant as a metalwork catalogue.

A momentous discovery is the yajna kunda with an octagonal yupa.
This is a signature tune of a Soma SamsthA performed at the site on the banks of Vedic River Sarasvati.

See: [http://bharatkalyan97.blogspot.in/2016/07/a-defining-discovery-of-binjor.html](http://bharatkalyan97.blogspot.in/2016/07/a-defining-discovery-of-binjor.html)
A remarkable discovery is the octagonal brick which is a yaṣṭi in a fire-altar of Binjor site on the banks of Vedic River Sarasvati. This yaṣṭi attests to the continuum of the Vedic tradition of fire-altars venerating the yaṣṭi as a baton, skambha of divine authority which transforms mere stone and earth into metal ingots, a manifestation of the cosmic dance enacted in the furnace/smelter of a smith. Bhuteswar sculptural friezes provide evidence to reinforce this divine dispensation by describing the nature of the smelting process displaying a tree to signify kuṭi rebus: kuṭha 'smelter' with kharva 'dwarf' adorning the structure with a garland to signify kharva 'a nidhi or wealth' of Kubera. A Bhutesvar frieze also indicates the skambha with face signifying ekamukha linga rebus:

\[mūhe \text{ 'ingot' (Santali) } mūhā = \text{ the quantity of iron produced at one time in a native smelting furnace of the Kolhes; iron produced by the Kolhes and formed like a four-cornered piece a little pointed at each end; } mūhā mēṛhēt = \text{ iron smelted by the Kolhes and formed into an equilateral lump a little pointed at each of four ends; } kolhe tehen mēṛhēt ko mūhā akata = \text{ the Kolhes have to-day produced pig iron (Santali).}\]

cāṣāla on aṣṭāṣri yupa is described in Śatapatha Brāhmaṇa as a ketu, proclamation of performance of a Soma Samsthā Yajña. cāṣāla os godhuma ‘smoke of wheat chaff’ infuses carbon to harden metal in the fire-altar.


**Abstract**

Karanpura is located on the River Chautang (ancient Drishadvati, a tributary of River Sarasvati) nearly 60 km west of Hissar and 6 km west of Bhadra on the Bhadra-Goga Medi road in District Hanumangarh, Rajasthan. The Excavation Branch II of the Archaeological Survey of India excavated the site for two field seasons, viz., 2012-13 and 2013-14. The excavation brought to light occupational remains of Early Harappan and Mature Harap-pan phases of Harappan civilization. The occupational remains of over 3 m evidenced a continuous occupation at the site starting around circa 2800 BCE until around the end of second millennium BCE. The upper 1.5 m of occupational deposit had been removed by local villagers for agricultural purposes and it hence could be presumed that the end of the habitation occurred towards 2000 BCE. Nevertheless the excavation has enabled us to understand the dynamics of Harappan culture and its spread into the areas watered by the tributary rivers like River Drishadvati for reasons of exploitation of various copper resources located in the northern Aravalli region. The access to these raw material sources might have been facilitated through the settlements located on the
River Drishadvati to a larger extent. This paper puts forth the preliminary results of two seasons of excavation at this site.

http://repository.iitgn.ac.in/handle/123456789/1462?show=full

medha is yajña.

Indus Script Corpora hieroglyph meḍhā m. ‘post, forked stake’ is read rebus: medha, ‘yajña’. Sivalinga is a divine impeller; the metaphor is ताण्डव नृत्यम् the cosmic dance of transmutation.

Such a yupa, a post fixed in the middle of the sacrificial ground is used in yajña. अन्तःपूवेण यूपं परीत्यान्तःपात्यदेशे स्र्ापयहत कात्य. -पातित-पातिन् (Apte. Samskrtam). This is clearly an invocation to the paramaatman, as elaborated in this note with particular reference to the octagonal shape of the Yupam यूपं before commencing the yajña.

Almost every fire-altar found in Sarasvati civilization sites has such a medhā installed in the altar. The conclusive evidence comes from Binjor yajña kuNDa with an अष्टाहि 'having eight corners' (Vedic) yupa discovered in April 2015 by a young team of students from Institute of Arcaheology, National Museum, New Delhi.

ashtAs’ri yupa is signified by s’ivalinga and ekamukha s’ivalinga. A s’ivalinga is meḍhā -- with a unique octagonal/quadrangular shape as prescribed in Vedic texts -- rebus medha ‘yajña’. Scores of s’ivalingas are found in India, Nepal, Laos, Vietnam, Indonesia, Thailand with such s’ivalinga and ekamukha s’ivalinga of octagonal shape in rudra bhAgA (middle). Images of such lingas of octagonal shape in rudra bhAga are appended for ready reference. If a mukha ‘face’ is ligatured to the linga, the rebus rendering is: mũh ‘face’ Rebus: mũhe ‘ingot’ rebus: muhā ‘quantity of metal produced at one time in a native smelting furnace.’ PLUS medhā ‘stake, yupa’ rebus: medha ‘yajña’. See: http://bharatkalyan97.blogspot.in/2016/01/casala-on-yupa-indus-script-hieroglyph_6.html

चषालः caṣāla on Yupa, is an Indus Script hieroglyph like a crucible to carburize ores into steel/hard alloys (vajra).

The transmission and dissemination of a knowledge system to carburize ores to produce hard alloys and metals is thus complete, precise and unambiguous, through Indus Script Corpora.

This authenticated transmission through data archiving using inscriptions on seals or tablets or other objects reinforces that Indus Script is a knowledge system conveyed through metallurgical metaphors of hypertexts (hieroglyph-multiplexes).

This medhā rebus: medha ‘yajña’ is also a metallurgical metaphor to signify Prakrtam lōkhaṇḍa ‘iron work, iron implements’ as will be seen on Candi-Sukuh evidence discussed by Stanley J. O’Connor (embedded article). Mulavarman’s yupa inscription described the soma yaga as बहुसुवर्णक, bahusuvvarṇaka, the same metaphorical expression used in the epic.
Valmiki Ramayana, sto ignify creation and distribution of wealth. Every one of the 19 yupa inscriptions are on octagonal-shaped pillars and relate to the performance of soma yajña categories of अहीन सल्ल (performed for 2-12 days, for more than 12 days).

'यज्ञो वे मेधः' इति शुरुः। एकविषेक- मेधान्ते Mb.14.29.18. (com. मेधो युद्दत्यजः। 'यज्ञो वे मेधः' इति शुरुः।)

All the 19 yupa inscriptions recorded in Epigraphia Indica are अहीन or सल्ल soma yajña lasting for over 2 days.

अहीन [p=116.2] अघ्र/आ (RV. AV. &c ) or अघ्र/आ (RV. viii , 2 , 41) or अघ्र/आ (RV. x , 27 , 15 AV. &c ) pl. eight (other forms are: gen. अघ्रानि Mn. &c ; instr. अघ्र/आ RV. i , 18 , 4 S3Br. &c ; loc. अघ्रस्दः S3Br. &c );[Lat. octo ; Goth. ahtau; Mod. Germ.acht ; Eng. eight ; Lith. asztun ; Slav. osmj.]). The dual form अघ्र/आ (in Vedic) is semantically 'two fours'. gaNDa 'four' rebus: kanda 'fire'.

'having eight corners' in 3rd kanda of Shatapathabrahmana also signifies the key comprehensive penetration of space by the पूर्व or skambha or .medhā 'stake' covered with cashAla (wheat chaff) in the carburization process to produce hard metal out of the working with fire.ाङ्गारा m. 'glowing charcoal' RV., °aka -- lex. 2. *iṅgāra, *iṅgāla -- m. Vāsav. com.1. Pa. aṅgāra -- m. 'charcoal', Pk. aṅgāra -- , °aya -- , aṅgāla -- , °aya -- m., Gy. eur. aṅgār 'charcoal', wel. varā m. (v -- from m. article), germ. yangar (v -- from yag, s.v. agnī -- 1); Ash. aṅā' 'fire', Kt. aṅā, Gmb. aṅā, Pr. anēye, Dm. aṅgar (a < ā NTS xii 130), Tir. Chilis Gau. K. nār (n < n - - , not ← Psht. nār ← Ar. AO xii 184), Paš. aṅgār, Shum. ār (← Paš. NOGaw 59), Gaw. Kal. Kho. aṅgār, Bshk. aṅgār, Tor. aṅā, Mai. aṅā, Phal. aṅgār, Sh. agār, ha° m.; S. aṅaru m. 'charcoal' (a < ā as in Dm.). L. aṅgār m., P. aṅyār, rā m., EP. āgeār (y or e from MIA. aggi < agnī -- 1?), WPah. bhid. aṅgārō n., pl. -- ā, Ku. aṅār (daṅār id. X dājno < dahyātē), N. aṅār, A. aṅgār, eṅgār, B. aṅgār, āṅrā, Or. aṅgāra; Bi. āgarwāh 'man who cuts sugar -- cane into lengths for the mill' (=pakwāh); OMyth. aṅgāra, Mth. aṅgor, H. āgār, rā m., G. āgār, rō m., M. āgār m., Si. aṅgura. -- Wg. ādotot;r, ār 'fire' (as opp. to aṅārī k 'charcoal', see aṅgārāyā -- ) poss. < agnī -- 1, Morgensterne NTS xvii 226.2. Pa. inghāla -- 'glowing embers (?)', Pk. inghāra -- , inghāla, °aya -- ; K. yēngur m. 'charcoal', yēnguru m. 'charcoal -- burner'; M. īgal, īglā m., Ko. īglo. -- Deriv. M. īglā m. 'a kind of large ant', īglī f. 'a large black deadly scorpion'.aṅgāraka -- , aṅgāri -- , aṅgāryā -- ; aṅgāradhānī -- , aṅgāravarta -- , aṅgārasthāna -- , aṅgrśtha -- .Addenda: āṅgāra -- ; Md. aṅguru 'charcoal'.(CDIAL 125)

The centrality of the carburization process using caSala atop yupa is a significant component of the knowledge system of ancient metallurgists to enhance the utility and exchange value of hard alloys or hardened metals (e.g. from mRdu 'soft iron' to .ukku 'steel'). The semantics of the north-
Knowledge system disseminated through Indus Script Corpora also finds expression in Vedic metaphor such as ईशावास्यम् N. of the ईशावास्योपहनषद्, also called ईशोप-निषद्; the only instance of an upaniṣad included in a Saṁhitā (Vāj.4.1). or ईशा*वासप, n. "to be clothed or pervaded by the Supreme " , N. of the ईशोपनिषद् (q.v.) which commences with that expression. This may explain the octagonal or eight-faced pillar which is the subject of an adhyatma philosophical tractus par excellence in Atharva Veda X.7 Skambha Suktam.

kāsminn ānge tápo asyādhi tiṣṭhati kāsminn ānga ṛtām asyādhy āhitamkvā vratāṃ kvā śraddhāsyā tiṣṭhati kāsminn ānge satyām asya prātiṣṭhitam (AV X.7.1)

Which of his members is the seat of Fervour: Which is the base of Ceremonial Order? Where in him standeth Faith? Where Holy Duty? Where, in what part of him is truth implanted?

Consequently, his insight is that an octagonal yupa signifies any somayaga. Vajapeya is one of seven somayagas which constitute somasamsthA.

The evidence for the performance of a soma yajña in Binjor and Kalibangan dated to ca. 2500 BCE in Sarasvati-Sindhu civilization is a stunning evidence of the Vedic yajna tradition. This tradition continues into the historical periods evidenced by 19 yupa inscriptions in regions such as Rajasthan, Isapur (suburb of Mathura) and East Borneo.

It will thus be appropriate to refer to the octagonal yupa in the Binjor agnikuNDa as a signifier of a somayaga, perhaps a particular type of somayaga which was called Vājapeya Soma samsthA.

In most of the 19 yupa inscriptions, the yaga is recorded to have gone on for several days, hence may be called अहीन Soma yoga (or Soma samsthA). such a somayaga could have been a Vājapeya.

एकविशति is a count of twenty-one , a collection or combination of twenty-one TS. S3Br.

Thus, medha is yajña. अहीन is a yajña lasting 2 to 12; a सल is an extended अहीन which could last from 12 days upto a year. अहीन सल soma yajña or सोम--संस्था [p= 1250.3] f. the basis or initial form of a सोम sacrifice MBh. Gaut. MātrkP performed for several days -- from 12 days upto a year. Examples of सोम--संस्था are seven: अघ्रिश्वम, अत्यङ्गिश्वम, उक्थ, षोढशी, अतिरित्र, आप्तोयायम and वाजपेय.
Example of सत्त्र is गवाम्--यन [p=351,3] n. id. AitBr.iv, 17 A1s3vS3r. Ka1tyS3r. MBh.iii, 8080.

