

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

The monograph is presented in the following sections:

Introduction including Abstract

Section 1. *Tantra yukti* deciphers Indus Script

Section 2. Momentous discovery of Soma samsthā yāga on Vedic River Sarasvati Basin

Section 3. Binjor seal

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

Section 5. Gaṇeśa *pratimā*, Gardez, Afghanistan is an Indus Script hypertext to signify Superintendent of *phaḍa* ‘metala manufactory’

Section 6. Note on the cobra hoods of Daimabad chariot

Section 7 Note on Mohenjo-daro seal m0304: *phaḍā* ‘metals manufactory’

Section 8. Conclusion

Introduction

The locus of Veda culture and Sarasvati Civilization is framed by the Himalayan ranges and the Indian Ocean.

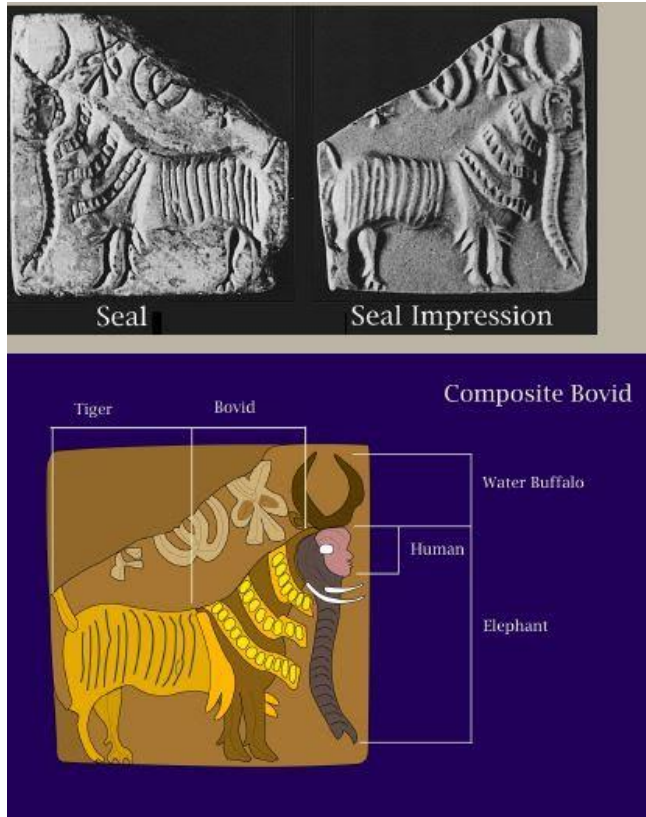


The Himalayan range stretches from Hanoi, Vietnam to Teheran, Iran and defines the Ancient Maritime Tin Route of the Indian Ocean – *āsetu himācalam*, ‘from the Setu to Himalayaś. Over several millennia, the Great Water Tower of frozen glacial waters nurtures over 3 billion people. The range is still 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). Gaṇeśa is an example of a hypertext signified orthographically with an elephant trunk as head on a human body.



Example of hypertext from a seal with Sarasvati Script

Tantra Yukti is a comprehensive review of hypertexts (cyphertexts) to derive plain texts, together with ‘meanings – for e.g. vākyārtha ‘meaning or understanding of a sentence’ using 40 language categories such as adhikaraṇa (subject matter), yoga (arrangement). The subject matter of all 8000+ inscriptions relates to metalwork in manufactories called *phaḍā*. The arrangement is a combination of ‘pictorial motifs’ and ‘signs’ which are signifiers of messages and metallurgical expertise 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 Vākyapadīya (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. *upamānam* (or *dyṣṭānta* or analogy), *vākyaviśeṣa* (completion of a sentence meaningfully even in the absence of a word which is understood), *pūrvapakṣa* (objections, *prima facie* or provisional view), *uttarapakṣa* (correct view or answers) are included as among 32 devices in *Arthaśāstra* list of *Tantra yukti*.

स्फुटता न पदैरपाकृता न च न स्वीकृत मर्थगौरवम् ‘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: तन्त्रे समासव्यासोक्ते भवन्त्येता हि क्रत्स्नशः एकदेशने दृश्यन्ते समासाभिहिते तथा ‘all these tantrayukti-s 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 (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' *karṇika* 'legs spread out' rebus: *karṇī* '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 'fins of fish which signify: *'khambharā* '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: *dhāvaḍ* 'iron-smelter' with Indus script hieroglyphs signifies *𑀢𑁆𑀭*, '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 *-vaḍ* 'string' rebus: *𑀭𑀸𑀓𑀾𑀢* '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:

karba ‘iron’ ibha ‘elephant’ rebus: ib ‘iron’, gaNDa ‘rhinoceros’ rebus: khaNDA ‘implements’, kola ‘tiger’ rebus: kol ‘working in iron’, kolle ‘blacksmith’ kolhe ‘smelter’, ranga ‘buffalo’ rebus: ranga ‘pewter’, ayo, aya ‘fish’ rebus: aya ‘iron’ ayas ‘metal’. These are further complemented by other hieroglyphs such as standing person with legs spread, rim-of-jar to signify meD ‘body’ rebus: meD ‘iron’ PLUS karNika ‘legs spread out’ rebus: karNika ‘Supercargo, engraver, scribe, account’; kanka, karNika ‘rim of jar’ rebus: karNI ‘Supercargo’ karNika ‘engraver, scribe, account’ PLUS kanda ‘pot’ rebus: kanda ‘fire-altar’ khaNDA ‘implements’. Hieroglyph: *kariba* ‘trunk of elephant’ rebus: *karba* ‘iron’ ibha ‘elephant’ rebus: *ib* ‘iron’ ibbo ‘merchant’ *ib* ‘needle (writing stylus?)’.

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

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

Hieroglyph: Ash. piç -- kandə ‘pine’, Kt. pūci, piçi, Wg. puç, pūc (pūc -- kər ‘pine-cone’), Pr. wyoç, Shum. lyēwiç (lyē -- ?).(CDIAL 8407). Cf. Gk. peu/kh f. ‘pine’, Lith. pušis, OPruss. peuse NTS xiii 229. The suffix –kande in the lexeme: Ash. piç-- kandə ‘pine’ may be cognate with the bulbous glyphic related to a mangrove root: Koḍ. kaṇḍe root-stock from which small roots grow; ila·ti kaṇḍe sweet potato (ila·ti England). Tu. kaṇḍe, gaḍḍè a bulbous root; Ta. kaṇṭal mangrove, *Rhizophora mucronata*; dichotomous mangrove, *Kandelia rheedii*. Ma. kaṇṭa bulbous root as of lotus, plantain; point where branches and bunches grow out of the stem of a palm; kaṇṭal what is bulb-like, half-ripe jackfruit and other green fruits; R. candel. (DEDR 1171). Rebus: *kaṇḍa* ‘tools, pots and pans of metal’. Hieroglyph: *𑌕𑌃𑌕* [*kaṇḍe*] *kaṇḍe*. [Telugu] n. A head or ear of millet or maize. జొన్నశొంఱి. Rebus: *Tu. kandūka*, *kandaka* ditch, trench. *Te. kandakamu* id. *Koṇḍa kanda* trench made as a fireplace during weddings. *Pe. kanda* fire trench. *Kui kanda* small trench for fireplace. *Malt. kandri* a pit. (DEDR 1214). I suggest that *kanda* signifies ‘fire-altar, vedi’.



Gaṇeśa

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*, *karṇika* 'rim of jar' rebus: *karṇika* '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.

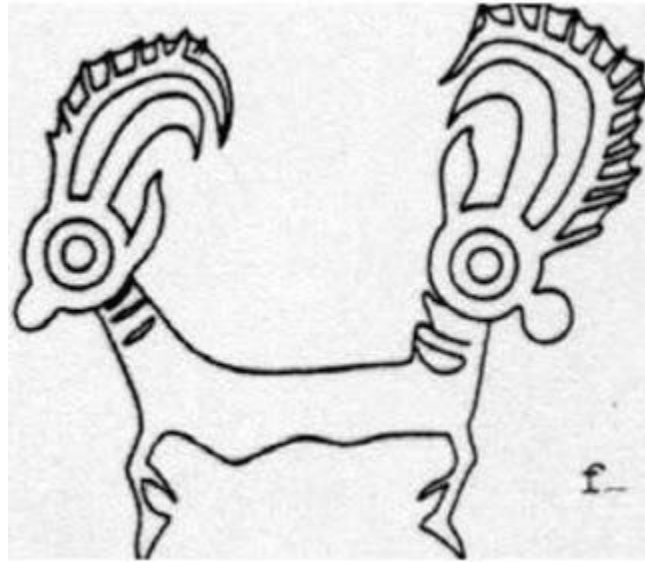


Fig. 96f: Failaka no. 260 Double antelope at the belly in the Levant similar doubling occurs for a lion Readings, meanings: *miṇḍāl* 'markhor' (Tōrwālī) *meḍho* a ram, a sheep (Gujarati)(CDIAL 10120) Rebus: *mēṛhēt*, *meḍ* 'iron' (Santali.Munda.Ho.) *med* 'copper' (Slavic) *meḍh* 'merchant' PLUS *dula* '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: *lokhandā* 'metal implement'. 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). করণিক [karaṇika] n an office-clerk, a clerk. কারণিক [kāraṇika] a pertaining to cause, causal; examining, judging. n. an examiner; a judge; a clerk (Bengali). खनक [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.



This 2.5 inch long gold pendant has a 0.3 inch nib; its ending is shaped like a sewing or netting needle. It bears an inscription painted in Indus Script. This inscription is deciphered as a proclamation of metalwork competence.