Example of अहीन is. वाज--पेय one of the seven forms of the सोम- sacrifice (offered by kings or Brahmans aspiring to the highest position, and preceding the राज-सुलय and the बहुस्पति-सवा) AV. Br. S3rS. MBh. R. Pur. वाज--पेय is name of the 6th book of the शतपथ-ब्राह्मण in the काण्व-शाखा.

अहीन [p=125,3] m. (fr. /अहीन Pa1n2. 6-4, 145) "lasting several days", a sacrifice lasting several days AitBr. A1s3vS3r. &c; mfn. unimpaired, whole, entire, full S3Br. AitBr. &c.

Somayaga or soma samsthA are seven. “Agnishtoma is considered to be a prakriti soma yajna (A template based on which other six are done--Atyagnistoma, Aptoryama, Atirātra, उक्त, shodasi, Vājapeya). The Vājapeya is the highest soma yajna. The performer of the Vājapeya has to be led into the country by the king himself and anna abhishekam has to be performed by the king for the performer of Vājapeya. Then the person who has performed this is given the title Vājapeya. Generally based on number of days performed, soma sacrifices are split into 1. Ekaha (one day) 2. Ahina (2-12 days) and 3. Satra (12 days till one year). The agnishtoma is an example of a 1 day sacrifice. The Vajapaya is an example for Ahina and the Gavamayana is an example for a satra. Specifically it is a samvatsara satra meaning it lasts for one year. The entire 7th kanda of the Taittriya samhita deals with satra type sacrifices.”

http://jayasreesaranathan.blogspot.in/2012/10/what-are-vedic-yajnas-guest-post-by-r.html

सत्त्र [p=1138,2] n. "session", a great सोम sacrifice (lasting accord. to some, from 13 to 100 days and performed by many officiating Brahmans; also applied to any oblation or meritorious work equivalent to the performance of a सत्त्र; सत्त्र/अस्य्/अक्ततः N. of a सामन् A1rshBr.) RV. &c. wealth L.

अष्टा* श्रि [p=117,1] mfn. having eight corners S3Br. MBh.iii, 10665 अश्रि [p=114,2] f. the sharp side of anything, corner, angle (of a room or house), edge (of a sword) S3Br. Ka1tyS3r [L=19806] often ifc. e.g. अष्टा*श्रि, निर्ब्रि/अश्रि, चू/अतुरः-श्रि, शाता*श्रि q.v. (cf. अश्रि); ([cf. Lat. acies, acer; Lith. asmuu3]) (Monier-Williams) aṣṭanum. a. [अष्ट-व्याप्तो कनिन् तुट च Un.1.154.] (nom., acc. अष्टो) Eight. It often occurs in comp. as अष्ट with numerals and some other nouns; as अष्टदशन्, अष्टविशाः; अष्टपद &c. [cf. L. octo; Gr. okto; Zend astani Pers. hasht.].

अस्रम् an octagon. -अञ्ज: A kind of single-storied building octagonal in plan. अस्र: [अस्-रन्] 1 A corner, an angle अस्रिय a. octagonal; asriḥ अस्रि: 1 An angle; अस्रिय: सर्व एव शलक्षणरूपसमक्ति: Rām.1.14.26. अश्रय [p=158,2] > आ-श्रि: m. that to which anything is annexed or with which anything is closely connected or on which anything depends or rests Pa1n2. R.Ragh. Sus3r. a recipient, the person or thing in which any quality or article is inherent or retained or received dwelling, asylum, place of refuge, shelter R. S3is3. &c help, assistance, protection Pan5cat. Ragh. &c mfn. ifc. depending on, resting on, endowed or
A LANDSAT image shows clearly the bifurcation of the River Sarasvati into two channels, one
point of Vedic River Sarasvati
The location of the Binjor archaeological site (4MSR) is significant in identifying the desiccation point of Vedic River Sarasvati.
A LANDSAT image shows clearly the bifurcation of the River Sarasvati into two channels, one
channel flowing westwards towards Ganweriwala (Bahawalpur Province) and another flowing southwards towards Surkotada/Dholavira (Gujarat). The River Sutlej had joined River Sarasvati at Shatran as a tributary. This tributary emanating from Manasarovar glacier in the Himalayas, took a 90-degree turn westwards at Ropar (another archaeological site with a site museum). This 90-degree turn is evidence of the impact of plate tectonics resulting in the River Sutlej changing its course abandoning the supply of glacial waters to River Sarasvati/Drishadvati drainage system.

Thus, Binjor (4MSR) site is a time marker for the River Sarasvati as a navigable channel prior to 1900 BCE, allowing for the trade indicated by the Binjor seal of metal implements which might have been carried by seafaring merchant caravans across the Persian Gulf.

Hieroglyph: *kōda* 'young bull, bull-calf' rebus: *kōdā* 'to turn in a lathe'; *kōnda* 'engraver, lapidary'; *kundār* 'turner'.

Hieroglyph: *sāghārɔ* 'lathe'. (Gujarati) Rebus: sangara 'proclamation, trade'.

Together, the message of the Binjor Seal with inscribed text is a proclamation, a metalwork catalogue (of) 'metallic iron alloy implements, hard alloy workshop'

Thus, the text of Indus Script inscription on the Binjor Seal reads: 'metallic iron alloy implements, hard alloy workshop'
Together, with the hypertexts on the field symbol, the message of the Binjor Seal with inscribed text is a proclamation, a metalwork catalogue (of) 'metallic iron alloy (hard iron, steel) implements, hard alloy workshop'.

An exposition by Sadhashiv A Dange: "the yūpa is described as being the emblem of the sacrifice (RV III.8.8 yaññasya ketu). Though it is fixed on the terrestrial plane at the sacrifice, it is expected to reach the path of the gods. Thus, about the many sacrificial poles (fixed in the Paśubandha, or at the Horse-sacrifice) it is said that they actually provide the path for reaching the gods (ib., 9 devānām api yanti pāthah). They are invoked to carry the offerings to the gods (ib., 7 te no vyantu vāryam devatrā), which is the prerogative of the fire-god who is acclaiemd as 'messenger' (dūta); cf. RV I.12.1 agrim dītam vṛṇimahe). In what way is the yūpa expected to carry the chosen offering to the gods? It is when the victim is tied to the sacrificial pole. The parallelism between the sacrificial fire and the yūpa is clear. The fire carries it through the smoke and flames; the yūpa is believed to carry it before that, when the victim is tied to it, as its upper end is believed to touch heaven. A more vivid picture obtains at the vajapeya. Here the yūpa is eight-angled, corresponding to the eight quarters. (śat. Br. V.2.1.5 aśtāśrir yūpo bhavati; the reason given is that the metre Gayatri has eight letters in one foot; not applicable here, as it is just hackneyed. At Taitt.Sam. I.7.9.1, in this context a four-angled yūpa is prescribed.) The one yūpa is conceived as touching three worlds: Heaven, Earth and the nether subterranean. The portion that is above the caṣāla (ring) made of wheat-dough (cf.śat. Br. V.2.1.6 gaudhūmam caṣālam bhavati) represents Heaven. This is clear from the rite of ascending to the caṣāla, made of wheat-dough, in the Vajapeya sacrifice. The sarificer ascends to it with the help of a ladder (niśrayaṇī); and, while doing so, calls upon his wife, 'Wife, come; let us ascend to Heaven'. As soon as he ascends and touches the caṣāla, he utters, 'We have reached Heaven, O gods' (ib., 12). According to Sāyaṇa on the Taitt.Sam. I.7.9.1, the sacrificer stretches his hands upwards when he reaches the caṣāla and says, 'We have reached the gods that stay in heaven' (udgrhūṭābhyaṃ bāhubhyāṃ). Even out of the context of the Vajapeya, when the yūpa is erected (say in the Paśubandha), it is addressed, 'For the earth you, for the mid-region you, for heaven you (do we hoist you)' (Taitt. Sam. I.3.6.1-3; cf. śat. Br. III.7.1.5-6). The chiselled portion of the yūpa is above the earth. So, from the earth to heaven, through the mid-region the yūpa represents the three-regions. The un-chiselled portion of the yūpa is fixed in the pit (avaṭa) and the avaṭa, which represents the subterranean regions, is the region of the ancestors (ib.4).The yūpa, thus, is the axis mundi...Then, it gave rise to various myths, one of them being that of the stūpa of Varuṇa, developing further into Āśvattha tree, which is nothing but a symbol of a tree standing with roots in the sun conceived as the horse (aśva-stha = aśvattha), a symbol obtaining at various places in the Hindu tradition. It further developed into the myth of the churning staff of the mountain (Aṃṛta-mañṭhana); and yet further, into the myth of Vasu Uparicara, whom Indra is said to have given his yaṣṭi (Mb.Adi. 6y3.12-19). This myth of the yaṣṭi was perpetuated in the ritual of the Indra-dhvaḻa in the secular practice (Brhatsamhita, Chapter XLII), while in the s'rauta practice the original concept of the axis mundi was transformed into the yūpa that reached all regions, including the under-earth. There is another important angle to the yūpa. As the axis mundi it stands erect to the east of the Uttaravedi and indicates the upward move to heaven. This position is unique. If one takes into account the position of the Gārhapatya and the āhavaniya fireplaces, it gets clear that the march is from the
earth to heaven; because, the Gārhapatya is associated with this earth and it is the household fire (cf. grhā vai gārhapatyah, a very common saying in the ritual texts), and the seat of the sacrificer's wife is just near it, along with the wives of the gods, conceptually. From this fire a portion is led to the east, in the quarter of the rising sun (which is in tune with such expressions as prāṇcam yajñam pra nayatā sahāyah, RV X.101.2); where the Ahavaniya fireplace is structured. As the offerings for the gods are cast in the Ahavaniya, this fire is the very gate of heaven. And, here stands, the yūpa to its east taking a rise heavenwards. This is, by far, the upward rise. But, on the horizontal plane, the yūpa is posted half-inside, half-outside the altar. The reason is, that thereby it controls the sacred region and also the secular, i.e. both heaven and earth, a belief attested by the ritual texts. (Tait. Sam. VI.6.4.1; Mait. Sam. III.9.4).”(Dange, SA, 2002, Gleanings from Vedic to Puranic age, New Delhi, Aryan Books International, pp. 20-24).

Skambha Sukta ( Atharva Veda X-7 ) begins with this enquiry to unravel the implanted truth:

kāsmīn āṅge tápo asyaśdhi tiṣṭhati kāsmīn āṅga ṛtām asyaśādhy āhitam
kvā vratāṁ kvā śraddhāsyā tiṣṭhati kāsmīn āṅge sātyāṁ aṣya prātiṣṭhitam 1

1. Which of his members is the seat of fervour: Which is the base of Ceremonial Order? Where in him standeth Faith? Where Holy Duty? Where, in what part of him is truth implanted?

The sequences of questions posed in 44 sukta verses are an inquiry as profound as the Nasadiya Sukta of Rigveda. The wonder of the Rishi and the insights provided linking earth and heaven in an axis mundi the primordial pillar signified by the skambha (linga) metaphor is unsurpassed in any cosmic-consciousness enquiries of all time.

This wonder, this enquiry gets embedded in some hieroglyph-multiplexes of Indus Script Corpora and on Bhuteswar friezes linking sivalinga to a smelter and processes of the smith working with minerals to produce metallic implements. This is one reason why the stella are implanted in almost every fire-altar of Sarasvati-Sindhu civilization.
Discovery of the ancient channels of Vedic River Sarasvati. Now, the people who nurtured the civilization and the language they spoke have been discovered.

Section 4. Bhāratīya itihāsa, Indus Script hypertexts signify metalwork wealth-creation by Nāga-s in paṭṭaḍa ‘smithy’ = phaḍā फड ‘manufactory, company, guild, public office, keeper of all accounts, registers’

All Indus Script hypertexts with phaḍā 'serpent hood' signify metals manufactory public officers

https://tinyurl.com/y7a26nhe

Public or open inquiry. Fruit, vegetables &c. furnished on occasions to Rajas and public officers, on the authority of their order upon the villages; any petty article or trifling work exacted from the Ryots by Government or a public officer.

Commonly the keeper of the registers &c. By him were issued all grants, commissions, and orders; and to him were rendered all accounts from the other departments. He answers to Deputy auditor and accountant. Formerly the head Kárkún of a district-cutcherry who had charge of the accounts &c. was called फडनीस.

A man belonging to a company or band (of players, showmen &c.)

A clearing off of public business (of any business comprehended under the word फड q. v.): also clearing examination of any फड or place of public business.

A place of public business or public resort; as a court of justice, an exchange, a mart, a counting-house, a custom-house, an auction-room: also, in an ill-sense, as खेळण्याचा फड A gambling-house, नाचण्याचा फड A nach house, गाण्याचा or ख्यालीखुशालीचा फड A singing shop or merriment shop. The word expresses freely Gymnasium or arena, circus, club-room, debating-room, house or room or stand for idlers, newsmongers, gossips, scamps &c.

The spot to which field-produce is brought, that the crop may be ascertained and the tax fixed; the depot at which the Government-revenue in kind is delivered; a place in general where goods in quantity are exposed for inspection or sale.

Any office or place of extensive business or work, as a factory, manufactory, arsenal, dock-yard, printing-office &c.

A plantation or field (as of ऊस, वांग्या, भिरच्चा, खरबुजे &c.): also a standing crop of such produce.

Full and vigorous operation or proceeding, the going on with high animation and bustle (of business in general).

A company, a troop, a band or set (as of actors, showmen, dancers &c.)

The stand of a great gun.

A play; a company, a troop, a band or set (as of actors, showmen, dancers &c.)

To come before the public; to come under general discussion.

Hieroglyph: ṽḷīmī paṭam, n. < pada. Instep; பாதத் தின் முபகுதி. படாக்குந்து நின் விப்பை்யலு (சூடா. 9, 53).


Instep venerated. Amaravati sculptural friezes. Skambha with ayo kambhāra ‘fish-fin' rebus: ayo kammaṭa ‘alloy metals mint, coiner, coinage'.
A truly fascinating paper by Dennys Frenez and Massimo Vidale on composite Indus creatures and their meaning: Harappa Chimaeras as 'Symbolic Hypertext'. Some Thoughts on Plato, Chimaera and the Indus Civilization at a.harappa.com/...

The classifier is the cobra hood: फड़ा phaḍā f (फटा S) The hood of Coluber Nāga Rebus: phaḍa फड़ ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

On this seal, the key is 'combination of animalś. This is an example of metonymy of a special type called synecdoche. Synecdoche, wherein a specific part of something is used to refer to the whole, or the whole to a specific part, usually is understood as a specific kind of metonymy. Three animal heads are ligatured to the body of a 'bull'; the word associated with the animal is the intended message.

The ciphertext of this composite animal is to be decrypted by rendering the sounds associated with the animals in the combination: ox, young bull, antelope. The rebus readings are decrypted with metalwork categories: barad 'ox' rebus: bharat 'alloy of copper, pewter, tin'; kondh 'young bull' rebus: kūdār 'turner, brass-worker, engraver (writer)'; kunda 'nidhi' kundāṇa 'fine gold' ranku 'antelope' rebus: ranku 'tin'.

Mohenjo-daro. Sealing. Surrounded by fishes, lizard and snakes, a horned person sits in 'yoga' on a throne with hoofed legs. One side of a triangular terracotta amulet (Md 013); surface find at Mohenjo-daro in 1936, Dept. of Eastern Art, Ashmolean Museum, Oxford. [seated person penance, crocodile?]

The classifier is the cobra hood: फड़ा phaḍā f (फटा S) The hood of Coluber Nāga Rebus: phaḍa फड़ ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

Brief memoranda: kamaḍha 'penance' Rebus: kammaṭa 'mint, coiner'; kaṇḍo 'stool, seat' Rebus: kaṇḍa 'metalware' kaṇḍa 'fire-altar'.
kāru 'crocodile' Rebus: kāru 'artisan'; khar 'blacksmith'

Hieroglyphs (allographs):

kamaḍha 'penance' (Prakriam)

kamḍa, khamḍa 'copulation' (Santali)

kamaṭha crab (Skt.)

kamarkom = fig leaf (Santali.lex.) kamarmāṛṇā (Has.), kamarkom (Nag.); the petiole or stalk of a leaf (Mundari.lex.) kamaṭha = fig leaf, religiosa (Sanskrit) kamaḍha = ficus religiosa (Sanskrit)

kamāṭhiyo = archer; kāmaṭhum = a bow; kāmaḍ, kāmaḍum = a chip of bamboo (G.) kamaṭhiyo a bowman; an archer (Sanskrit)

Rebus: kammaṭi a coiner (Ka.); kampaṭṭam coinage, coin, mint (Ta.) kammaṭa = mint, gold furnace (Te.) kamaṭa = portable furnace for melting precious metals (Telugu);

eraka 'upraised arm' rebus: eraka 'moltencast copper' arka 'gold'.

able ornée de serpents et de divinités aux eaux jaillissantes XIVe siècle avant J.-C. Suse, Tell de l'Acropole Bronze H. 19.5 cm; W. 15.7 cm; L. 69.5 cm Fouilles J. de Morgan, 1898 , 1898 Sb 185 Near Eastern Antiquities Sully wing Ground floor Iran, Susiana (Middle Elamite period) Room 10
The classifier is the cobra hood hieroglyph/hypertext: फडा phaḍā f (फटा S) The hood of Coluber Nāga Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

Hieroglyph: kāṇḍa ‘water’ Wg. kāṇṭā ‘water -- channel’, Woṭ. kāṇṭél f., Gaw. khāṇṭ†l, Bshk. kāṇḍo (CDIAL 2680). काण्ठा kāṇṭam, n. < kāṇḍa. 1. Water; sacred water; नीर। काण्ठिवा पाण्ठिवा काण्ठामक काण्ठा लाम (काण्ठत: 49, 16)

Rebus: khaṇḍa ‘implements (metal)’

The classifier is the cobra hood hieroglyph/hypertext: फडा phaḍā f (फटा S) The hood of Coluber Nāga Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

Text on obverse of the tablet m453A: Text 1629. m453BC Seated in penance, the person is flanked on either side by a kneeling adorant, offering a pot and a hooded serpent rearing up.


Rebus readings of glyphs on text of inscription:

koṇḍa bend (Ko.); Tu. Kōḍi corner; kōṇṭu angle, corner, crook. Nk. Kōṇṭa corner (DEDR 2054b) G. khūṭrī f. ‘angle’ Rebus: kōḍā ‘to turn in a lathe’(B.) कोद kōnda ‘engraver, lapidary
setting or infixing gemş (Marathi) kođ ‘artisan’s workshop’ (Kuwi) kođ = place where artisans work (G.) ācāri koṭṭya ‘smithy’ (Tu.) कुडऩ [kōṇḍaṇa] f A fold or pen. (Marathi) B. kōḍa ‘to turn in a lathe’; Or. kānda ‘lathe’, kūḍibā, kūḍ ‘to turn’ (→ Drav. Kur. Kūḍ ‘lathe’) (CDIAL 3295)

aṭar ‘a splinter’ (Ma.) aṭaruka ‘to burst, crack, sli off, fly open; aṭarcc ‘splitting, a crack’; aṭartuka ‘to split, tear off, open (an oyster) (Ma.); aḍaruni ‘to crack’ (Tu.) (DEDR 66) Rebus: aduru ‘native, unsmelted metal’ (Kannada)

ās = scales of fish (Santali); rebus: aya ‘metal, iron’ (Gujarati.) cf. cognate to amśu ‘soma’ in Rigveda: ancū ‘iron’ (Tocharian)G. karā n. pl. ‘wristlets, bangle; S. f. ‘wrist’ (CDIAL 2779). Rebus: khār ‘blacksmith’ (Kashmiri)

dula ‘pair’; rebus dul ‘cast (metal)’

Glyph of ‘rim of jar’: kārṇaka m. ‘projection on the side of a vessel, handle ’ ŚBr. [kārṇa -- ]Pa. kaṇṇaka -- ‘having ears or corners’; (CDIAL 2831) kaṇḍa kanka; Rebus: furnace account (scribe). kaṇḍ = fire-altar (Santali); kan = copper (Tamil) khanaka m. one who digs, digger, excavator Rebus: karanikamu. Clerkship: the office of a Karanam or clerk. (Telugu) kāraṇa n. ‘act, deed’ RV. [ṅkṛt] Pa. karaṇa -- n. ‘doing’; NiDoc. karṇa, kāmṛamṇa ‘work’; Pk. karaṇa -- n. ‘instrument’ (CDIAL 2790)

The suggested rebus readings indicate that the Indus writing served the purpose of artisans/traders to create metalware, stoneware, mineral catalogs -- products with which they carried on their life-activities in an evolving Bronze Age.

Jasper Akkadian cylinder seal
Red jasper H. 1 1/8 in. (2.8 cm), Diam. 5/8 in. (1.6 cm) cylinder Seal with four hieroglyphs and four kneeling persons (with six curls on their hair) holding flagposts, c. 2220-2159 B.C.E., Akkadian (Metropolitan Museum of Art) Cylinder Seal (with modern impression). The four hieroglyphs are: from l. to r. 1. crucible PLUS storage pot of ingots, 2. sun, 3. narrow-necked pot with overflowing water, 4. fish A hooded snake is on the edge of the composition. (The dark red color of jasper reinforces the semantics: eruvai 'dark red, copper' Hieroglyph: eruvai 'reed'; see four reedposts held.

The classifier is the cobra hood hieroglyph/hypertext: फडा phaḍā f (फटा S) The hood of Coluber Nága Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

koṭhāri 'crucible' Rebus: koṭhāri 'treasurer, warehouse'

If the hieroglyph on the leftmost is moon, a possible rebus reading: कमर kamar

A कमर kamar, s.m. (9th) The moon. Sing. and Pl. See سپوږمي or سپوګمي (Pashto) Rebus: kamar 'blacksmith'.


arka 'sun' Rebus: arka, eraka 'copper, gold, moltencast, metal infusion'

lokāṇḍa 'overflowing pot' Rebus: l lokāṇḍa 'metal implements, excellent implementś

aya 'fish' Rebus: aya 'iron' (Gujarati) ayas 'alloy metal' (Rigveda)

baṭa 'six' Rebus: baṭa ‘iron’ bhaṭa 'furnace' PLUS meḍh 'curl' Rebus: meḍ 'iron'

m0492Ct 2835 Pict-99: Person throwing a spear at a bison and placing one foot on the head of the bison; a hooded serpent at left.
The classifier is the cobra hood hieroglyph/hypertext: फड़ा phaḍāḥ (फड़ा S) The hood of Coluber Nāga Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

Hieroglyph: kolsa = to kick the foot forward, the foot to come into contact with anything when walking or running; kolsa pasirkedan = I kicked it over (Santali.lex.) mērsa = v.a. toss, kick with the foot, hit with the tail (Santali).

kol ‘furnace, forge’ (Kuwi) kol ‘alloy of five metals, pancealoha’ (Ta.) • kolhe (iron-smelter; kolhuyo, jackal) kol, kollan-, kollar = blacksmith (Ta.lex.) • kol ‘to kill’ (Ta.) • sal ‘bos gaurūś, bison; rebus: sal ‘workshop’ (Santali) mērhēt,’iron”; ispat m. = steel; dul m. = cast iron; kolhe m. iron manufactured by the Kolhes (Santali); meṛed (Mun.dari); meḍ (Ho.)(Santali.Bodding)

nāga 'serpent' Rebus: nāga 'lead'

Hieroglyph: rāgo ‘buffalo bull’

Rebus: Pk. raṅga ‘tin’ P. rāg f., rāgā m. ‘ pewter, tin ’ Ku. rān ‘ tin, solder ’ Or. rānga ‘ tin ’, rāngā ‘ solder, spelter ’, Bi. Mth. rāgā, OAw. rā nga: H. rā g f., rāgā m. ‘ tin, pewter ‘ raṅgaada - m. ‘ borax ’ lex. Kho. (Lor.) ruṅ ‘ saline ground with white efflorescence, salt in earth ’ *raṅgapattra ‘ tinfoil ’. [raṅga -- 3, pātra -- ]B. rāṅ(g)tā ‘ tinsel, copper -- foil ’.

pāTa 'hood of serpent' Rebus: padanu 'sharpness of weapon' (Telugu)


2. Pa. konta -- m. ‘ standard ’; Pk. koṇta -- m. ‘ spear ’; H. kōt m. (f.?) ‘ spear, dart ’; -- Si. kota ‘ spear, spire, standard ’ perh. ← Pa.(CDIAL 3289)

Rebus: kuṇṭha munda (loha) 'hard iron (native metal)’ Rebus: kunda ‘nidhi’ kundaṇa ‘fine gold’
Allograph: कुंठणें [ kuṇṭhaṇēṃ ] v i (कुंठ S) To be stopped, detained, obstructed, arrested in progress (Marathi)

The classifier is the cobra hood hieroglyph/hypertext: फडा phadā f (फटा S) The hood of Coluber Nāga Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

C-49 a,b,c

+ hieroglyph in the middle with covering lines around/dots in corners poḷa 'zebu' rebus: poḷa 'magnetite'; dhāv 'strand' rebus: dhāv 'smelter'; kulā 'hooded snake' rebus: kolle 'blacksmith' kol 'working in iron' kolhe 'smelter'; kolmo 'three' koD 'horn' rebus: kolimi 'smithy' koของเขา 'workshop'. tri-dhātu 'three strands, threefold' rebus: tri-dhāv 'three mineral ores.'