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 'signs'. 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 'signs'. 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 (poḷa 'zebu' rebus: poḷa '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'

Kur. *mūxā* frog. Malt. *múqe* id. Cf. Skt. *mūkaka*- id. (DEDR 5023) rebus: *mūh* 'ingot' (Santali)
Santali gloss:

**Muhā. The quantity of iron produced
at one time in a native smelting
furnace.**

ayo '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

The Dong Son Bronze Drums



Find spots



Sites of Đông 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

http://www.burmalibrary.org/docs22/Tin_Mining_in_Myanmar.pdf Gardiner, Nicholas J., et al., Tin mining in Myanmar: production and potential, *Resources Policy* 46 (2015) 219-233



Hanoi-Haifa maritime tin route ca. 4th millennium BCE



Discovery spots. Karen and Dongson

Bronze Drums

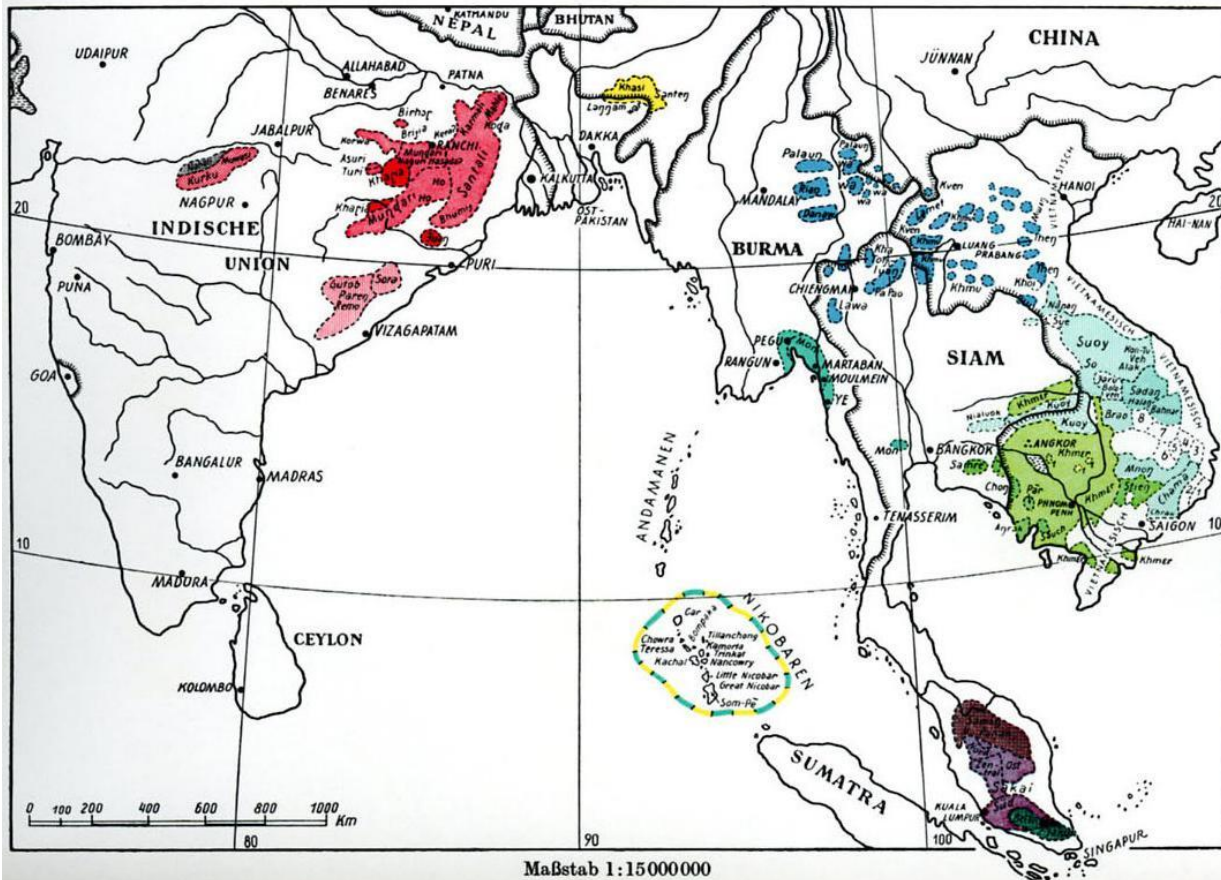


Karen drum cire perdue tympanum

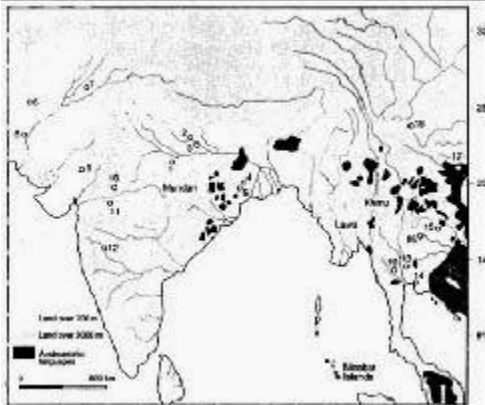


Burmese Karen drum.

Übersichtskarte über die austroasiatischen Sprachen



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



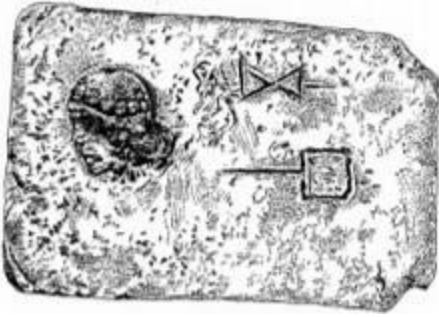
Bronze Age sites of eastern Bha_rata and neighbouring areas: 1. Koldihwa; 2. Khairdih; 3. Chirand; 4. Mahisadal; 5. Pandu Rajar Dhibi; 6. Mehrgarh; 7. Harappa; 8. Mohenjo-daro; 9. Ahar; 10. Kayatha; 11. Navdatoli; 12. Inamgaon; 13. Non Pa Wai; 14. Nong Nor; 15. Ban Na Di and Ban Chiang; 16. Non Nok Tha; 17. Thanh Den; 18. Shizhaishan; 19. Ban Don Ta Phet [After Fig. 8.1 in: Charles Higham, 1996, *The Bronze Age of Southeast Asia*, Cambridge University Press]. NOTE: There is perfect correlation between the locations of Austro-Asiatic language speakers and the locations of Bronze Age finds in

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

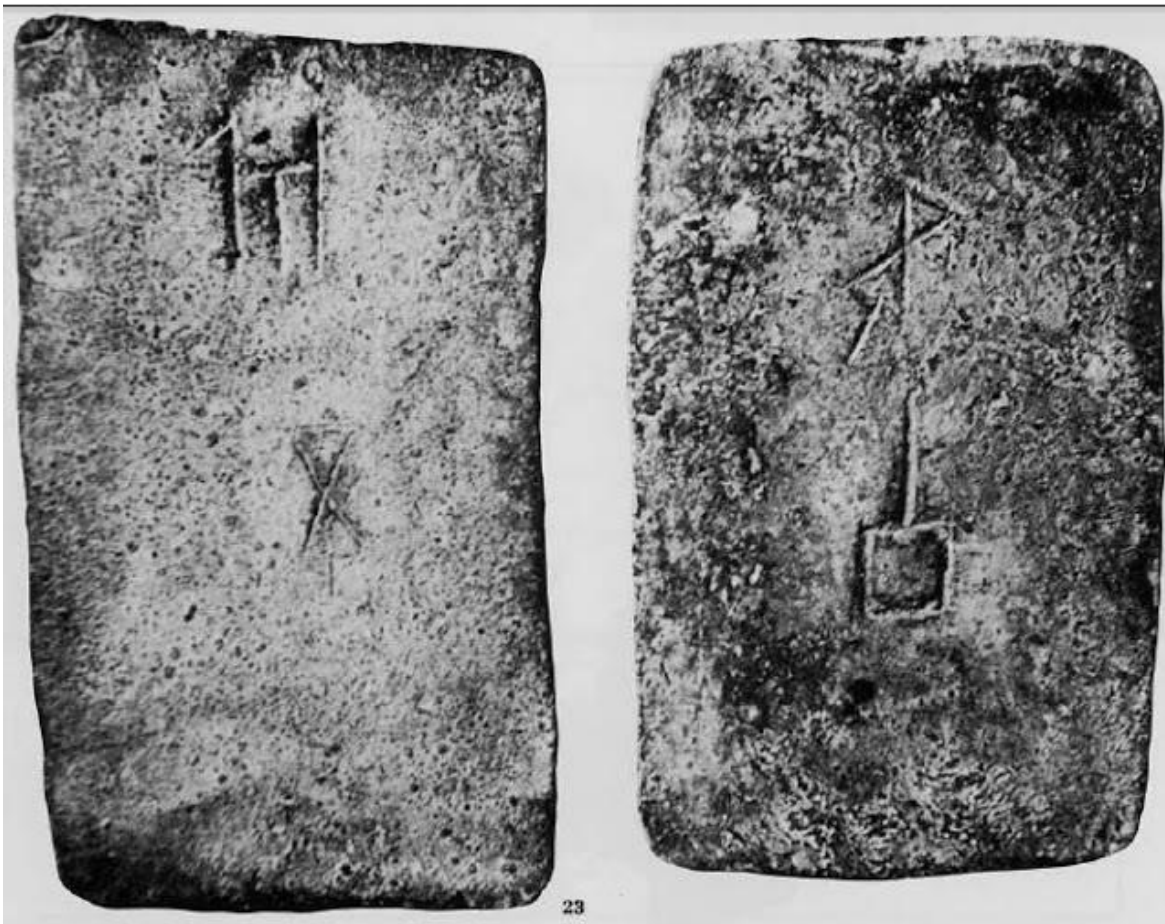


Stanniferous areas of the world (From RG Taylor, *Geology of Tin Deposits*, Amsterdam 1979, 6, fig. 2.1)

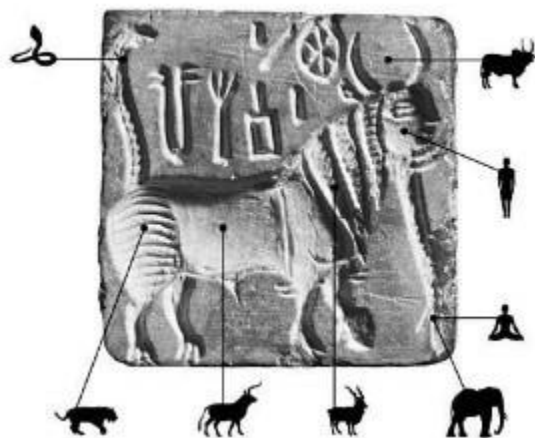
24. *Samśaya* (doubt) There are linguistic arguments which raise doubts about the Meluhha (Mleccha) language. It is possible that this was the spoken version of Prakrtam or Proto-Indic which co-existed with the *chandas* which is the metrical, literary version of Samskr̥tam or Vedic diction. There is 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 Viśvāmītra in Ṛgveda (3.53.12). One example of common feature is the feature of reduplication to convey semantics, e.g. *kaṇḍānmuṇḍān* ‘metal bits and pieces’.
25. *Atītāpekṣaṇa* / *atītavekṣaṇa* (retrospective reference; *atīkrāntāvekṣaṇa* ‘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 *poḷa* (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' *mũh* 'face' rebus: *mũh*, *muhã* 'ingot' or *muhã* 'quantity of metal produced at one time in a native smelting furnace.' *dātu* '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. *Nidaršana* (illustration) The illustration of the devices of *tantra yukti* used is seen on a cylinder seal from Ancient Near East, the seal of Sharkali-Sharri.



Cylinder Seal of Ibni-Sharrum Agade period, reign of Sharkali-Sharri (c. 2217-2193 BCE) Mesopotamia Serpentine H. 3.9 cm; Diam. 2.6 cm Formerly in the De Clercq collection; gift of H. de Boisgelin, 1967 AO 22303 <http://bharatkalyan97.blogspot.in/2014/04/continuity-in-hieroglyph-motifs-from.html> The signifiers: *rango* 'buffalo' rebus: *rango* 'pewter' *lo* 'overflow' *kanda* 'pot' rebus: *lokhandā* 'metal implements' *baṭa* 'six' rebus: *baṭa* 'iron', *bhaṭa* 'furnace' *meḍ* 'curl' rebus: *meḍ* 'iron'. Thus, Sharkali-Sharri is a smelter working with pewter, iron and metal implements.

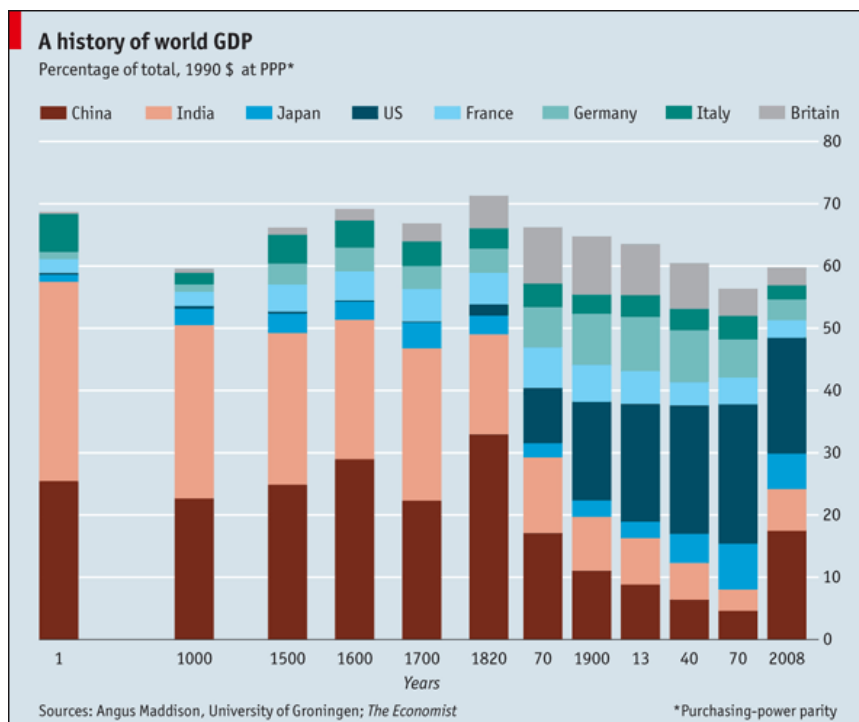
31. *Nirvacana* (definition or derivation or etymology of terms) An Indian Lexicon provides etyma which include most of the 25+ ancient languages of Indian sprachbund. Many metalwork terms used in Indus Script Corpora as hypertexts are traceable to one or more of the etyma of the *sprachbund*. IndianLexicon.pdf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

32. *Niyoga / sanniyoga* (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.

Example: Elamite standard. Hieroglyphs on the Elamite standard atop a bangle comparable to the ceramic stoneware rings of Mohenjo-daro and Harappa: Tor. *miṇḍ* 'ram', *miṇḍāl* 'markhor' (CDIAL 10310) Rebus 1: *meḍ* (Ho.); *mēṛhet* 'iron' (Munda.Ho.) *med* 'copper' (Slavic) *dula* 'two' rebus: *dul* 'metalcasting'. Rebus 2: *meḍh* 'metalcasting merchant's helper' (Desi namamama of Hemacandra). Thus, a merchant dealing with metalcastings (of copper, alloys).

The bangle Elamite 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. **karā** 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 *meḍ* ‘body’ rebus: *meḍ* ‘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 *śabdaspṛṣṭa* ‘word sound meanings’ are composed as hypertexts *vākyaspṛṣṭa* ‘message meanings’ to create *vākyārtha* ‘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. *Paripraśna* (question and answer) A *paripraśna* 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.;

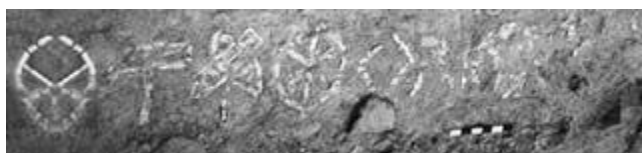
Gadd, PBA 18 (1932), pp. 11-12, pl. II, no. 12; Porada 1971: pl.9, fig.5; Parpola, 1994, p. 183; water carrier with a skin (or pot?) hung on each end of the yoke across his shoulders and another one below the crook of his left arm; the vessel on the right end of his yoke is over a receptacle for the 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: *mēdhā yajña, dhanam*; Split ellipse or parenthesis is split of a bun ingot shape (rhombus): *mūh*, *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 *vākyapadīya* <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. *Vyutkrāntabhidāna* (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 minerals 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 strands’ rebus: ‘three minerals’ 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: *poḷa* ‘zebu; rebus: *poḷa* ‘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 *sāḡāḍ* Rebus: stone-cutter *sangatarāsū*). *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 *sangatarāsū* ‘stone-cutter’ or lapidary of neolithic/chalolithic age had graduated into a metal turner’s workshop (*koḍ*), working with metallic minerals (*dhātu*) of the bronze age.

Three professions are described by the three hieroglyphs: scarf, young bull, standard device *dhātu kōdāsāḡāḍī* 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 tantrayukti <https://www.academia.edu/12132105/Tantrayukti>)

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 आस्यमुत्पत्ति-रस्य ।) ताम्रम् । इति हारावली ॥ म्लेच्छास्यं, क्ली, (म्लेच्छे म्लेच्छदेशे आस्यमुत्पत्ति-रस्य ।) ताम्रम् । इति हारावली ॥ म्लेच्छमुखं, क्ली, (म्लेच्छे म्लेच्छदेशे मुखमुत्पत्ति- रस्य । इत्यमरटीकायां रघुनाथः ।) ताम्रम् । इत्यमरः । २ । ९ । ९७ ॥ (तथास्य पर्यायः । “ताम्रमौदुम्बरं शुल्वमुदुम्बरमपि स्मृतम् । रविप्रियं म्लेच्छमुखं सूर्यपर्यायनामकम् ॥” इति भावप्रकाशस्य पूर्वखण्डे प्रथमे भागे ॥ “ताम्रमौदुम्बरं शूलं विद्यात् म्लेच्छमुख- न्ता ॥” इति गारुडे २०८ अध्याये ॥)

<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* मेढ Stake or post rebus: *मृदु mṛdu*, *mēṛhēt*, *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 *yasti* or *yupa* a fiery pillar of light.



Yagna Kunda. Kalibangan. Quadrangular yupa

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:

1. Ajit Kumar* Rajesh S.V.* Abhayan G.S.*Vinod V.* and Sujana Stephen**, 2013, *Indian Ocean Maritime Trade: Evidences from Vizhinjam, South Kerala, India*: *Journal of Indian Ocean Archaeology* No. 9, 2013 | 195-201 and 31-33 (Plates).
<http://tinyurl.com/zldsszl>



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

<https://www.scribd.com/document/260613722/Origin-of-Early-Harappan-Cultures-in-the-Sarasvati-Valley-Recent-Archaeological-Evidence-and-Radiometric-Dates>

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 'magnetite, 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.



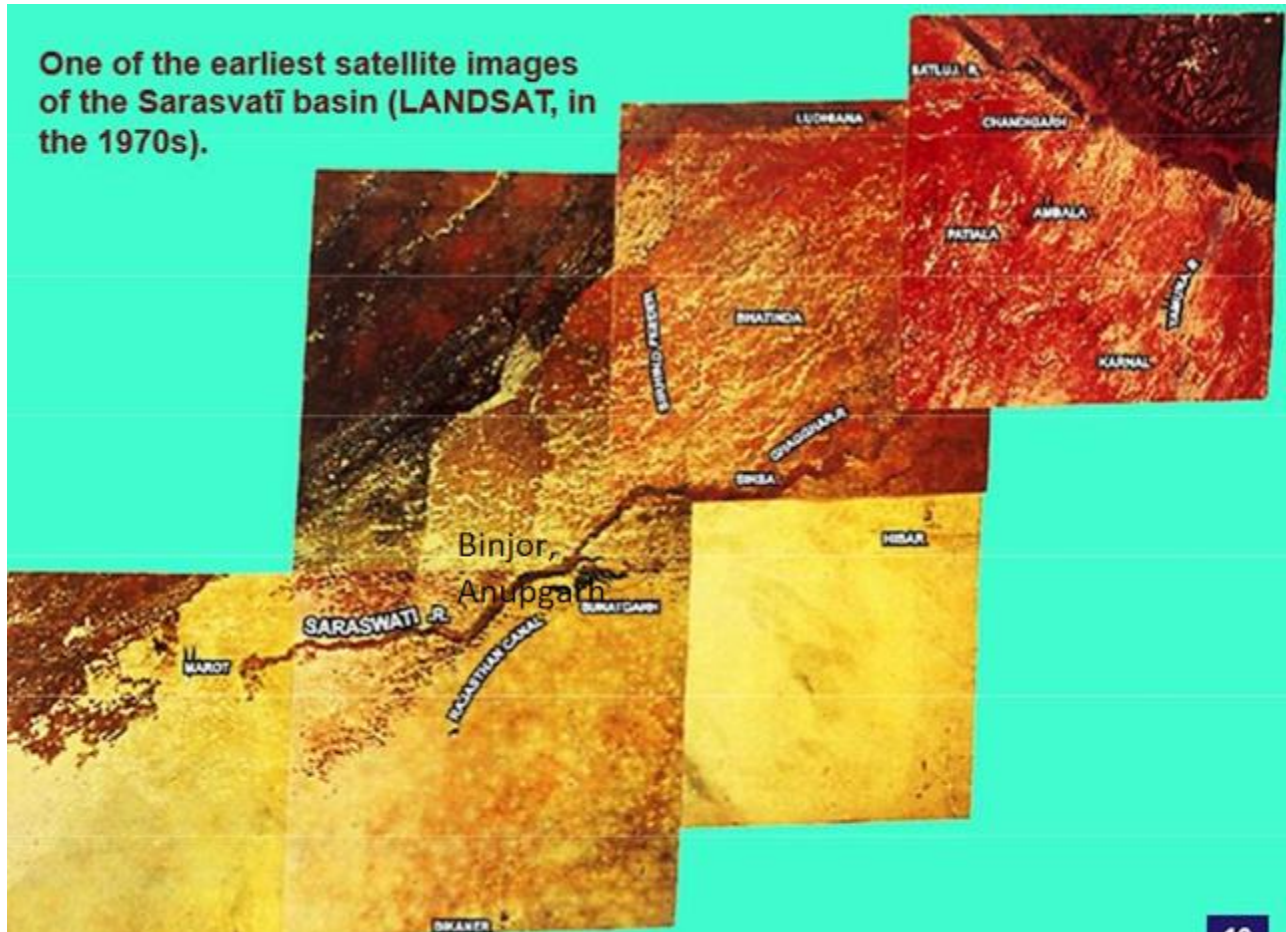
A terracota figurine of a humped bull discovered in Binjor. poḷa 'zebu' rebus: poḷa 'magnetite, ferrite ore'.