The classifier is the cobra hood hieroglyph/hypertext: फडा phadā f (फटा S) The hood of Coluber Nāga Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

Cylinder seal with a zebu, scorpion, man, snake and tree. Enstatite. H. 2.6 cm (1 in.); diam. 1.55 cm (5/8 in.). Mesopotamia, Ur, U. 16220. Late 3rd millennium BCE. British Museum. BM 122947

Gadd seal 6. (cut down into Ur III mausolea from Larsa level; U. 16220), enstatite; Legrain, 1951, No. 632; Collon, 1987, Fig. 611 Cylinder seal; BM 122947: humped bull stands before a palm-tree, a thorny stone(?), tabernae montana (five-petalled fragrant flower); snake; person with long legs; behind the bull a scorpion ... Deciphered Indus writing: poḷa 'zebu, bos indicus; poḷa 'magnetite ore' (Munda. Asuri); bichi 'scorpion'; 'hematite ore'; tagaraka 'tabernae montana'; tagara 'tin'; ranga 'thorny'; Rebus: pewter, alloy of tin and antimony; kankar., kankur. = very tall and thin, large hands and feet; kankar dare = a high tree with few branches (Santali) Rebus: kanka, kanaka = gold (Sanskritam); kan = copper (Tamil) nāga 'snake' nāga 'lead' (Sanskritam).
Jiroft artifacts with Meluhha hieroglyphs referencing dhokra kamar working with metals.

Dark grey steatite bowl carved in relief. Zebu or brahmani bull is shown with its hump back; a male figure with long hair and wearing akilt grasps two sinuous objects, representing running water, which flows in a continuous stream. Around the bowl, another similar male figure stands between two lionesses with their head turned back towards him; he grasps a serpent in each hand. A further scene (not shown) represents a prostrate bull which is being attacked by a vulture and a lion.

The zebu is reminiscent of Sarasvati Sindhu seals. The stone used, steatite, is familiar in Baluchistan and a number of vessels at the Royal Cemetery at Ur were made out of this material.

The bowl dates from c. 2700-2500 B.C. and the motif shown on it resembles that on a fragment of a green stone vase from one of the Sin Temples at Tell Asmar of almost the same date.

Khafajeh bowl; a man sitting, with his legs bent underneath, upon two zebu bulls. This evokes the proto-Elamite bull-man; the man holds in his hands streams of water and issurrounded by
ears of corn. He has a crescent beside his head. On the other side of the bowl, a man is standing upon two lionesses and grasping two serpents.

Figure 11: a. mountains landscape and waers; (upper part) a man under an arch with sun and crescent moon symbols; (lower part) man seated on his heels holding zebus; b. man holding a snake; c. two men (drinking) and zebus, on a small cylindrical vessel; d. Head of woman protruding from jar, and snakes; 3. man falling from a tree to the trunk of which a zebu is tied; f. man with clas and bull-man playing with cheetahs, and a scorpion in the center (on a cylindrical vessel). http://www.iranicaonline.org/articles/jiroft-iv-iconography-of-chlorite-artifacts.

The classifier is the cobra hood hieroglyph/hyptext: फड़ा phadâ S The hood of Coluber Nága Rebus: phaḍa ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

bica 'scorpion' rebus; bicha 'haematite, ferrite ore'

पोळा pōḷā 'zebu, bos indicus' rebus: पोळा pōḷā 'magnetite, Fe3O4, Ferrite ore'

khaṇḍa ‘implements (metal)’
The classifier is the cobra hood hieroglyph/hypertext: फड़ा phaḍā f (फटा S) The hood of Coluber Nága Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

Harappa seal signifies फड़ा phaḍā 'metals manufactory' sēṇa 'eagle' rebus sena 'thunderbolt'
https://tinyurl.com/yar94t7p

See:

Harappa seal h166A, h166B. Vats, 1940, Excavations in Harappa, Vol. II, Calcutta: Pl. XCI. 255


dharga 'mountain range' Rebus: dhangar 'blacksmith'

Ta. eruvai a kind of kite whose head is white and whose body is brown; eagle. Ma. eruva eagle, kite (DEDR 818). Rebus: eruvai ‘copper’ (Tamil).


Indus Script hypertext to signify फडा phaḍā 'metals manufactory' has cognates in expressions of Bhāratīya languages

https://tinyurl.com/y8me6tze

All cognates: phaṭā फटा (Sanskrtam), phaḍā फडा (Marathi), paṭam (Tamil. Malayalam), padaga (Telugu) have the same meaning: cobra hood. Rebus words/expressions which signify 'manufactory, metals workshop' are: bhaṭṭh m., ʻtī f. ʻfurnace', paṭṭaṭai, paṭṭarai 'anvil, smithy, forge', paṭṭade, paṭṭadi 'workshop'.

This concordance suggested by the use of Indus Script Cipher evidenced in many inscriptions (See links cited below) indicates the essential semantic unity of Bhāratīya languages and the evolution of manufactories/workshops for metalwork all over Bhāratam during the Bronze Age.

The semantic unity is matched by the cultural significance of the pratimā of Gaṇeṣa of Gardez, with the Indus Script hypertexts of cobra hood and elephant-face ligature to a human body attesting to the significance of Gaṇeṣa as the leader of the hosts performing ironwork (karibha, ibha 'elephant' rebus: karba, ib 'iron'); phaḍā फडा 'cobra hood' rebus: phaḍā फडा 'metals manufactory'; müṣa 'mouse' rebus: müṣa 'crucible'; med 'step, dance step' rebus: mērhēṭ, med 'iron' med 'copper' (Slavic)

Based on this example of word-sets of Bhāratīya languages suggesting phonetic variants of phaḍā, paṭam meaning 'cobra hood', I suggest that phaḍā 'metals manufactory' in Marathi is cognate with and explains, semantically, the derivatives with cognate meanings: paṭṭade, paṭṭadi 'workshop' (Kannada) and paṭṭaṭai, paṭṭarai 'anvil, smithy, forge.'(Tamil). It is also possible to suggest a cognate bhaṭṭh m., ʻtī f. 'furnace' (Punjabi). baṭa 'iron' (Gujarati) bhaṭṭī f. 'forge' (Marathi). Semantics of forge, smithy are seen in the following lexemes signifying 'furnace work': bhrāṣṭra n. 'frying pan, gridiron ' MaitrS. [vbhrajj] Pk. bhaṭṭha - m.n. 'gridiron '; K. būṭhi f. ʻ level surface by kitchen fireplace on which vessels are put when taken off fire ' ; S. baṭhu m. 'large pot in which grain is parched, large cooking fire ', baṭhī f. ʻ distilling furnace ' ; L. bhaṭṭh m. ' grain -- parcher's oven ', bhaṭṭhī f. ʻ kiln, distillery ' ; awān. bhaṭṭh; P. bhaṭṭh m.,


A number of expressions are presented below which relate to the semantics of ‘public office’, for e.g. paṭṭaśāle, ‘reading hall’ (Kannada).


Hieroglyph pair which support the platform of the person seated in penance (Mohenjodaro Seal m0304): पत्तकालिवे paṭṭaṭai ‘corn-rick’ Rebus: paṭṭadi ‘smithy, forge’ (Kannada) Rebus: phaḍā फडा ‘metals manufactory’.

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Moenjo-daro seal m0304


பட்டலட் paṭṭai, n. prob. பாṭ்டியும் + அலட். 1. [T. paṭṭika, K. paṭṭade.] Anvil; ஆண்டால் (பின்ன.) கிரி.ம.கால ஏசுகளின் பண கல் (கால், 821). 2. [K.
paṭṭa. (பட்ட). It is one of the tatsamas (Smd. 384; Ct. II, 480; Kk. 95; Sm. 77). Cloth. 2, = பட்ட 2, பட்ட 2, பட்ட 2, பட்ட 2, பட்ட 2, coloured cloth, fine cloth; woven silk, silk. 3, an upper or outer garment. 4, a tablet for painting, a plate of metal for inscription or engraving royal edicts, grants, etc.; a royal order or grant. 5, a frontlet or fillet with a golden tablet, with which a king is decorated at coronation and his principal wife at the time of marriage; it is also worn by the prince, and the general, and by others who receive it as a token of royal favor; it is further tied to the head of the king's favourite horse (see பட்ட-) or elephant; and the purūdha affixes it to the forehead of the bride and bridgroom at marriages (My.); the chief office of the state, royalty; a royal throne; dignity, authority, office. 6, a place where four roads meet; see பட்ட. 7, = பட்ட No. 9, a curtain or screen; see பட்ட. 8, = பட்ட No. 10. See பட்ட பட்ட. 9, = பட்ட, a city, town, village. 10. See பட்ட பட்ட. 11, = பட்ட, a valley. 12. See பட்ட பட்ட. 13, = பட்ட, a river. 14. See பட்ட பட்ட. 15, = பட்ட, a hill. 16, 1. — பட்ட. To tie the frontlet of dignity or authority, etc. (to a person's forehead, Bp. 44, 32; 56,
To sit down on or come to the throne (My.; B. 4, 3. 79). — राजकृतिः सुधरते. To place on the throne (B. 5, 42. 48. 57; My. as -राजमय). — राजामय.
To grant any dignity or office (My.). — राजामयेन विचार्य धनाद्वारेऽविधुतप्रदेशः राजमयेन (B. 4, 81). — राजामयेन विचार्य धनाद्वारेऽविधुतप्रदेशः (Śmd. 385). A throne. — राजभवनः. —राजभवनः (Śmd. 385. Māb., o. r. राजभवनः, which appears also Kāk. 99). Silk raiment, etc. — राजरूपः (Bp. 2, 25; Rāv. 4, 119). — राजरूपः तृषाः (V. 8, after 25). — राजरूपः सत्योऽर्जुनः अष्टोऽदशः. To throw from the throne, to dethrone (B. 5, 52; My.). — राजस्वादिनः सत्योऽर्जुनः अष्टोऽदशः = राजस्वादिनः (B. 4, 3; My.). — राजस्वादिनः. A jain who has been formally installed as a spiritual guide or principal of a matha (My.). — जैनस्वादिनः. The first or properly consecrated wife of a rāja, the queen (Ślm. Mr. 301). — जैनस्वादिनः. A formally installed king (J. 31, 50). — जैनस्वादिनः = जैनस्वादिनः (J. 1, 4; 28, 14; Ślm. 182, 183;
An elephant with a pāṭṭa on its forehead: a distinguished elephant, or a king's favourite, or a white elephant (ﺳُمٌّ ﺔَذْرُ نُكَّ, نُكَّ ﺔَذْرُ Nn. 61). — ﻤَثَأر. (سُمٌّ ﺔَذْرُ, نُكَّ ﺔَذْرُ Nr., see مَثَأر). — ﻤَثَأر. -مَثَأر. (Smd. 385; Kk. 99). A throne (سُمٌّ ﺔَذْرُ, نُكَّ ﺔَذْرُ ﻚَرْ وُدُّر ﺔَذْرُ ﻚَرْ وُدُّ ﺔَذْرُ ﺔَذْرُ ﻚَرْ وُدُّ ﺔَذْرُ ﺔَذْرُ ﻚَرْ Wd. 87; ﻢَوْذُر, ﻢَوْذُر ﻢَوْذُر; ﺔَذْرُ, ﻢَوْذُر ﺔَذْرُ ﺔَذْرُ ﻚَرْ Kk. 26; ﻢَوْذُر, ﻢَوْذُر ﺔَذْرُ Sm. 37). See ﻚَرْ Wd. 6, 53; 6, after 71; ﻢَوْذُر, 68, after 88; ﻢَوْذُر, 4, after 55; 6, after 10; 10, after 5. — ﻤَثَأر. -مَثَأر. Royal power, etc. to come into one's possession (My.). — ﻤَثَأر. -مَثَأر. To ascend the throne (My.; ﻚَرْ Wd. 4, 8, 218; 5, 50).

A large forest (Wd. 5, after 39; see مَثَأر No. 4).


Fran. pāṭṭu 2-adj. = مَثَأر, q.v. (My.; ﺔَذْرُ Si. 399). 2, = مَثَأر (My.). — ﻤَثَأر. A workshop (مَثَأر, ﺔَذْرُ ﺔَذْرُ ﺔَذْرُ Si. 108; My.).