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>

A remarkable discovery is the octogon 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 *kuTi* rebus: *kuThi* 'smelter' with *kharva* 'dwarf' adorning the structure with a garland to signify *kharva* 'a *nidhi* or wealth' of Kubera. A Bhuteswar frieze also indicates the *skambha* with face signifying *ekamukha* *linga* rebus:

mūhe 'ingot' (Santali) *mūhā* = 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 mērhēt* = iron smelted by the Kolhes and formed into an equilateral lump a little pointed at each of four ends; *kolhe tehen mērhēt ko mūhā akata* = the Kolhes have to-day produced pig iron (Santali).

caṣāla on *aṣṭāśri* *yupa* is described in Śatapatha Brāhmaṇa as a *ketu*, proclamation of performance of a Soma Samsthā Yajña. *caṣāla* or *godhuma* 'smoke of wheat chaff' infuses carbon to harden metal in the fire-altar.

Dange, Sadashiv A. "The *yUpa* - its nature and evolution." *BhAratI*. Vol.16(1985-1987) pp.1-10

Prabhakar, V. N. and Majid, Jaseera C. , "Preliminary results of excavation at Karanpura, a Harappan settlement in district Hanumangarh", *Man and Environment*, vol. 39, no. 2, pp. 13-41, 2014.

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 Harappan 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 *medhā* 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*. अन्तःपूर्वेण यूपं परीत्यान्तःपात्यदेशे स्थापयति Kāty. -पातिन्, -पातिन् (Apte. Samskr̥tam). This is clearly an invocation to the paramaatman, as elaborated in this note with particular reference to the octagonal shape of the Yupa 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 अष्टाश्रि 'having eight corners' (Vedic) yupa discovered in April 2015 by a young team of students from Institute of Archaeology, National Museum, New Delhi.

ashtAs'ri yupa is signified by *s'ivalinga* and *ekamukha s'ivalinga*. A *s'ivalinga* is *medhā* -- 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: *mūh* 'face'

Rebus: *mūhe* '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, *bahusuvarṇaka*, the same metaphorical expression used in the epic

Valmiki Ramayana, to signify 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 सत्त (performed for 2-12 days, for more than 12 days).

यज्ञो वै मेधः' इति श्रुतेः । एकविंशति- मेधान्ते Mb.14.29.18. (com. मेधो युद्धयज्ञः । 'यज्ञो वै मेधः' इति श्रुतेः ।)

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

अष्टन् [p=116,2] अष्ट/औ ([RV. AV. &c]) or अष्ट/आ ([RV. viii , 2 , 41]) or अष्ट/अ ([RV. x , 27 , 15 AV. &c]) pl. eight (other forms are: gen. अष्टानाम् Mn. &c ; instr. अष्टभ्/इस् RV. ii , 18 , 4 S3Br. &c ; loc. अष्टास्/उ S3Br. &c);[Lat. octo ; Goth. ahtau; Mod. Germ. acht ; Eng. eight ; Lith. asztuni ; Slav. osmj.]. The dual form अष्ट/औ (in Vedic) is semantically 'two fours'. gaNDa 'four' rebus: kanda 'fire-altar'. Thus, the expression अष्टा* श्रि 'having eight corners' in 3rd kanda of Shatapatha brahmana also signifies the key comprehensive penetration of space by the यूपं or skambha or .medhā 'stake' covered with cashala (wheat chaff) in the carburization process to produce hard metal out of the working with fire. āṅgāra m. n. 'glowing charcoal' RV., °aka -- lex. 2. *iṅgāra -- , iṅgāla -- m. Vāsav. com.1. Pa. āṅgāra -- m. 'charcoal', Pk. aṅgāra -- , °aya -- , aṅgāla -- , °aya -- m., Gy. eur. angār 'charcoal', wel. vañār m. (v -- from m. article), germ. yangar (y -- from yag, s.v. agnī -- 1); Ash. aṇā 'fire', Kt. aṇā, Gmb. aṇā, Pr. anéye, Dm. aṅgar (a < ā NTS xii 130), Tir. Chilis Gau. K. nār (n < ṇ -- , not ← Psht. nār ← Ar. AO xii 184), Paš. aṅgā'r, Shum. ār (← Paš. NOGaw 59), Gaw. Kal. Kho. aṅgā'r, Bshk. āṅgā'r, Tor. aṇā, Mai. agār, Phal. aṅgōr, Sh. agā'r, ha° m.; S. aṇaru m. 'charcoal' (a < ā as in Dm.), L. aṅgār m., P. aṅgyār, °rā m., EP. āgeār (y or e from MIA. aggi < agnī -- 1?), WPah. bhid. aṅgā'rō n., pl. -- ā, Ku. aṇār (ḍaṇār id. X ḍājño < dahyātē), N. aṇār, A. āṅgār, eṅgār, B. āṅgār, āṇrā, Or. aṅgāra; Bi. āgarwāh 'man who cuts sugar -- cane into lengths for the mill' (=pakwāh); OMth. aṅgāra, Mth. āgor, H. āgār, °rā m., G. āgār, °rō m., M. āgār m., Si. aṅgura. -- Wg. ādotdot;ř, āī 'fire' (as opp. to aṇarī'k 'charcoal', see aṅgāryā' --) poss. < agnī -- 1, Morgenstierne NTS xvii 226.2. Pa. iṅghāla -- 'glowing embers (?)', Pk. iṅgāra -- , iṅgāla, °aya -- ; K. yēngur m. 'charcoal', yēnguru m. 'charcoal -- burner'; M. iṅgaḷ, iṅlā m., Ko. iṅlo. -- Deriv. M. iṅlā m. 'a kind of large ant', iṅlī f. 'a large black deadly scorpion'. āṅgāraka -- , āṅgāri -- , āṅgāryā' -- ; āṅgāradhānī -- , *āṅgāravarta -- , *āṅgārasthāna -- , *āṅgrṣṭha -- .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-

east direction *īśāna* -- , °ná -- ‘ ruling ’ RV. [√īś] (CDIAL 1618) ईश m. A master, lord, the Supreme Spirit. ईशा- बास्यमिदं सर्वम् Īśop.1 summarizes the significant and dominant role of the multi-faceted (eight-faceted) yupa in the divine intervention, in the cosmic dance of mere earth and stone getting transformed into utility value and exchange value metal ingots generating wealth for a fire-worker artisan working with fire and dhAtu'minerals.

Knowledge system disseminated through Indus Script Corpora also finds expression in Vedic metaphor such as ईशावास्यम् N. of the ईशावास्योपनिषद्, also called ईशोप- निषद्; the only instance of an upaniṣad included in a Saṁhitā (Vāj.4.1).or ईशा*वास्य, 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 Sukta.

kāsminn āṅge tāpo asyādhi tiṣṭhati kāsminn āṅga ṛtām asyādhy āhitamkvā vratām kvā śraddhāsyā tiṣṭhati kāsminn āṅge 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.

एकविंशति 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 सत्त is an extended अहीन which could last from 12 days upto a year. अहीन सत्त soma yajña or सोम--संस्था [p= 1250,3] f. the basis or initial form of a सोम sacrifice MBh. Gaut. Ma1rkP performed for several days -- from 12 days upto a year. Examples of सोम--संस्था are seven: अग्निष्टोम, अत्यग्निष्टोम, उक्थ, षोडशी, अतिरात्र, आप्तोर्याम and वाजपेय

Example of सत्त्वं 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 Brahmins aspiring to the highest position , and preceding the राज-su1ya and the बृहस्पति-sava) 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. /अहन् 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 ,uktha, 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 Vājapeyajī. 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 Taittiriya samhita deals with satra type sacrifices." <http://jayasreesaranathan.blogspot.in/2012/10/what-are-vedic-yajnas-guest-post-by-r.html>

सत्त्वं [p=1138,2] n. " session " , a great सोम sacrifice (lasting accord. to some , from 13 to 100 days and performed by many officiating Brahmins ; also applied to any oblation or meritorious work equivalent to the performance of a सत्त्वं ; सत्त्वं/अस्य/अद्धिः 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 , त्रिर्-/अश्रि , च्/अतुर्-श्रि , शता*श्रि q.v. (cf. अश्रि); ([cf. Lat. acies , acer ; Lith. assmu3])(Monier-Williams) aṣṭan अष्टन् num. a. [अश-व्याप्तौ कनिन् तुट् च Uṇ.1.154.] (nom., acc. अष्ट-ष्टौ) Eight. It often occurs in comp. as अष्टा with numerals and some other nouns; as अष्टादशन्, अष्टाविंशतिः, अष्टापद &c. [cf. L. octo; Gr. okto; Zend astani Pers. hasht.].

अस्रम् an octagon. -अस्रः A kind of single-storeyed building octangular in plan. अस्रः [अस्-रन्] 1 A corner, an angle अस्रिय a. octangular; asriḥ अस्रिः 1 An angle; अष्टास्रयः सर्व एव श्लक्ष्णरूपसमन्विताः Rām.1.14.26. आश्रय [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 receiveddwelling , asylum , place of refuge , shelter R. S3is3. &c help , assistance , protection Pan5cat. Ragh. &c mfn. ifc. depending on , resting on , endowed or

furnished with (e.g. अष्ट-गुणा*श्रय » under अष्ट). यूप[p= 856,1] m. (prob. fr. √ युप् ; but according to Un2. iii , 27 , fr. √2. यु) a post , beam , pillar , (esp.) a smooth post or stake to which the sacrificial victim is fastened , any sacrificial post or stake (usually made of bamboos or खदिर wood ; in R. i , 13 , 24 ; 25, where the horse sacrifice is described , 21 of these posts are set up , 6 made of बिल्व , 6 of खदिर , 6 of पलाश , one of उडुम्बर , one of श्लेष्मातक , and one of देव-दारु) RV. &ca column erected in honour of victory , a trophy (= जय-स्तम्भ) L.N. of a partic. conjunction of the class आकृति-योग (i.e. when all the planets are situated in the 1st , 2nd , 3rd and 4th houses) VarBr2S.

19 yupa inscriptions have been recorded from Rajasthan, Allahabad, Mathura and East Borneo (Mulavarman yupa inscription). All the inscriptions are associated with अष्टा* श्रि 'octagonal' yupa. A Yupa is a post, beam, pillar used in soma yajña. Such a yupa in fact is a signature tune of an ayamedha 'yajña' involving metals. (ayas ' अयस् [p= 85,1] n. iron , metal RV. &can iron weapon (as an axe , &c) RV. vi , 3 , 5 and 47 , 10gold Naigh.steel L. ; ([cf. Lat. aes , aer- is for as-is ; Goth. ais , Thema aisa ; Old Germ. e7r , iron ; Goth. eisarn ; Mod. Germ. Eisen.]). अय [p= 84,2] N. of a periodical sacrifice MBh. मेध [p= 832,3] an animal-sacrifice , offering , oblation , any sacrifice (esp. ifc.) ib. MBh. &cmēdhḥ मेधः 1 A sacrifice, as in नरमेध, अश्वमेध, एकविंशति- मेधान्ते Mb.14.29.18. (com. मेधो युद्धयज्ञः । यज्ञो वै मेधः' इति श्रुतेः ।). -2 A sacrificial animal or victim. - 3 An offering, oblation. -4 Ved. The juice of meat, broth.-5 Ved. Sap, pith, essence. -Comp. - जः an epithet of Viṣṇu. mēdhā मेधा [मेध्-अञ्] (changed to मेधस् in Bah. comp. when preceded by सु, दुस् and the negative particle अ) 1 Retentive faculty, retentiveness (of memory); धी- धरिणावती मेधा Ak. -2 Intellect, intelligence in general; यत् सप्तान्नानि मेधया तपसाजनयत् पिता Bri. Up.1.5.1; Bg. 1.34; आयुष्मन्तं सुतं सूते यशोमेधासमन्वितम् Ms.3.263; Y. 3.173. -3 A form of Sarasvathī. -4 A sacrifice. -5 Strength, power (Ved.). -Comp. -अतिथिः N. of a learned commentator on Manusmṛiti. -जननम् N. of a rite for producing mental and bodily strength. -जित् m. an epithet of Kātyāyana. -रुद्रः an epithet of Kālidāsa.mēdhyaमेध्य a. [मेध्-ण्यत्, मेधाय हितं यत् वा] 1 Fit for a sacrifice; अजाश्वयोर्मुखं मेध्यम् Y.1.194; Ms.5.54. -2 Relating to a sacrifice, sacrificial; मेध्येनाश्वेनेजे; R.13. 3; उषा वा अश्वस्य मेध्यस्य शिरः Bri. Up.1.1.1. -3 Pure, sacred, holy; भुवं कोष्णेन कुण्डोद्गी मध्येनावमृथादपि R.1.84; 3.31;14.81. -4 Ved. Fresh, strong, vigorous. -5 Wise, intelligent. -ध्वः 1 A goat. -2 A Khadira tree. -3 Barley (according to Medinī). -ध्या 1 N. of several plants (केतकी, शङ्खपुष्पी, रोचना, शमी &c.). -2 The gall- stone of a cow (रोचना). -3 A particular vein.

Section 3. Binjor seal

The seal reported from Binjor is a signature tune of the civilization and consistent with about 7000 inscriptions of Indus Script Corpora. This seal has been deciphered and authenticates the findings so far that the entire Indus Script Corpora constitute metalwork catalogues of the Bronze Age by Bharatam Janam,'metalcaster folk' artisans speaking Meluhha *parole* of Indian sprachbund.

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 Shatrana 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 caravants across the Persian Gulf.



Sarasvati-Sindhu Script seal. Binjor

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

Hieroglyph: *sāghār* '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'



gaṇḍa 'four (short

strokes' as circumscribed rebus: लोखंड [lōkhaṇḍa] 'metalwork' PLUS *khambhaṛā* 'fish-fin' rebus: *kammaTa* 'mint, coiner, coinage' PLUS *ayo* 'fish' rebus: *ayas* 'alloy metal' PLUS *dhāla* f (S through H) The grand **flag** of an army directing its march and encampments: also the standard or banner of a chieftain' rebus: ढाल [dhāla] 'metal ingot' PLUS *pōlaḍu*, 'black drongo bird' rebus: *pōlaḍa*, 'steel'.

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 *yajñasya 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 acclaimed as 'messenger' (*dūta*); cf. RV I.12.1 *agrim dūtam 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 *aṣṭāśrir 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 sacrificer 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' (*udgrhītābhyām bāhubhyām*). 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 *Aśvattha* 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 (*Amṛta-manthana*); 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-dhvaja 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 *prāñcam 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:

kāsminn āṅge tāpo asyādhi tiṣṭhati kāsminn āṅga ṛtām asyādhy āhitam
kvā vratām kvā śraddhāsyā tiṣṭhati kāsminn āṅge satyām asya 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. Bhāratiya itihāsa, Indus Script hypertexts signify metalwork wealth-creation by Nāga-s in paṭṭaḍa ‘smithy’ = phaḍa 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>

Hieroglyph: फड (p. 313) phaḍā f (फट S) The hood of Coluber Nāga &c. Ta. patam cobra's hood. Ma. paṭam id. Ka. peḍe id. Te. paḍaga id. Go. (S.) paṛge, (Mu.) barak, (Ma.) baṛki, (F-H.) biṛki hood of serpent (Voc. 2154). / Turner, CDIAL, no. 9040, Skt. (s)phaṭa-, sphaṭā- a serpent's expanded hood, Prākṛtam. phaḍā- id. For IE etymology, see Burrow, The Problem of Shwa in Sanskrit, p. 45.(DEDR 47) Rebus: phaḍa फड ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

फडपूस (p. 313) phaḍapūsa f (फड & पुसणें) Public or open inquiry. फडफरमाश or स (p. 313) phaḍapharamāśa or sa f (H & P) 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.

फडनिविशी or सी (p. 313) phaḍaniviśī or sī & फडनिवीस Commonly फड- निशी & फडनीस.

फडनीस (p. 313) phaḍanīsa m (H) A 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 फडनीस.

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. See under फड. 3 A retail-dealer (esp. in grain).

फडझडती (p. 313) phaḍajhaḍatī f sometimes फडझाडणी f 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.

फड (p. 313) phaḍa m (H) 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 खेळण्या- चा 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.
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.



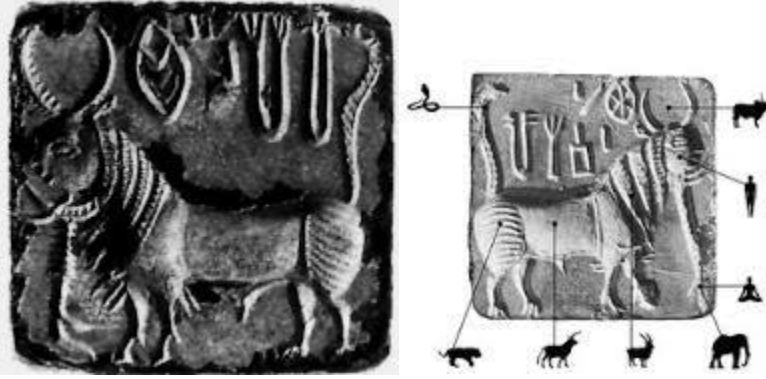
Cloth worn on Ganeśa pratimā, Gardez, Afghanistan. Hieroglyph: படம்¹ paṭam , n. < paṭa. 1. Cloth for wear; சீலை. (பிங்.) மாப்பட நூலின் றொகுதிக் காண் டலின் (ஞானா. 14, 21). 2. Painted or printed cloth; சித்திரச்சீலை. (பிங்.) இப்படத்தெழுது ஞான வாவி (காசிக. கலாவ. 2). 3. Coat, jacket; சட்டை. படம்புக்கு (பெரும்பாண். 69). 4. Upper garment, cloak; போர்வை. வனப்பகட்டைப் பட மாக வுரித்தாய் (தேவா. 32, 7). 5. Body; உடல். படங்கொடு நின்றவிப் பல்லுயிர் (திருமந். 2768).



Hieroglyph: படம் paṭam, n. < pada. Instep; பாதத் தின் முற்பகுதி. படங்குந்திநிற்றல் (சூடா. 9, 53).

𑌕𑌃 phaḍā f (𑌕𑌃 S) The hood of Coluber Nága Rebus: phaḍa 𑌕𑌃 'manufactory, company, guild, public office', keeper of all accounts, registers.

Instep venerated. Amaravati sculptural friezes. Skambha with ayo khambhaṛā '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 Hypertexts'. Some Thoughts on Plato, Chimaera and the Indus Civilization at [a.harappa.com/...](http://a.harappa.com/)

The classifier is the cobra hood: फडा phadā f (फटा S) The hood of Coluber Nága Rebus: phadā फड 'manufactory, company, guild, public office', keeper of all accounts, registers.

On this seal, the key is 'combination of animals'. 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' *kundaṇa* 'fine gold' *rānku* 'antelope' rebus: *rānku* 'tin'.



Mohenjo-daro. Sealing. Surrounded by fishes,

lizard and snakes, a horned person sits in 'yoga' on a throne with hooved 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: फडा phadā f (फटा S) The hood of Coluber Nága Rebus: phadā फड 'manufactory, company, guild, public office', keeper of all accounts, registers.

Brief memoranda: kamaḍha 'penance' Rebus: kammaṭa 'mint, coiner'; kaṇḍo 'stool, seat' Rebus: *kāṇḍa* 'metalware' *kaṇḍa* 'fire-altar'.

kāru 'crocodile' Rebus: *kāru* 'artisan'; *khar* 'blacksmith'

Hieroglyphs (allographs):

kamaḍha 'penance' (Prakriam)

kamḍa, *khamḍa* 'copulation' (Santali)

kamaṭha crab (Skt.)

kamaṛkom = fig leaf (Santali.lex.) *kamarmaṛā* (Has.), *kamaṛkom* (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.) *kāmaṭhiyo* 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* 'molten cast 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

<http://www.louvre.fr/en/oeuvre-notices/table-decorated-serpents-and-deities-bearing-vessels-spouting-streams-water>

The classifier is the cobra hood hieroglyph/hypertext: $\overline{\text{𓏏}}$ *phaḏā* f ($\overline{\text{𓏏}}$ S) The hood of Coluber Nāga Rebus: *phaḏa* $\overline{\text{𓏏}}$ ‘manufactory, company, guild, public office’, keeper of all accounts, registers.

Hieroglyph: *kāṇḏa* ‘water’ Wg. *kāṇṭä* ‘ water -- channel ’, Woṭ. *kaṇṭēl* f., Gaw. *khāṇṭ**l, Bshk. *kāṇḏa* (CDIAL 2680). காண்டம்² *kāṇṭam*, *n.* < *kāṇḏa*. 1. Water; sacred water; நீர். துருத்திவா யதுக்கிய குங்குமக் காண் டமும் (கல்லா. 49, 16)

Rebus: *khaṇḏa* ‘implements (metal)’

Mērhēf. Iron.
Mērhēf iēna. The iron is rusty.
Ispat mērhēf. Steel.
Dul mērhēf. Cast iron.
Mērhēf khaṇḏa. Iron implements.



The classifier is the cobra hood hieroglyph/hypertext: $\overline{\text{𓏏}}$ *phaḏā* f ($\overline{\text{𓏏}}$ S) The hood of Coluber Nāga Rebus: *phaḏa* $\overline{\text{𓏏}}$ ‘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.

Glyph: *kaṇḏo* ‘stool’. Rebus; *kaṇḏ* ‘furnace’. Vikalpa: *kaṇḏ* ‘stone (ore) metal’. Rebus: *kamaḏha* ‘penance’. Rebus 1: *kaṇḏ* ‘stone ore’. Rebus 2: *kampaṭṭa* ‘mint’. Glyph: ‘serpent hood’: *paṭa*. Rebus: *pata* ‘sharpness (of knife), tempered (metal). *padm* ‘tempered iron’ (Ko.) Glyph: rimless pot: *baṭa*. Rebus: *bhaṭa* ‘smelter, furnace’ *baṭa* ‘iron’. It appears that the message of the glyphics is about a mint or metal workshop which produces sharpened, tempered iron (stone ore) using a furnace.