Fran. pāṭṭa-dē. (مَثَأر 2-adj). = مَثَأر. An anvil, etc. (My., ﻚَرْ Tē.; T. ﻚَرْ مَثَأر).
patṭana = (ರ, No. 9), रम्रा. Tbh. of विना (Smd. 363. 364; रम्र Nn. 22. 40; त्र 23; My.; Tē., T.). रम्रा ए तथा, रम्रा सारा वा. — रम्रा क्रियार्थ देखना सर्वज्ञान संबंधम्. — रम्रारुप सत्त्वेव रम्रारुपमेव सत्त्वस्य विनयः (Prvσ.). See रम्र, रम्रा, रम्रा रम्रा.

patṭanige. Cloth; dress, attire (अम्ल, अम्ल, अम्ल, अम्ल, अम्ल, अम्ल; Čpr. 8, after 4; 8, 52; Abh. P. 3, 72).

patṭatana. (fr. ज्ञा 1). Obtaining, incurring, feeling, etc. ज्ञा संप्रर्थ (कुर्रा Nn. 106).

patṭana. = रम्रा. (Sk.).

patṭanē. = रम्रा, etc. (My.). रम्रारुपस्य रम्रारुपः (B. 2, 43).

patṭa-baddha. A man to whose forehead the patṭa has been tied: a king, etc. (Bp. 52, 40; 55, 3).

patṭa-baddha-utsava. The festival of formally installing a king (Čpr. 4, after 24).

patṭa-mahishi. (Smd. 385; Kk. 99). The first wife of a king: the queen (My.).

patṭa-mārga. A principal street, a main road (Čpr. 1, 124).

patṭalē. A district, a community. (R.).
paṭṭa-buddha. A man to whose forehead the paṭṭa has been tied: a king, etc. (Bp. 52, 40; 55, 3).

paṭṭa-boddha-utsava. The festival of formally installing a king (Čpr. 4, after 24).

paṭṭa-mahishi. (Śmd. 385; Kk. 99). The first wife of a king: the queen (My.).

paṭṭa-mārga. A principal street, a main road (Čpr. 1, 124).

paṭṭa-lē. A district, a community. (R.).

paṭṭa-vardhana. (Śmd. 385). Elevated by the paṭṭa: a distinguished elephant (Jñānādi II, 50; Śm. 38; Kk. 92; Čpr. 2, after 91). 2, a vaidika Brāhmaṇa of much reading, but devoid of any practical knowledge (My.).

paṭṭavardhana-gaja. = paṭṭa-gaja (Jñānādi Nn. 61).

paṭṭavardhana-nārasimha. N. (Bp. 56, 84).


patṭasa. Tbh. of रचनसय. (J. 12, 24).

patṭa-sara. (Kk. 99). = रचनसय.

patṭa-sahāni. A distinguished groom (Grj. 2, after 106; RsV. 13, after 61).

patṭa-sāliga. (Smd. 233). A silk-weaver.

patṭa-sālē. = रचनसय (Smd. 376). A reading-hall (Abh. P. 7, after 47; V. 4, 54).


patṭalē. (= रचन 1 No. 2). The broad strap tied round an ox’s or horse’s body, a girth, a martingal (सनरी भ. Mr. 350; Tē. रचन, रचन; cf. रचन 3, No. 2; रचन 1, No. 3).

patṭā. 1. = रचन 3, रचनोत. A long and broad sword (Mhr., H.; Tē. रचनोत, रचन, रचन; T. रचनोत; M. रचनोत, रचन = Sk. रचन). — रचनोत = रचन. (My.; Si. 289). — रचनोतसय. Brandishing of a patṭā (My.).
A tablet; a plate of metal; a kind of necklace (see টাকা). 2, a document. 3, a bandage, a ligature. 4, a frontlet. 5, a piece of cloth; cloth. 6, a piece of wove silk, silk cloth. 7, a board: the pieces of wood across a door (Tē., = টাকা 3 No. 2).

See টাকা, ৩, ৪০০.

পাটিকে. 1. = টাকা, টাকা, টাকা. See টাকা পাটিকে.

পাটিকে. 2. = টাকা, q.v. See টাকা, টাকা পাটিকে. Cf. টাকা ৩.

পাটিকে. Tbh. of টাকা. See টাকা, টাকা, টাকা, টাকা, টাকা. টাকা. A woman’s zone (My.; T., = টাকা 3, No. 3).

পাটিসা. = টাকা. A sort of weapon, a kind of axe; a spear with a sharp edge (cf. টাকা ৩, etc.).

পাটিসা. = টাকা. A spear with a sharp edge. 2, a certain feat of wrestlers (Sāv. 4, 75).

পাট্টু ২-এর ৪. = টাকা, q.v. (My.; Si. ৩৯৬). ২, = টাকা টাকা (My.). — টাকা. A workshop (সেতুরান, टाका 108; My.).

পাট্টিধে. (পাট্টু ২-এর ৮). = টাকা. An anvil, etc. (My., Tē.; T. টাকা, টাকা).
**Public or open inquiry.**

**Fruit, vegetables &c. furnished on occasions to Rajas and public officers, on the authority of their order upon the villages; any petty article or trifling work exacted from the Ryots by Government or a public officer.**

**Commonly**

- **Public officer,** --the keeper of the registers &c. By him were issued all grants, commissions, and orders; and to him were rendered all accounts from the other departments. He answers to Deputy auditor and accountant. Formerly the head Kārkūn of a district-cutcherry who had charge of the accounts &c. was called **Public officer.**

- **A man belonging to a company or band (of players, showmen &c.) 2 A superintendent or master of a public place. See under public place. 3 A retail-dealer (esp. in grain).**

- **A clearing off of public business (of any business comprehended under the word public place q. v.): also clearing examination of any public place of public business.**

- **A place of public business or public resort; as a court of justice, an exchange, a mart, a counting-house, a custom-house, an auction-room: also, in an ill-sense, as a stock-room. A gambling-house, a nāch house, a gān shop or merriment shop. The word expresses freely Gymnasium or arena, circus, club-room, debating-room, house or room or stand for idlers, newsmongers, gossips, scamps &c. 2 The spot to which field-produce is brought, that the crop may be ascertained and the tax fixed; the depot at which the Government-revenue in kind is delivered; a place in general where goods in quantity are exposed for inspection or sale. 3 Any office or place of extensive business or work, as a factory, manufactory, arsenal, dock-yard, printing-office &c. 4 A plantation or field (as of ऊस, वांग्या, मिरच्या, खरबुजे &c.): also a standing crop of such produce. 5 fig. Full and vigorous operation or proceeding, the going on with high animation and bustle (of business in general). v चाल, पड, घाल, मांड. 6 A company, a troop, a band or set (as of actors, showmen, dancers &c.) 7 The stand of a great gun. फड पडणें g. of s. To be in full and active operation. 2 To come under brisk discussion. फड मारणें- राखणें-संभाळणें To save appearances, फड मारणें or संपादणें To cut a dash; to make a display (upon an occasion). फडाच्या मापानें With full tale; in flowing measure. फडास येणें To come before the public; to come under general discussion.
Section 5. Gaṇeṣa pratimā, Gardez, Afghanistan is an Indus Script hypertext to signify Superintendent of phaḍa ‘metala manufactory’

Cloth worn on Gaṇeṣa pratimā, Gardez, Afghanistan. A broad strap of cloth is tie around the twaist. This is a hieroglyph paṭṭaḍi (Telugu) PLUS the phonetic determinant of gaṇḍa ‘four’ Rebus: kaṇḍa ‘equipment’ phaḍa ‘cobra hood’ rebus: phaḍa ‘metala manufactory’ presents and describes Gaṇeṣa as फडकरी (p. 313) phaḍakarī m A man belonging to a company or band (of players, showmen &c.) 2 A superintendent or master of a फड or public place, ‘metalsmanufactory’. See under फड. 3 A retail-dealer (esp. in grain). Thus, Gaṇeṣa is supervisor of the metals foundry. That the metal worked on is iron is signified by the elephant trunk: karibha, ibha ‘elephant’ rebus: karba, ib ‘iron’. Phonetic determinant: meḍ ‘body’ rebus: meḍ ‘iron’ (Mu.Ho.)

Marut-gaṇa including Gaṇeṣa on a sculptural panel. Kailasanatha Temple, Kanchipuram.
The broad strap tied round an ox’s or horse’s body, a girth, a martingal (Mr. 350; Tē. ṭṛapā, ṭṛapī; cf. ṭṛap 3, No. 2; ṭṛap 1, No. 3).

On the cloth worn by Gaṅeśa are repetitive signifiers of four-hoods of cobra (orthography reinforced by showing a cobra-hood on the sacred thread worn as hypertext): lo ‘membrum virile’ rebus: loḥ ‘copper’ PLUS gaṇḍa ‘four’ rebus: khaṇḍa ‘implement’ (lokhaṇḍa ‘metal implements’) PLUS phaḍā f rebus: phaḍā f ‘superintendent of metals manufactory’. Thus, the hypertext is superintendent of metals manufactory, of copper metal implements.


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bottom, base; kār aḍi footsole, footstep; aḍi kai palm of the hand. Te. aḍugu foot, footstep, footprint, step, pace, measure of a foot, bottom, basis; aḍime slavery, slave, bondman; aḍiyāḍu slave, servant; aḍi-garra sandal, wooden shoe. Ga. (S.2) aḍugu footstep (< Te.). Go. (G.) aḍi beneath; (Mu.) aḍit below; aḍita lower; arke below; (Ma.) aḍita, aḍna lower; (M.) aḍ(ḍ)i below, low; (L.) aḍi down; (Ko.) aṛgi underneath; aṛgita lower (Voc. 33). Konḍa aḍgi below, underneath; aḍgiR(i) that which is underneath; aḍgiRaṇḍ from below, from the bottom. (DEDR 72)

See:

https://tinyurl.com/y7a26nhe All Indus Script hypertexts with phaḍā 'serpent hood' signify metals manufactory public officers

https://tinyurl.com/yar94t7p Harappa seal signifies फडा phaḍā 'metals manufactory' sēṇa 'eagle' rebus sena 'thunderbolt'


_Tri-dhātu_ Gaṇeṣa in Gardez; Indus Script hypertext cipher, ib 'iron worker', phaḍa, 'manufactory in-charge'

https://tinyurl.com/y7vo7gqx

Tracing back through the mists of time into the periods prior to 8th millennium BCE, it is possible to realize the significance of _Tri-dhātu_ Gaṇeṣa venerated from the days of Ṛgveda. Veneration of Gaṇeṣa dates back to Rigvedic times (See RV 2.23 sukta gaṇāṇām tvā gaṇapatiṁ havāmahe kaviṁ kaviṁ upamaśravastam). In the tradition of Bharatam Janam, gana are related to _kharva_, dwarfs as part of Kubera's nidhi; rebus: karba 'iron'. See:

Gaṇeṣa, Indus Script tradition. significance of hieroglyphs on Dholkal, Bastar, Chattisgarh Gaṇeṣa with metal chain and pine cone https://www.academia.edu/s/32bd84b1b4

Mahāvināyaka, _Tri-dhātu_ Gaṇeṣa in Gardez; śabda-sphoṭa 'meaning of pratimā': karba, ib 'iron worker', phaḍa 'फड फड' manufactory in-charge, guild, public officer, scribe with iron stylus (ib 'elephant' rebus; ib 'needle, writing stylus, ib 'iron').


Rebus: फड 'manufactory, company, guild, public office', keeper of all accounts, registers.
Public or open inquiry.

Fruit, vegetables &c. furnished on occasions to Rajas and public officers, on the authority of their order upon the villages; any petty article or trifling work exacted from the Ryots by Government or a public officer.

Commonly the keeper of the registers &c. By him were issued all grants, commissions, and orders; and to him were rendered all accounts from the other departments. He answers to Deputy auditor and accountant. Formerly the head Kárkún of a district-cutcherry who had charge of the accounts &c. was called फडनीस.

A public officer, the issuing officer of all grants, commissions, and orders; and also the keeper of the registers &c. By him were issued all grants, commissions, and orders; and to him were rendered all accounts from the other departments. He answers to Deputy auditor and accountant. Formerly the head Kárkún of a district-cutcherry who had charge of the accounts &c. was called फडनीस.

A man belonging to a company or band (of players, showmen &c.)

2 A superintendent or master of a फड or public place. See under फड.

3 A retail-dealer (esp. in grain).

A clearing off of public business (of any business comprehended under the word फड q. v.): also clearing examination of any फड or place of public business.

A place of public business or public resort; as a court of justice, an exchange, a mart, a counting-house, a custom-house, an auction-room: also, in an ill-sense, a gambling-house, a nach house, or ख्यातीब्रजी चाय फड.

A singing shop or merriment shop. The word expresses freely Gymnasium or arena, circus, club-room, debating-room, house or room or stand for idlers, newsmongers, gossips, scamps &c.