Rebus readings of glyphs on text of inscription:

koṇḏa bend (Ko.); Tu. *Kōḏi* corner; *kōṇṭu* angle, corner, crook. Nk. *Kōṇṭa* corner (DEDR 2054b) G. *khūṭṭī* f. ‘angle’ Rebus: *kōḏā* ‘to turn in a lathe’ (B.) $\overline{\text{𓏏}}$ *kōṇḏa* ‘engraver, lapidary

setting or infixing gems (Marathi) *koḍ* ‘artisan’s workshop’ (Kuwi) *koḍ* = place where artisans work (G.) *ācāri kottya* ‘smithy’ (Tu.) कोंडण [kōṇḍaṇa] f A fold or pen. (Marathi) B. *kōḍā* ‘to turn in a lathe’; Or. *kūṇḍa* ‘lathe’, *kūḍibā*, *kūḍ* ‘to turn’ (→ Drav. Kur. *Kūḍ* ‘lathe’) (CDIAL 3295)

aṭar ‘a splinter’ (Ma.) *aṭaruka* ‘to burst, crack, sli off, fly open; aṭarcca’ 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: *ancu* ‘iron’ (Tocharian) G. *karā* n. pl. ‘wristlets, bangles; S. f. ‘wrist’ (CDIAL 2779). Rebus: *khār* खार् ‘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. [√kr1] Pa. *karaṇa* -- n. ‘doing’; NiDoc. *karana*, *kaṁraṁna* ‘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: $\overline{\text{𐎶𐎵}}$ *phaḏā f* ($\overline{\text{𐎶𐎵}}$ S) The hood of Coluber Nāga Rebus: *phaḏa* $\overline{\text{𐎶𐎵}}$ '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: $\overline{\text{𐎶𐎵}}$ *ḵamar*

A $\overline{\text{𐎶𐎵}}$ *ḵamar*, s.m. (9th) The moon. Sing. and Pl. See $\overline{\text{𐎶𐎵}}$ or $\overline{\text{𐎶𐎵}}$ (Pashto) Rebus: *kamar* 'blacksmith'.

kulā hooded snake Rebus: *kolle* 'blacksmith' *kolhe* 'smelters'. $\overline{\text{𐎶𐎵}}$ *phaḏā f* ($\overline{\text{𐎶𐎵}}$ S) The hood of Coluber Nāga Rebus: *phaḏa* $\overline{\text{𐎶𐎵}}$ 'manufactory, company, guild, public office', keeper of all accounts, registers.

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

lokāṇḍa 'overflowing pot' Rebus: l *lokhaṇḍa* 'metal implements, excellent implements'

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

baṭa 'six' Rebus: *baṭa* 'iron' *bhaṭa* 'furnace' PLUS *meḏh* 'curl' Rebus: *meḏ* '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: $\overline{\text{𑌵𑌶𑌷}}$ *phaḍā* f ($\overline{\text{𑌵𑌶𑌷}}$ S) The hood of Coluber
 Nága Rebus: *phaḍa* $\overline{\text{𑌵𑌶𑌷}}$ ‘manufactory, company, guild, public office’, keeper of all accounts,
 registers.

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

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

nāga ‘serpent’ Rebus: *nāga* ‘lead’

Hieroglyph: *rāgo* ‘buffalo bull’

Rebus: Pk. *raṅga* ‘tin’ P. *rāḡ* f., *rāḡā* m. ‘pewter, tin’ Ku. *rāṇ* ‘tin, solder’ Or. *rāṅga* ‘tin’,
rāṅgā ‘solder, spelter’, Bi. Mth. *rāḡā*, OAw. *rāmga*; H. *rāḡ* f., *rāḡā* m. ‘tin, pewter’ *raṅgaada* -
 - m. ‘borax’ lex. Kho. (Lor.) ruṇ ‘saline ground with white efflorescence, salt in earth’
 **raṅgapattra* ‘tin foil’. [raṅga -- 3, páttira --]B. *rāṇ(g)tā* ‘tinsel, copper -- foil’.

paTa ‘hood of serpent’ Rebus: padanu ‘sharpness of weapon’ (Telugu)

Hieroglyph: *kunta* 1 ‘spear’. 2. **kōnta* -- . [Perh. ← Gk. *konto/s* ‘spear’ EWA i 229] 1. Pk.
kumta -- m. ‘spear’; S. *kundu* m. ‘spike of a top’, °dī f. ‘spike at the bottom of a stick’, °dīrī,
 °dīrī f. ‘spike of a spear or stick’; Si. *kutu* ‘lance’.

2. Pa. *konta* -- m. ‘standard’; Pk. *komta* -- 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: कुंठणे [kuṇṭhaṇēm] v i (कुंठ S) To be stopped, detained, obstructed, arrested in progress (Marathi)



C-49 A



C-49 B



C-49 C

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.

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' *koḍ* 'workshop'. *tri-dhātu* 'three strands, threefold' rebus: *tri-dhāv* 'three mineral ores'.

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.

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 is surrounded 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.

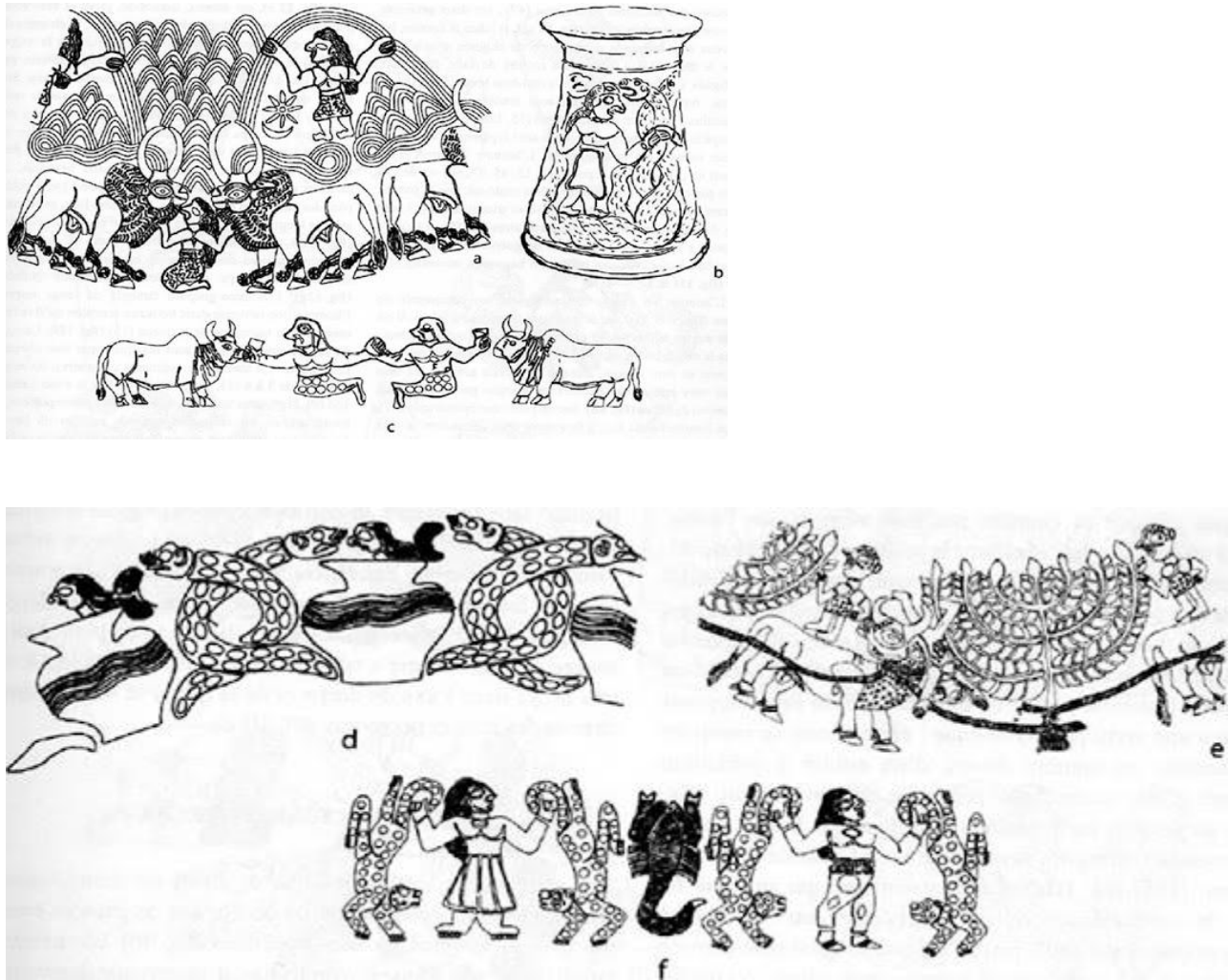


Figure 11: a. mountains landscape and waers; (upper part) a man under an arch with sun and crescent moon symbols; (lower part) man seated on his heels holding zebus; b. man holding a snake; c. two men (drinking) and zebus, on a small cylindrical vessel; d. Head of woman protruding from jar, and snakes; 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/hypertext: फडा *phaḍā* f (फटा S) The hood of Coluber Nāga Rebus: *phaḍa* फड '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'

Hieroglyph: *kāṇḍa* ‘water’ Wg. *kāṇḍä* ‘ water -- channel ’, Woṭ. *kaṇḍél* f., Gaw. *khāṇḍ**l, Bshk. *kāṇḍa* (CDIAL 2680). காண்டம்² *kāṇḍam*, *n.* < *kāṇḍa*. 1. Water; sacred water; நீர். துருத்திவா யதுக்கிய குங்குமக் காண் டமும் (கல்லா. 49, 16)

khaṇḍa ‘implements (metal)’

Mērhēf. Iron.
Mērhēf iēna. The iron is rusty.
Ispat mērhēf. Steel.
Dul mērhēf. Cast iron.
Mērhēf khaṇḍa. Iron implements.



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.

Harappa seal signifies फडा *phaḍā* 'metals manufactory' *sēṇa* 'eagle' rebus *sena* 'thunderbolt'

<https://tinyurl.com/yar94t7p>

See:

Homa bird, श्येन *śyena*, *sēṇa* brings down Soma. Sellers of Mujavata Soma. Indus Script evidences बहुसुवर्णक, *bahusuvarṇaka* Soma *Samsthā yāga*. <https://tinyurl.com/yb72o7za>



Harappa seal h166A,

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

फडा (p. 313) *phaḍā* f (फटा S) The hood of Coluber Nāga &c. Ta. *patam* cobra's hood. Ma. *paṭam* id. Ka. *peḍe* id. Te. *paḍaga* id. Go. (S.) *paṛge*, (Mu.) *baṛak*, (Ma.) *baṛki*, (F-H.) *biṛki* hood of serpent (Voc. 2154). / Turner, CDIAL, no. 9040, Skt. (s)*phaṭa*-, *sphaṭā*- a serpent's expanded hood, Prākṛtam. *phaḍā*- id. For IE etymology, see Burrow, The Problem of Shwa in Sanskrit, p. 45.(DEDR 47) Rebus: *phaḍa* फड 'manufactory, company, guild, public office', keeper of all accounts, registers.

dhanga '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).

eraka 'wing' (Telugu) Rebus: *erako* 'molten cast' (Tulu) *loa* 'ficus'; rebus: *loh* 'copper'. *Pajhar* 'eagle'; rebus: *pasra* 'smithy'.

kanda 'fire-altar'. *khamba* 'wing' rebus: *kammaṭa* 'mint'. *gaṇḍa* 'four' Rebus: *khaṇḍa* 'metal implements. Together with cognate *ancu* 'iron' *amśu* 'Soma' (Ṛgveda) the message is: native metal implements mint.

श्येन [p= 1095,2] m. a hawk, falcon, eagle , any bird of prey (esp. the eagle that brings down सोम to man) RV. &c; firewood laid in the shape of an eagle Śulbas. (Monier-Williams) *śyēnā* m. ‘ hawk, falcon, eagle ’ RV. Pa. *sēna* -- , °aka -- m. ‘ hawk ’, Pk. *sēna* -- m.; WPah.bhad. *śeṇ* ‘ kite ’; A. *xen* ‘ falcon, hawk ’, Or. *seṇā*, H. *sen*, *sē* m., M. *śen* m., *śenī* f. (< MIA. **senna* --); Si. *sen* ‘ falcon, eagle, kite’(CDIAL 12674) Rebus: *sena* 'thunderbolt' (Sinhala):

aśāni f. ‘ thunderbolt ’ RV., °nī -- f. ŚBr. [Cf. *áśan* -- m. ‘ sling -- stone ’ RV.] Pa. *asanī* -- f. ‘ thunderbolt, lightning ’, *asana* -- n. ‘ stone ’; Pk. *asaṇi* -- m.f. ‘ thunderbolt ’; Ash. *ašī* ‘ hail ’, Wg. *ašē*~, Pr. *išī*, Bashg. "azhir", Dm. *ašin*, Paš. *ášen*, Shum. *ä'sin*, Gaw. *išin*, Bshk. *ašun*, Savi *išin*, Phal. *āšun*, L. (Jukes) *ahin*, *awān*. (both with n, not ṇ), P. *āhiṇ*, f., *āhaṇ*, *aihaṇ* m.f., WPah. bhad. *āṇ*, *hiṇi* f., N. *asino*, pl. °nā; Si. *sena*, *heṇa* ‘ thunderbolt ’ Geiger GS 34, but the expected form would be *āṇ; -- Sh. *aiyē*’r f. ‘ hail ’ (X ?). -- For ‘ stone ’ > ‘ hailstone ’ cf. upala -- and A. xil s.v.silā’ -- . (CDIAL 910) *vajrāśāni* m. ‘ Indra's thunderbolt ’ R. [vájra -- , aśāni --]Aw. *bajāsani* m. ‘ thunderbolt ’ prob. ← Sk.(CDIAL 11207)

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

<https://tinyurl.com/y8me6tze>

All cognates: *phaṭā* 𑀧𑁆𑀭𑀸𑀓 (Sanskrtam), *phaḍā* 𑀧𑁆𑀭𑀸𑀓 (Marathi), *paṭam* (Tamil. Malayalam), *paḍaga* (Telugu) have the same meaning: cobra hood. Rebus words/expressions which signify 'manufactory, metals workshop' are: *bhaṭṭh* m., °*thī* f. ‘ furnace’, *paṭṭatai*, *paṭṭarai* 'anvil, smithy, forge', *paṭṭade*, *paṭṭaḍi* '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 Gaṇeśa of Gardez, with the Indus Script hypertexts of cobra hood and elephant-face ligature to a human body attesting to the significance of Gaṇeśa as the leader of the hosts performing ironwork (*karibha*, *ibha* 'elephant' rebus: *karba*, *ib* 'iron'); *phaḍā* 𑀧𑁆𑀭𑀸𑀓 'cobra hood' rebus: *phaḍā* 𑀧𑁆𑀭𑀸𑀓 'metals manufactory'; *mūṣa* 'mouse' rebus: *mūṣa* 'crucible'; *meḍ* 'step, dance step' rebus: *mēṛhēt*, *meḍ* '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*, *paṭṭaḍi* 'workshop' (Kannada) and *paṭṭatai*, *paṭṭarai* 'anvil, smithy, forge.'(Tamil). It is also possible to suggest a cognate *bhaṭṭh* m., °*thī* 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. [√bhraj] Pk. *bhaṭṭha* -- m.n. ‘ gridiron ’; K. *būṭhū* f. ‘ 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. ‘ distilling furnace ’; L. *bhaṭṭh* m. ‘ grain -- parcher's oven ’, *bhaṭṭhī* f. ‘ kiln, distillery ’, *awān*. *bhaṭh*; P. *bhaṭṭh* m.,

°thī f. ‘furnace’, *bhaṭṭhā* m. ‘kiln’; N. *bhāṭi* ‘oven or vessel in which clothes are steamed for washing’; A. *bhaṭā* ‘brick -- or lime -- kiln’; B. *bhāṭi* ‘kiln’; Or. *bhāṭi* ‘brick -- kiln, distilling pot’; Mth. *bhaṭhī*, *bhaṭṭī* ‘brick -- kiln, furnace, still’; Aw. lakh. *bhāthā* ‘kiln’; H. *bhaṭṭhā* m. ‘kiln’, *bhaṭ* f. ‘kiln, oven, fireplace’; M. *bhaṭṭā* m. ‘pot of fire’, *bhaṭṭī* f. ‘forge’. -- X *bhāstrā* - q.v. *bhrāṣṭra* --; **bhraṣṭrapūra* --, **bhraṣṭrāgāra* --. Addenda: *bhrāṣṭra* -- : S.kcch. *bhaṭṭhī kenī* ‘distil (spirits)’. (CDIAL 9656)

Hieroglyph:  (p. 313) *phaḍā* f. ( S) The hood of Coluber Nāga &c. Ta. *paṭam* cobra's hood. Ma. *paṭam* id. Ka. *peḍe* id. Te. *paḍaga* id. Go. (S.) *parge*, (Mu.) *barak*, (Ma.) *bar̥ki*, (F-H.) *bir̥ki* hood of serpent (Voc. 2154). / Turner, CDIAL, no. 9040, Skt. (s)*phaṭa*-, *sphaṭā*- a serpent's expanded hood, Prākṛtam. *phaḍā*- id. For IE etymology, see Burrow, The Problem of Shwa in Sanskrit, p. 45. (DEDR 47) Rebus: *phaḍa*  ‘manufactory, company, guild, public office’, keeper of all accounts, registers. A cognate expression for workshop, smithy, forge are the following expressions: Ta. *paṭṭatai*, *paṭṭarai* anvil, smithy, forge. Ka. *paṭṭaḍe*, *paṭṭaḍi* anvil, workshop. Te. *paṭṭika*, *paṭṭeḍa* anvil; *paṭṭaḍa* workshop. Cf. 86 Ta. *aṭai*. (DEDR 3865) Ta. *aṭai* prop. slight support; *aṭai-kal* anvil. Ma. *aṭa-kkallu* anvil of goldsmiths. Ko. *aṭ gal* small anvil. Ka. *aḍe*, *aḍa*, *aḍi* the piece of wood on which the five artisans put the article which they happen to operate upon, a support; *aḍegal*, *aḍagallu*, *aḍigallu* anvil. Tu. *aṭṭe* a support, stand. Te. *ḍā-kali*, *ḍā-kallu*, *dā-kali*, *dā-gali*, *dāyi* anvil. (DEDR 86) *adhikaraṇī* f. ‘*anvil’, *adhikaraṇa* -- n. ‘receptacle, support’ TUp. [√kr̥1]

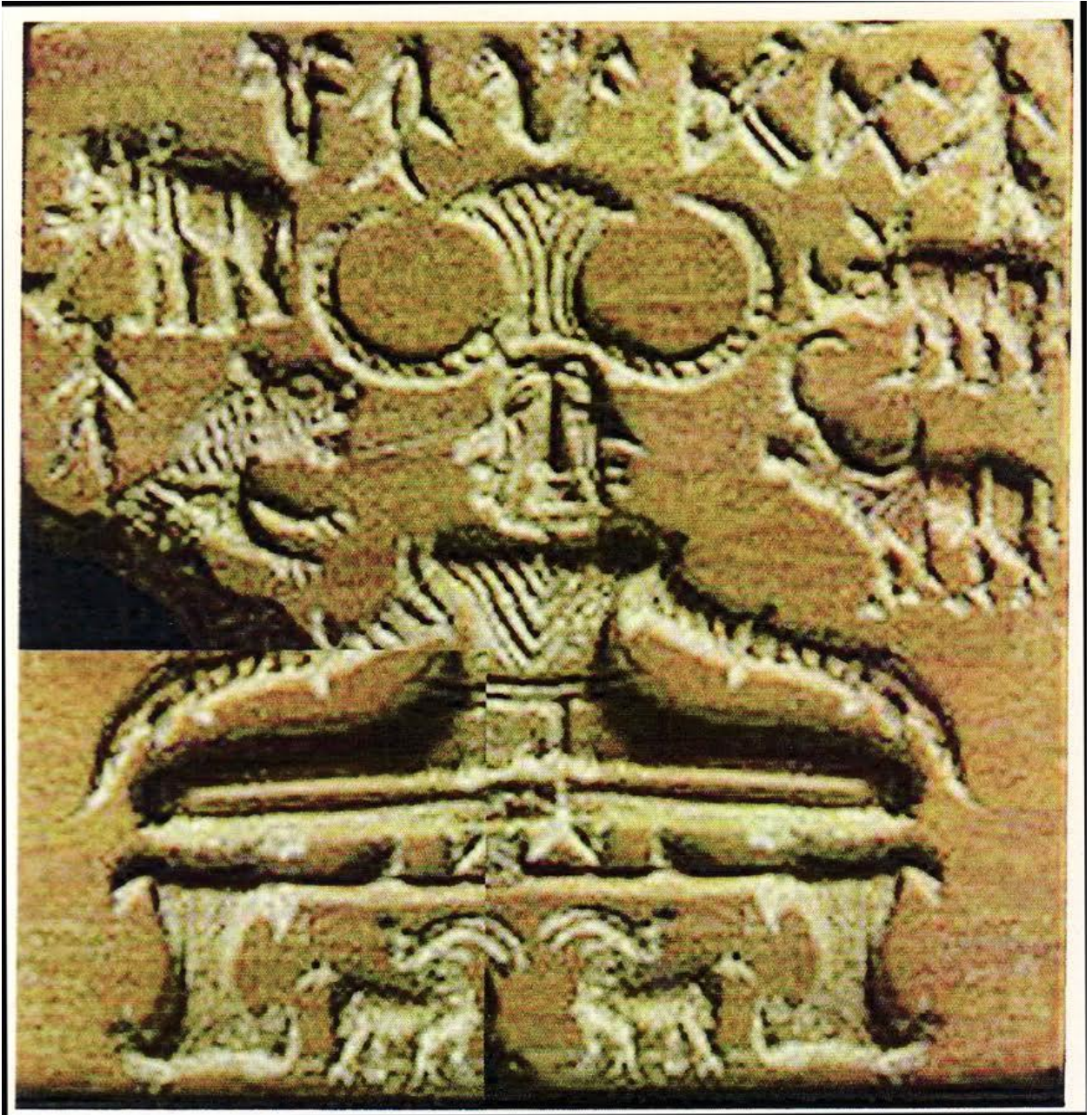
Pa. *adhikaraṇī* -- f. ‘smith's anvil’; Pk. *ahigaraṇī* -- f. ‘a piece of apparatus for a smith’; K. *yīran*, dat. *yūrūñ* f. ‘anvil’, S. *aharaṇi*, *araṇi* f., L. (Jukes) *ariṇ* f., awāṇ. &circmacrepsilon;run, P. *aihran*, *airan*, *āhran* f., WPah. *bhal*. *arhini*; roh. *er̥ne* ‘smithy’, N. *āran*; H. *aheran*, *āhran* m. ‘anvil’; -- H. Smith BSL 101, 115. Addenda: *adhikaraṇī* -- : S.kcch. *eṇ* f. ‘anvil’; WPah.kṭg. *n/ar̥ṇ*, *n/ar̥ṇi* f. ‘furnace, smithy’; ā’*r̥ṇ* m. prob. ← P. Him.I 4; jaun. *āran*, *airan*; G. *eraṇi* f. ‘anvil’, M. *aheran*, *ahiran*, *airan*, *airnī*, *haran* f. (CDIAL 252)