2 The spot to which field-produce is brought, that the crop may be ascertained and the tax fixed; the depot at which the Government-revenue in kind is delivered; a place where goods in quantity are exposed for inspection or sale. 3 Any office or place of extensive business or work, as a factory, manufactory, arsenal, dock-yard, printing-office &c. 4 A plantation or field (as of मेघ, जंगल, मिरची, खरबुजे &c.): also a standing crop of such produce. 5 fig. Full and vigorous operation or proceeding, the going on with high animation and bustle (of business in general). v चाल, पड, घाल, मांड.

A company, a troop, a band or set (as of actors, showmen, dancers &c.)

The stand of a great gun.

To be in full and active operation, To come under brisk discussion. फड मारणे, राखणे-संभाळणे To save appearances, फड मारणे or संपादणे To cut a dash; to make a display (upon an occasion). फडाच्या मापाने With full tale; in flowing measure. फडास येणे To come before the public; to come under general discussion.

Shiva, the god of wisdom and of obstacles (son of खंडन and पार्वती) , or according to one legend of पार्वती alone; though गणेश causes obstacles he also removes them; hence he is invoked at the commencement of all undertakings and at the opening of all compositions with the words नमो गणेशाय विप्लवःप्रवायाय; he is represented as a short fat man with a protuberant belly, frequently riding on a rat or attended by one, and to denote his sagacity has the head of an elephant, which however has only one tusk; the appellation गणेश
with other similar compounds, alludes to his office as chief of the various classes of subordinate gods, who are regarded as शिव’s attendants; cf. RTL. pp. 48, 62, 79, 392, 440; he is said to have written down the MBh. as dictated by व्यास MBh. i, 74 ff.; persons possessed, by गणेश are referred to Yājñ5. i, 270 ff.).

Hypertexts on the Gardez pratimā of Gaṇeśa and additional hieroglyphs/hypertexts on other images are:

1. cobra hood
2. membrum virile
3. elephant head
4. mouse
5. broken rusk
6. dance step

Rebus readings of the hypertexts relate their significance to iron-metal work:

1. फड, phaḍa, ‘cobra hood’ rebus: फड, phaḍa ‘Bhāratīya arsenal of metal weapons’
2. lo ‘membrum virile’ rebus: loh ‘copper’
3. karibha, ibha ‘elephant’ rebus: karba, ib ‘iron’ ibbo ‘merchant’
5. दंत danta [p= 468,2] an elephant's tusk, ivory MBh. R. &c Rebus: dhātu ‘mineral ore’
6. meḍ ‘dance-step’ Rebus; mṛṛḥēt, meḍ ‘iron’ (Santali.Mu.Ho.).med ‘copper’ (Slavic) (cf. Candi-Sukuh Gaṇeśa)

Ib ‘elephant’ rebus: ib ‘needle’, rebus: ib ‘iron’ is a rendering in hypertext of the iron stylus used by Gaṇeśa as a scribe of Mahābhārata Epic.

Candi-Sukuh Gaṇeśa is shown in a dance-step, in the context of smelting, forging of sword by Bhima and by the bellows-blower Arjuna. The building in the background is a smelter/forge.
The association of Gaṇeśa with iron-working gives him the name tri-dhātu 'three mineral(s) which are:

goṭa 'laterite, ferrite ore' poḷa 'magnetite, ferrite ore' bicha 'haemtite, ferrite ore'. These three ferrite ores are signified by the hieroglyphs: goṭa 'round pebble stone' poḷa 'zebu, dewlap, honeycomb' bica'scorpion'.

Gaṇeśa is signified as part of Marut गण[p= 343,1] troops or classes of inferior deities (especially certain troops of demi-gods considered as शिव's attendants and under the special superintendence of the god गणेश; cf. देवता) Mn. Ya1jn5. Lalit. &c; m. a flock, troop, multitude, number, tribe, series, class (of animate or inanimate beings), body of followers or attendants RV. AV. &c.

[quote] Hindu Shahi Rule

The Shahi dynasties ruled portions of the Kabul Valley (in eastern Afghanistan) and the old province of Gandhara (NE Afghanistan, northern Pakistan and NW India), known as Kabul-shahan, with twin capitals at Kapisa and Kabu, from the aftermath of the Kushan Empire in the 3rd century CE to the early 9th century.

The term Shahi was a popular royal title in Afghanistan — used at various times by Achaemenids, Bactrians, Sakas, Kushan rulers and Huns (Hephthalites), as well as by the 6th- to 8th-century Shahi rulers of Kapisa/Kabul.

Historians divide the Shahi Period of Kabul/Gandhara into two eras: the so-called Buddhist Turk-Shahis (before 870 AD), and the so-called Hindu-Shahis (after 870 AD).

Despite numerous references to the Shahis as descendent of the Kushans or Western Turks, the Shahi rulers of Kabul/Kapisa almost certainly descended from the warrior caste known as Ashvakas (the word from which, several scholars contend, the term "Afghan" is derived) who for many centuries dwelt in the region known as Kambojas on the northern and southern sides of the Hindu Kush range.
[unquote] https://www.cemml.colostate.edu/cultural/09476/afgh02-09enl.html
This marble statue of Ganesha found at Gardez, Afghanistan (later moved to Dargah Pir Rattan Nath, Kabul) bears the date of 753 and an inscription indicating this "great and beautiful image of Mahavireyeke" was dedicated to the 7th-century Shahi King Khingala.
Hooded snake on sacred thread.
I suggest that the glyphics on the sacred thread and on the garment worn on the sculpture signify cobra-hoods. Cobra hoods are clearly seen on the following sculpture, on the left shoulder of Ganeśa. These cobra-hoods are also comparable to the glyphics shown on Sanchi sculptural frieze.

Cobra hoods arching over membrum virile of charioteer. Daimabad.
फड, phaḍa, 'cobra hood' rebus: फड, phaḍa 'Bhāratīya arsenal of metal weapons lo 'membrum virile' rebus: loh 'copper'

Sanchi. Cobra hoods.

*Fig. 4.21*
A serpent at Sanchi.
A 5th century marble Gaṇeśa found in Gardez, Afghanistan, now at Dargah Pir Rattan Nath, Kabul. The inscription says that this "great and beautiful image of Mahāvināyaka" was consecrated by the Shahi King Singal. For details of inscription cf. Dhavalikar, M. K., "Gaṇeśa: Myth and Reality", in: Robert Brown, 1991, Ganesh: Studies of an Asian God, SUNY Press, NY, pp. 55, 63. Dhavalikar ascribes the quick ascension of Gaṇeśa in the Hindu pantheon, and the emergence of the Ganapatyas, to this shift in emphasis from vighnakartā (obstacle-creator) to vighnahartā (obstacle-averter). (Ibid., p. 49)


Figure 1: Elephant-headed figure from Luristan, western Iran, 1000 BCE. Was this the scribe of the Mahabharata?

Figure 2: Four armed Gaṇeśa, Shankar Dhar, Afghanistan, 4th century CE.

Figure 3: Four armed Mahavinayaka, Gardez, Afghanistan, 5th-6th century CE.

Figure 4: Gaṇeśa as the primordial sound or pranava mantra OM.

Figure 5: Gaṇeśa under the Pipal tree.

Figure 6: Gaṇeśa as head of ganas, Mihintale stupa, Sri Lanka, 2nd-3rd century CE.

Figure 7: Gaṇeśa in bas relief, Fatehgarh, Uttar Pradesh, 3rd century CE.

Figure 8: Ganesh, Mathura, 5th century CE.

Figure 9: Gaṇeśa, Deogarh, Madhya Pradesh, 5th century CE.

Figure 10: Gaṇeśa, Samalaji, Gujarat, 5th century CE.

Figure 11: Ganesh, Badami, Karnataka, 6th-7th Century CE.

Figure 12: Gaṇeśa with Saptamatrikas, Aihole, Karnataka, 8th century CE.

Figure 13: Gaṇeśa with dancing Shiva, Badami, Karnataka, 6th-7th century CE. Figure 14: Dancing Gaṇeśa, Gangaikonda-cholapuram, Tamil Nadu, 11th century CE.

Figure 15: A patachitra painting of dancing Gaṇeśa, Orissa, contemporary painting.

Figure 16: Ashta Vinayaka, Maharashtra.
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Figure 14: Dancing Gaṇeśa, Gangaikonda-cholapuram, Tamil Nadu, 11th century CE.
Figure 15: A patachitra painting of dancing Ganeśa, Orissa, contemporary painting.

Figure 16: Ashta Vinayaka, Maharashtra.
Section 6. Note on the cobra hoods of Daimabad chariot

Four hoods of cobra arch over membrum virile. Hypertext expression reads: lo gaṇḍa phaṇin

Rebus plaintext readings : 1. phaṇi lokhaṇḍa, 'tin or lead foil, metalware, metal implements market (pun on the word phaṇi, 'market'); 2. lokhaṇḍa paṇe (phaṇi) 'metal implements production, metals quarry'. Thus, the charioteer is described to be a paṇikkān, 'a metals worker, a master metallurgical artificer'. Alternative: mēṇḍhra -- m.ʻ penis' (Samskritam)(CDIAL 9606) rebus: muḍ muḍu, mēṛhēṭ, meḍ 'iron' meḍ 'iron, metal' (Ho.Mu.) Alternative: reinforcement of semantics for upraised penis, for lo: bhaṛkanu rise of penis (N.(CDIAL 9365) rebus: bhaṭa 'furnace, smelter' Thus, an alternative plain text is: bhaṭa phaṇi lokhaṇḍa 'furnace (for) tin or lead foil, metal implements'.

Curved stick held in his right hand: mēṇḍa [ mēṇḍhā ] A crook or curved end (of a stick, horn &c.)

rebus: muḍ muḍu, mēṛhēṭ, meḍ 'iron' meḍ 'iron, metal' (Ho.Mu.)


Hieroglyph: dula 'pair' rebus: dul 'metal casting' PLUS pōlaḍu, 'black drongo' rebus: pōlāda Of steel. (Marathi) bulad 'steel, flint and steel for making fire' (Amharic); fUlAd 'steel' (Arabic).

Hieroglyph: kōlā (p. 105) kōḷ m (Commonly kōḷhā) A jackal. For compounds see under kōḷhā. kōḷhā (p. 105) kōḷhā m A jackal, Canis aureus. Linn. kōḷhā (p. 105) kōḷhē m A jackal. Without reference to sex. Pr. अडलें kōḷhēṃगळ गाय Even the yelling jackal can sing pleasantly when he is in distress. kōḷhē Ta. kol working in iron, lacksmith; kolla lacksmith. Ma. koll blacksmith, artificer. Ko. kōl smithy, temple in Kota village. To. kwala\'l Kota smithy. Ka. kolime, kolume, kulame, kulime, kulume, kulume fire-pit, furnace; (Bell.; U.P.U.) konimi

blacksmith (Gowda) kolla id. Koḍ. kōḷ blacksmith. Te. kolimi furnace. Go. (SR.) kollusāṇā to mend implements; (Ph.) kolstānā, kulsānā to forge; (Tr.) kōlstānā to repair (of ploughshares); (SR.) kolmi smithy (Voc. 948). Kuwi (F.) kollhani to forge. (DEDR 2133)

Hieroglyph: barad, 'bullock': balivārda (balīv° ŚBr.) m. ʻ ox, bull ʻ TBr., balivanda- m. Kāṭh., barivarda -- m. lex. [Poss. a cmpd. of balīn -- (cf. *balīla --) and a non -- Aryan word for ʻ ox ʻ (cf. esp. Nahāli baddī and poss. IA. forms like Sik. pāḍō ʻ bull *pāḍa -- : EWA ii 419 with lit.)] Pa. balivadda -- m. ʻ ox ʻ, Pk. balīvadda -- , balīdda --, baladda -- m. (cf. balaya -- m. < *balaka -- ?); L. baledā, mult. baled m. ʻ herd of bullocks ʻ (→ S. baledo m.); P. bald, baldh,
boy
Hieroglyph: ``^penisin. red metal, copper VS. &c red, reddish, copper Meluhha)
Hieroglyph: lo 'peni
Hieroglyph: laj(R) ~ lij ~ la'a'j ~ laJ/ laj ~ kaD `peni.Sa. lij `penis, esp. of small boyš.

Hieroglyph: lo 'peni Go<luGgu>(Z) [LUGguy'] {NB} ``male ^genitals, ^penis, ^scrotum``.(Munda etyma) loe 'peni (Ho.) Rebus: loh 'copper, iron, metal' (Indian sprachbund, Meluhha) लोि [p = 908,3]mfn. (prob. fr. a √ रूि् for a lost √ रूि, "to be red" ; cf. रोहि, रोहिण &c ) red, reddish, copper-coloured S3rS. MBh.made of copper S3Br. (Sch.) made of iron Kaus3.m. n. red metal, copper VS. &c

Hieroglyph: ``^peniš'So. laj(R) ~ lij ~ la'a'j ~ laJ/ laj ~ kaD `peniś.Sa. lij `penis, esp. of small boyš.


<ului>(P),<ului>(MP) {NB} ``^penis, male organ, male^genitalis'. Cf.
<kOlo>(P),<susu>(M) `testicle'; <kuLij>(M), <kuRij>(P)`vulva'. *Sa., MuN<lO'j>, MuH, Ho<lo'e>,So.<laj - An>, U.Tem.<lo'> ?? %33271.

#33031.So<lO?Oj>(D),<AlAj>(L)//<lAj>(DL) {NI} ``^penis, male organ, male^genital'.  Cf.
<kOlOb>(P),<susu>(M) `testicle'; <kuLij>(M), <kuRij>(P) `vulva'.  *Sa., MuN<lO'j>, MuH, Ho<lo'e>,So.<laj - An>, U.Tem.<lo'> ?? %33271.


Pur. phaṇin `hooded (of snake, esp. cobra)' Kathās. [phaṇa -- 1] Pk. phaṇi -- m. `snake'; P. phaṇi `flat -- headed (of snake)'; A. phani `snake'; Or. phaṇi `hooded', sb. `snake'; H. phaṇi `hooded'; G. phaṇī m. `snake', Si. paniya.(CDIAL 9046) phaṇa1 m. `expanded hood of snake (esp. of cobra)' MBh. 2. *phaṇa -- 2. [Cf. phaṇa -- *phaṇati -- 2. For mng. `shoulder blade &c. cf. association of shape in phaṇāphalaka -- Bhartṛ. ārisaphalakā -- ŚBr. and cf. phēna -- n. `cuttlefish bone' Car.] 1. Pa. phaṇa -- m. `expanded hood of snake', Pk. phaṇa -- m. `nā -- f.; Wg. paṇ -- sī `big snake' (+šai `head'? NTS xvii 287); K. phaṇa m. `expanded hood of snake', S. phaṇī f., L. awāṇ phaṇ, P. phaṇ, oṇu f., ludh. phaṇ m., WPah. (Joshi) faṇ m., Ku. phaṇ, oṇi, N. phaṇi, A. phañā, B. phaṇ, oṇā, Or. phaṇā, Mth. phañā, Bhoj. phaṇ, H. phaṇ, oṇā m., G. phen (< *phaṇi), phaṇī f., M. phaṇ m., oṇī f., Si. paṇa, peṇa. -- S. phaṇī f. `shoulderblade'; H. phañī f. `wedge'; G. phaṇo m. `fore part of foot'. 2. A. phenī `expanded hood of snake', Or. phañā. phaṇin --, phañakara --, phañā -- 2 `froth' see phāñīta --. Addenda: phaṇa -- 1: S.kcch. phaṇ f. `snake's hood, front part of foot', phaṇī f. `weaver's toothed instrument for pressing and closing the woof'; WPah.kt. phañ m. `cobra's hood'; Garh. phañ f. `snake's hood'. (CDIAL 9042) phañakara m. `cobra' lex. [Cf. phañākara --, phañādhara --, phañādhō m. lex. -- phañā -- 1, karā -- 1]L. phañiari m., P. phañyar m., WPah. (Joshi) fanār m. (all with n, not ṇ?) Addenda: phañakara -- : WPah.kt. phoñor m. `cobra', J. fanār m. (ktg. phoñir m. poss. ← P. Him.I 127). (CDIAL 9043)

Rebus 1: tin or metal foil: फणि [p= 716,2] n. (prob.) tin or lead Ka1lac. paṇi f. `tinfoil ' (Sindhi); P. pannya m. `leaf, page', pannya f. `gilt leather'; H. pān m. `leaf', pannā m. `leaf, page', pannya f. `metal foil, grass for thatching'; G. pānū n. `blade' (CDIAL 7918) prāmāṇika `founded on authority' Dāyabh., m. `chief of a trade' W. [pramāṇa--] B. pāni, pān, pān a surname? (CDIAL 8949)

Rebus 2: पणि [p= 580,2] a market L.; N. of a class of envious demons watching over treasures RV. (esp. x, 108) AV. S3Br.; m. a bargainer, miser, niggard (esp. one who is sparing of sacrificial oblations) RV. AV.

Rebus: <lōha>(BD) {NI} ``^iron". Syn. <lāG>(D). *@. #20131) laūha -- `made of copper or iron 'GrŚr.', red ' MBh., n. `iron, metal' Bhaṭṭ. [lōhā -- ] Pk. lōha -- `made of iron'; L. lohā `
iron -- coloured, reddish ' ; P. lohā ' reddish -- brown (of cattle)' . lōhā 11158 lōhā ' red, copper -- coloured ' ŚrS., ' made of copper ' ŚBr., m.n. ' copper ' VS., ' iron ' MBh. [*rudh -- ] Pa. lōha -- m. ' metal, esp. copper or bronze ' ; Pk. lōha -- m. ' iron ' , Gy. pal. liō, lihi, obl. elhās, as. loa JGLS new ser. ii 258; Wg. (Lumsden) "loa" ' steel ' ; Kho. lōh ' copper ' ; S. lohu m. ' iron ' , L. lohā m., awān. lō'ā, P. lohā m. (→ K. rām. ḍoḍ. lōhā), WPah.bhad. lō̄u n., bhal. lōtilde; n., päḍ. jaun. lōh, paṅ. luhā, cur. cam.lōhā, Ku. luwā, N. lohu, ṭōhā, A. lo, B. lo, no, Or. lōhā, luhā, Mth. loh, Bhoj. lōhā, Aw.lakh. lōh, H. loh, lohā m., G. M. loh n.; Si. loho, lō ' metal, ore, iron ' ; Md.ratu -- lō ' copper ' . WPah.ktg. (kc.) lō̄ ' iron ' , J. lōhā m., Garh. loho; Md. lō ' metal ' . (CDIAL 11172).

lōhakāra m. ' iron -- worker ' , ṭrī -- f., ṭraka -- m. lex., lauhakāra -- m. Hit. [lōhā -- , kāra -- ] Pa. lōhakāra -- m. ' coppersmith, ironsmith ' ; Pk. lōhāra -- m. ' blacksmith ' , S. luhāru m., L. lohār m., ṭrī f., awān. luhār, P. WPah.khaś. bhal. luhār m., Ku. lwār, N. B. lōhār, Or. lohāla, Bi.Bhoj. Aw.lakh. lōhār, H. lohār, luhā m., G. lavār m., M. lohār m.; Si. lōvaru ' coppersmith ' . WPah.ktg. (kc.) lwār ' m. ' blacksmith ' , lwārī f. ' his wife ' , Garh. lwār m. (CDIAL 11159). lōhaghaṭa 11160 *lōhaghaṭa ' iron pot ' . [lōhā -- , ṭhaṭa -- ] Bi. lōhrā, ṭrī ' small iron pan ' . *lōhaphāla -- ' ploughshare ' . [lōhā -- , phāṭa -- ] WPah.ktg. lhōwā ' ] m. ' ploughshare ' , J. lōhāl m. ' an agricultural implement ' Him.I 197; -- or < ṭ*lōhahaṭa -- . (CDIAL 11160) lōhāla ' made of iron ' W. [lōhā -- ] G. lohar, lōhariya m. ' selfwilled and unyielding man ' . (CDIAL 11161). *lōhasāla ' smithy ' . [lōhā--, sā'la -- ] Bi. lōhsāri ' smithy ' . (CDIAL 11162). lōhahaṭika 11163 *lōhahaṭika ' ironmonger ' . [lōhā -- , ṭaṭa -- ] P.ludh. lōṭiyā m. ' ironmonger ' . ṭ*lōhahaṭa -- ' ploughshare ' . [lōhā -- , halā -- ] WPah.ktg. lhōwā ' ] m. ' ploughshare ' , J. lōhāl ' an agricultural instrument ' ; rather < ṭ*lōhahaṭa -- . (CDIAL 11163).
Section 7 Note on Mohenjo-daro seal m0304: *phaḍā* ‘metals manufactory’

See: http://tinyurl.com/hoq2t3e

I deeply appreciate Donal B Buchanan sending me a reconstructed image of m0304 Mohenjo-daro seal.

The image of Mohenjo-daro seal impression on the Left is a splendid reconstruction done by Donal B. Buchanan (personal communication) and the seal (m0304) is from the *Corpus of Indus Inscriptions*, Vol. I.

Don couldn't complete 'healing' the missing back and tail of the tiger, but at least he is still recognizable. Thus, the pictorial narrative on Seal m0304 is unambiguous and clear. All hieroglyphs are readable as hypertexts rebus of a metalwork catalog.

m0304 seal of Mohenjo-daro showing a seated person surrounded by animals has been deciphered.

The message of metalwork is from a brass-worker's mint and (अग्नि-)कुण्ड, (agni-)kuṇḍa, 'sacred fire-altar'.

This message is conveyed using Indus Script hieroglyphs.


பணியெச் சேர்க்கும் பணிக்காரர் (சிலம். 6, 135, என்).

பணியெச் சேர்க்கும் பணியெச் சேர்க்கும் பணிக்காரர் (சிலம். 6, 135, என்).

In the context of the profession tax on goldsmiths, tattār is mentioned. For further details, please refer to the relevant sections in Goldsmiths' manuals.

Hieroglyph: kuṇḍa3 n. ‘clump’ e.g. darbha -- kuṇḍa -- Pān. [← Drav. (Tam. koṇṭai ‘tuft of hair’, Kan. goṇḍe ‘cluster’, &c.) T. Burrow BSOAS xii 374] (CDIAL 3266)

Pictorial hieroglyph-multiplex: kuṭhi 'twig' Rebus: kuṭhi 'smelter'

kuṇḍa 'cluster' rebus: (अणिक)कुण्ड, (agni-)kuṇḍa 'fire-pit'. kuṇḍa -- I: S.kcch. kūṇḍho m. ‘flower -- pot’, kūṇṇī f. ‘small earthen pot’; WPah.kig. kūṇḍh m. ‘pot or vessel used for an oblation with fire into which barley etc. is thrown’; J. kūḍ m. ‘pool, deep hole in a stream’; Brj. kūro m., ṛī f. ‘pot’.(CDIAL 3264)

Glyph: clump between the two horns: kuṇḍa n. ‘clump’ e.g. darbha-- kuṇḍa-- Pān.(CDIAL 3236). kūṇḍār turner (A).CDIAL 3295) n. ‘clump’ e.g. darbha-- kuṇḍa-- Pān. [← Drav. (Tam. koṇṭai ‘tuft of hair’, Kan. goṇḍe ‘cluster’, &c.) T. Burrow BSOAS xii 374] Pk. kuṇḍa-- n. ‘heap of crushed sugarcane stalks’ (CDIAL 3266) Ta. koṇṭai tuft, dressing of hair in large coil on the head, crest of a bird, head (as of a nail), knob (as of a cane), round top. Ma. koṇṭa tuft of hair. Ko. goṇḍ knob on end of walking-stick, head of pin; koṇḍ knot of hair at back of head. To. kwidy Badaga woman's knot of hair at back of head (< Badaga koṇḍe). Ka. koṇḍe, goṇḍe tuft, tassel, cluster. Koḍ. koṇḍe tassels of sash, knob-like foot of cane-stem. Tu. goṇḍe topknot, tassel, cluster. Te. koṇḍe, (K. also) koṇḍi knot of hair on the crown of the head. Cf. 2049 Ta. koṭi. / Cf. Skt. kuṇḍa- clump (e.g. darbha-kuṇḍa-), Pkt. (DNM) goṇḍi- = maṇjarī-; Turner, CDIAL, no. 3266; cf. also Mar. goṇḍa cluster, tuft. (DEDR 2081) kuṇḍi = crooked buffalo horns (L.) rebus: kuṇḍi = chief of village. kuṇḍi-a = village headman; leader of a village (Pkt.) i.e. śreni jetṭha chief of metal-worker guild. koḍ ‘horns’; rebus: koḍ ‘artisan’s workshop’ (G.) Thus the entire glyphic composition of hieroglyphs on m1181 seal is a message conveyed from a sodagor ‘merchant, trader’. The bill of lading lists a variety of repertoire of the artisan guild's trade load from a mint -- the native metal and brass workshop of blacksmith (guild) with furnace: adar kuṭhi 'native metal furnace'; soṇḍu ‘fireplace’; sekra ‘bell-metal and brass worker’; aya sal ‘iron (metal) workshop’. Rebus: kunda ‘nidhi’, kuṇḍaṇa ‘fine gold’

Thus, the horned crown is read together as: tattār ‘brass worker’ PLUS kuṇḍa ‘fire-pit'.
Hieroglyph: Tor. mīṇḍ 'ram', mīṇḍāl 'markhor' (CDIAL 10310) Rebus: meḍ 'iron' (Ho.); med 'copper' (Slavic) kuṃḍa -- n. 'heap of crushed sugarcane stalks' (Prakritam) Rebus: (agni-) kuṃḍa 'fire-pit'. dula 'pair' rebus: dul 'cast metal' Thus, cast iron.

Hieroglyph pair which support the platform of the person seated in penance (Mohenjo-daro Seal m0304): पट्टलाṭ paṭṭaṭ 'corn-rick' Rebus: paṭṭa coiner (Ka.); kammaṭṭam coinage, coin, mint (Ta.) kammaṭa = mint, gold furnace (Te.) Thus, the over-arching message of the inscription composed of many hieroglyphs (of glyphic elements) thus is a description of the offerings of a 'mint or coiner (workshop with a golf furnace)'. Thus, together the person seated in penance PLUS platform PLUS corn-rick read: kammaṭa maṇḍā 'mint warehouse' PLUS phaḍā 'metals manufactory'.

maṇḍā 'raised platform, stool' Rebus: maṇḍā 'warehouse'.

The person is seated in penance: kamaḍha 'penance' (Pkt.) Rebus: kammaṭi a coiner (Ka.); kampaṭṭam coinage, coin, mint (Ta.) kammaṭa = mint, gold furnace (Te.) Thus, the over-arching message of the inscription composed of many hieroglyphs (of glyphic elements) thus is a description of the offerings of a 'mint or coiner (workshop with a golf furnace)'. Thus, together the person seated in penance PLUS platform PLUS corn-rick read: kammaṭa maṇḍā 'mint warehouse' PLUS phaḍā 'metals manufactory'.

kuṇḍī = crooked buffalo horns (L.) Rebus: kuṇḍi = chief of village. kuṇḍi-a = village headman; leader of a village (Pkt.lex.) I.e. śreni jeṭṭha chief of metal-worker guild.

dula 'pair' rebus: dul 'metal casting'. Thus, two hayricks and two markhors relate to 1. metalcasting furnace; and 2. copper/iron metal castings  meḍ kuṃḍa 'iron furnace or fire-altar'.

There is also a semantic reinforcement: on seal m0304, stacks of hay signify mēṭa 'stack of hay' which are phonetic determinants of the platform, raised place: mēṭa 'raised place'. Rebus reading is: mẽṛhẽt, meḍ 'iron (metal) 'copper' (Slavic languages).

Hieroglyph: Pk. kuṃḍa -- n. 'heap of crushed sugarcane stalks '; WPah. bhal. kunnu m. 'large heap of a mown crop '; N. kunyū 'large heap of grain or straw', bar -- kūro 'cluster of berries '. Rebus: कुण्ड [p=289,3] kuṇḍa a round hole in the ground (for receiving and preserving water or fire cf. अग्नि-कुण्ड), pit, well, spring or basin of water (especially consecrated to some holy purpose or person) MBh. R. &c; n. [अङ्गिकुण्ड] a bowl-shaped vessel, basin, bowl, pitcher, pot, water-pot KaltyS3r. MBh.&c;कुण्डी f. (Pa1n2. 4-1 , 42) a bowl, pitcher, pot Hcat. Prasannar.; कुण्ड n. ifc. a clump (e.g. द्रव्य-कु, a clump of द्रव्य grass) Pa1n2. 6-2 , 13
Glyphs of shoggy, bristles of hair on the face of the person: Shoggy hair; tiger’s mane. *sodo bodo, sodro bodro* adj. adv. rough, hairy, shoggy, hirsute, uneven; *sodo* [Persian, *sodā*, dealing] trade; traffic; merchandise; marketing; a bargain; the purchase or sale of goods; buying and selling; mercantile dealings (Gujarati) *sodagor* = a merchant, trader; *sodāgor* (P.B.) (Santali).

Face on m0304. Frontal PLUS Two faces in profile ligatured. I do not know if this signifies *Tvaṣṭr Trīṣiras* or *tri-dhātu mūḥ* ‘face’ Rebus *mūḥa* ‘iron furnace output’ *kolum* ‘three’ (faces) rebus: *kolimi* ‘smithy, forge’ Horns of buffalo: *rango* ‘buffalo’ rebus: *rango* ‘pewter’ (alloy of copper, zinc, tin), hence *tri-dhātu*. This could be a synonym *dhāvad* ‘iron-smelter’

Hieroglyph: *dhā́tu* ‘strand’ Rebus: mineral: *dhā́tu* n. ‘ substance ’ RV., m. ‘ element ’ MBh., ‘ metal, mineral, ore (esp. of a red colour) ’ Mn., ‘ ashes of the dead ’ lex., ‘*strand of rope ’ (cf. *tridhā́tu* -- ‘ threefold ’ RV., *ayugdhātu* -- ‘ having an uneven number of strands ’ Kāty Śr.). [\ndhā]Pa. *dhātu* -- m. ‘ element, ashes of the dead, relic ’; KharI. *dhatu* ‘ relic ’; Pk. *dhā́u* -- m. ‘ metal, red chalk ’; N. *dhā́u* ‘ ore (esp. of copper) ’; Or. *dhā́ ‘ red chalk, red ochre ’ (whence *dhā́u* ‘ reddish ’; M.*dhā́ī, dhā́v* m.f. ‘ a partic. soft red stone ’ (whence *dhā́vad* m. ‘a caste of iron -- smelters ’, *dhā́vī ‘ composed of or relating to iron ’); -- Sī. *dā ‘ relic ’; -- S. *dhā́i* f. ‘ wisp of fibres added from time to time to a rope that is being twisted ’, L. *dhā́i* f. (CDIAL 6773).

Rebus reading of the ‘face’ glyph: *mūhe* ‘face’ (Santali) *mūḥ* opening or hole (in a stove for stoking (Bi.)); ingot (Santali) *mūḥ* metal ingot (Santali) *mūḥā* = the quantity of iron produced at one time in a native smelting furnace of the Kolhes; iron produced by the Kolhes and formed like a four-cornered piece a little pointed at each end; *mūḥā mērḥēt* = iron smelted by the Kolhes and formed into an equilateral lump a little pointed at each of four ends; *kolhe tehen mērḥēt ko mūḥā akata* = the Kolhes have to-day produced pig iron (Santali) *mleccha-mukha* (Skt.) = *milakku* ‘copper’ (Pali) The Sanskrit gloss *mleccha-mukha* should literally mean: copper-ingot absorbing the Santali gloss, *mūḥ,* as a suffix

Hieroglyph: *karā* n.pl.‘wristlets, bangles’. (Gujarati)S. *karāﬁ* f. ‘wrist ’(CDIAL 2779) Rebus: *khā́r* ‘blacksmith’ (Kashmiri)

*sekeseke, sekese* covered, as the arms with ornaments; *sekra* those who work in brass and bell metal; *sekra sakom* a kind of armet of bell metal (Santali)
Four animals (elephant, leaping tiger, rhinoceros, buffalo) PLUS image of a standing person with spread legs surround the seated person. These five hieroglyph-multiplexes are read rebus:

1. karibha 'trunk of elephant' ibha 'elephant' rebus: karba 'iron' (Tulu) ib 'iron' (Santali) ibbo 'merchant' 
2. kāndā 'rhinoceros' rebus: kanda 'implements'
3. rango 'buffalo' rebus: rango 'pewter'
4. kola 'tiger' rebus: kol 'working in iron' kolhe 'smelter' kolle 'blacksmith' kūdā kol (tiger jumping) Rebus: kūdār 'turner' (Bengali) kōnda ‘engraver, lapidary setting or infixing gems’ (Marathi) Rebus: kunda ‘nidhi’, kuṇḍaṇa ‘fine gold’
5. meḍ 'body' rebus: meḍ 'iron' med 'copper' (Slavic) karṇaka 'spread legs' rebus: 'supercargo, merchant's agent responsible for the cargo of shipment')

Hypertext on m0304 (Top line of 6 hieroglyphs)

Rebus readings from R. in two parts of hypertext.
Part 1 (with four hieroglyphs):

Sign 1 (Mahadevan concordance)

1. meḍ 'body' rebus: meḍ 'iron' med 'copper' (Slavic) karṇaṇa 'spread legs' rebus: karṇī 'supercargo, merchant's agent responsible for the cargo of shipment')
2. ḍato =claws of crab (Santali) Rebus: dhātu 'mineral ore'.
3. kāru pincers, tongs. Rebus: khār 'blacksmith' (Kashmiri)
4. sal stake, spike, splinter, thorn, difficulty (H.); sal ‘workshop’ (Santali) PLUS Glyph of ‘rim of jar’: kárṇaka m. ‘projection on the side of a vessel, handle’ ŚBr. [kárṇa -- ]Pa. kaṇṇaka -- ‘having ears or corners’; (CDIAL 2831) kaṇḍa kanka; Rebus: furnace account (scribe). kaṇḍ = fire-altar (Santali); kan = copper (Tamil) khanaka m. one who digs, digger, excavator Rebus: karanikamu. Clerkship: the office of a Karanam or clerk. (Telugu) kárana n. ‘act, deed’ RV. [\kṛ] Pa. karaṇa -- n. ‘doing’; NiDoc. karana, kaṁraṁna ‘work’; Pk. karaṇa -- n. ‘instrument’ (CDIAL 2790) karnī ‘Supercargo’. Thus, cargo accounted from workshop account to supercargo.

Part 2 with two hieroglyphs:

5. aya ‘fish’ Rebus: aya ‘iron’ (Gujarati); ayas ‘alloy metal’ (Rigveda).PLUS khambharā ‘fin’ rebus: kammaṭa ‘mint, coiner, coinage’

6. PLUS kanka, karṇaka ‘rim of jar’ rebus: karnī ‘Supercargo’ karṇaka ‘account, scribe’. Thus, this second part of the hypertext reads: Mintwork account (to) Supercargo, a representative of the ship’s owner on board a merchant ship, responsible for overseeing the cargo and its sale.

Thus, seal m0304 Mohenjo-daro is a comprehensive metalwork catalogue of a mint, metals manufactory, documenting, using dharma samjñā ‘responsibility markers or hieroglyphs, the tasks assigned to kuṇḍi-a = village headman’; leader of a village (Pkt.) i.e. śreni jetṭha chief of metal-worker guild.

This is an unambiguous, remarkable example proving that Indus Script is a knowledge system. There are over 8000 inscriptions on Indus Script Corpora detailing the technical specifications of the knowledge system which facilitated trade/exchange transactions by seafaring merchants of Meluhha.

Section 8. Conclusion

Veneration of Gaṇeṣa is a celebration of the superintendent of the gana, ‘guild of artisans’ who created metal artifacts in a metals foundry using mere earth and stone and through the messenger divinity, Agni. This is exemplified in the Veda culture and continues in the Indus Script hypertext mlecchita vikalpa representations as data archives of metalwork, wealth creation activities of a Bronze Age civilization which is a veritable revolution in human evolution by Himalaya Parivār. Bhāratam Janam.

The momentous discovery of performance of Soma samsthā yāga ca. 3rd millennium BCE on Vedic River Sarasvati Basin reinforces the locus of Vedic River Sarasvati as a navigable waterway linking Rakhigarhi-Kalibangan-Bhirrana, Anupgarh-Dholavira through Persian Gulf to Tigris-Euphrates doab in Ancient Near East.

Ādhyātmikā excursus of the chandas of R̥gveda finds its mirror image in and matched by the eloquence of exquisite Sarasvati script writing system which is seen on tympanum of Dong Son
and Karen Bronze Drums of Ancient Far East and in an extensive area of Eurasia stretching upto Haifa, Israel. The writing system flourishes into the historical periods retaining the features of the writing system on tens of thousands of punch-marked coins in an extensive region stretching from Takhasila to Anuradhapura and on Sohgaura and Dhruva II copper plate inscriptions. The civilization is exemplified by over 2000 archaeological sites (80% of the total number of sites) on the Vedic River Sarasvati basin. The civilization continuum defines the form and function of and is the bedrock of Bhāratīya Itihāsa, culture and socio-economic spectrum of life activities with phenomenal contributions made by metalwork wealth creation, making Bhāratam the richest nation on the globe ca. 1 CE.

Dhruva II Inscription Gujarat Rashtrakuta 884 CE (H. Sarkar & BM Pande)

Sohgaura copper plate. Pre-Mauryan, ca. 6th century BCE

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