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

பட்டகசாலை *paṭṭaka-cālai*, n. < T. *paṭa- śāla*. [K. *paṭṭasāle*.] 1. Central or principal hall in a house; கூடம். Loc. 2. Dining hall adjoining a house; மனையில் உண்ணுமிடம். Nāṭ. chetti.

ಪಟ್ಟಸಾಲೆ *paṭṭa-sāle*. = ಪಟ್ಟಶಾಲೆ (Śmd. 376). A reading-hall (Abh. P. 7, after 47; V. 4, 54).

Hieroglyph pair which support the platform of the person seated in penance (Mohenjo-daro Seal m0304):   *paṭṭatai* ‘corn-rick’ Rebus: *paṭṭaḍi* ‘smithy, forge’ (Kannada) Rebus: *phaḍā*  ‘metals manufactory’.



Moenjo-daro seal m0304

Hypertext of bottom register, platform:.. *dula* 'pair' rebus: *dul* 'metalcasting' PLUS *miṇḍāl* 'markhor' (Tōrwālī) *meḍho* a ram, a sheep (Gujarati)(CDIAL 10120) Rebus: *mērhēt*, *meḍ* 'iron' (Munda.Ho.) *med* 'copper' (Slavic) PLUS பட்டடை¹ *paṭṭaṭai* 'corn-rick' Rebus: *paṭṭaḍi* 'smithy, forge' (Kannada) Rebus: *phaḍā* फडा 'metals manufactory' *kamaḍha* 'penance' rebus: *kammaṭa* 'mint, coiner, coinage'. *karā* n. pl.wristlets, bangles:rebus: *khār* 'blacksmith'.

பட்டடை¹ *paṭṭaṭai*, n. prob. படு¹- + அடை¹-. 1. [T. *paṭṭika*, K. *paṭṭaḍe*.] Anvil; அடைகல். (பிங்.) சீரிடங்காணி னெறிதற்குப் பட்ட டை (குறள், 821). 2. [K.

paṭṭaḍi.] Smithy, forge; கொல்லன் களரி. 3. Stock, heap, pile, as of straw, firewood or timber; குவியல். (W.) 4. Corn-rick, enclosure of straw for grain, wattle and daub, granary; தானியவுறை. (W.) 5. Layer or bed of olas for grain; தானியமிடுற்கு
 ஓலைகளாலமைத்த படுக்கை. (W.) 6. Anything held against another, as a support in driving a nail; prop to keep a thing from falling or moving; ஆணி முதலியன
 செல்லுதற்கு அடியிலிருந்து தாங்குங் கருவி. (W.) கொல்லன்பட்டடை *kollan-paṭṭai*, n. < கொல்லன் + Anvil; அடைகல். (C. G.)

கொல்லன்பட்டரை *kollan-paṭṭarai*, n. < id. +. Blacksmith's workshop, smithy;
 கொல்லன் உலைக்கூடம்.

பட்ட *paṭṭa*. (= பட்ட). It is one of the *tatsamas* (Śmd. 384; Ct. II, 480; Kk. 95; Śm. 77). Cloth. 2, = பட்டி 2, பட்டி 2, பட்டி 2, பட்டி 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 டாஃ-) or elephant; and the *purôhita* affixes it to the forehead of the bride and bridegroom at marriages (My.); the chief office of the state, royalty; a royal throne; dignity, authority, office. 6, a place where four roads meet; see பது:பட்டி. 7, = பட்ட No. 3, a curtain or screen; see பூர்பட்டி. 8, = பட்ட No. 10. See பகடைய பட்டி. 9, = பட்டி, a city, town, village. அமூனவரு பட்டி, அயூனவரு பட்டி (Prv.). See Śmd. 155. 292; சீய்ப்பட்டி, பரிபட்டி, மூலப்பட்டி; Āpr. 4, 14. 25; J. 8, 24; 16, 1. — பட்டி சட்டி. To tie the frontlet of dignity or authority, etc. (to a person's forehead, Bp. 44, 32; 56,

6; My.). ಪಟ್ಟ ಕಟ್ಟಿದರೂ ಪಟ್ಟು ಹೋಗಲಿಲ್ಲ (Prv.). — ಪಟ್ಟಕ್ಕೆ ಕುಳಿತು ಕೊಳ್ಳು. To sit down on or come to the throne (My.; B. 4, 3. 79). — ಪಟ್ಟಕ್ಕೆ ಕೂಡಿರಿಸು. To place on the throne (B. 5, 42. 48. 57; My. as -ಕೂಡಿಸು). — ಪಟ್ಟ ಕೊಡು. To grant any dignity or office (My.). ದೇವರಾಜನು ಒಬ್ಬ ಶ್ರೀವೈಷ್ಣವದ್ರಾಹ್ಮಣನಿಗೆ ಪ್ರಧಾನಿಪಟ್ಟ ಕೊಟ್ಟು (B. 4, 81). — ಪಟ್ಟ ಗರ್ವುಗಿ. (Śmd. 385). A throne. — ಪಟ್ಟಗೊಡೆ. -ಕೊಡೆ. (Śmd. 385. Mdb., o. r. ಪಟ್ಟಗಾಡೆ, which appears also Kk. 99). Silk raiment, etc. — ಪಟ್ಟಂಗಟ್ಟು. -ಂ-ಕಟ್ಟು. = ಪಟ್ಟ ಕಟ್ಟು. (Bp. 2, 25; Rāv. 4, 119). — ಪಟ್ಟದ ಚರ. = ಪಟ್ಟದ ಯ್ಯ. (V. 8, after 25). — ಪಟ್ಟದ ಮೇಲಿನ್ನ ತೆಗದು ಹಾಕು. To throw from the throne, to dethrone (B. 5, 52; My.). — ಪಟ್ಟದ ಮೇಲೆ ಕುಳಿತು ಕೊಳ್ಳು. = ಪಟ್ಟಕ್ಕೆ - . (B. 4, 3; My.). — ಪಟ್ಟದಯ್ಯ. -ಅಯ್ಯ. A jaṅgama who has been formally installed as a spiritual guide or principal of a maṭha (My.). — ಪಟ್ಟದರಸಿ. -ಅರಸಿ. The first or properly consecrated wife of a rāja, the queen (ಮಹಿಷ Mr. 301). — ಪಟ್ಟದರಸು. -ಅರಸು. A formally installed king (J. 31, 50). — ಪಟ್ಟದ ರಾಣಿ. = ಪಟ್ಟದರಸಿ. (J. 1, 4; 28, 14; Śi. 182, 183;

C.). — ಪಟ್ಟವಾಣಿ. -ಅನೆ. An elephant with a patta on its forehead: a distinguished elephant, or a king's favourite, or a white elephant (ಪಟ್ಟವರ್ಧನಗಜ, ಪುನ್ನಾಗ Nn. 61). — ಪಟ್ಟಪುಣಿಜ. (ಕರ್ಣಾಟಕ, ತತವದಿ Nr., see ಚಿದಿಲಿ). — ಪಟ್ಟವಣಿ. -ಮಣಿ. (Śmd. 385; Kk. 99). A throne (ಗದ್ದುಗೆ, ನರೇಂದ್ರಾಸನ Ūt. II, 51; ಸಿಂಹಪೀಠ 87; ಬಿತ್ತರಿಗೆ, ಸಿಂಹಾಸನ Śa.; ಗದ್ದುಗೆ, ಸಿಂಹಾಸನ Kk. 26; ಗದ್ದುಗೆ, ಸಿಂಹಾಸನ Śm. 37). See Ūpr. 6, 58; 6, after 71; Abh. P. 3, after 83; Rēv. 4, after 55; 6, after 10; 10, after 5. — ಪಟ್ಟವಾಗು. -ಅಗು. Royal power, etc. to come into one's possession (My.). ಅತನ ಮಗನಿಗೆ ಪಟ್ಟವಾಯಿತು (B. 4, 3). — ಪಟ್ಟವೇರು. -ಎರು. To ascend the throne (My.; B. 4, 8. 216; 5, 50).

ಪಟ್ಟಕಾನ್ತಾರ ಪಾಟಾ-ಕಾಂತಾರ. A large forest (Ūpr. 5, after 39; see ಪಟ No. 4).

ಪಟ್ಟಗೆ ಪಾಟಗಠ. (fr. ಪಟ 1). = ಪಟ್ಟಗೆ 1, etc. Obtaining, catching, incurring, undergoing, etc. (cf. ಪಟ್ಟತನ). See ಮೂಗುವಟ್ಟಗೆ.

ಪಟ್ಟಡಿ ಪಾಟು 2-ಅಡಿ 4. = ಪಟ್ಟಡೆ, q. v. (My.; Śi. 399). 2, = ಪಟ್ಟಡಿಮನೆ (My.). — ಪಟ್ಟಡಿಮನೆ. A workshop (ಅವೇಶನ, ತಿಲ್ಲಾಣಿ Śi. 108; My.).

ಪಟ್ಟಡೆ ಪಾಟಡಠ. (ಪಟ್ಟು 2-ಅಡಿ 8). = ಪಟ್ಟಡಿ. An anvil, etc. (My., Tē.; T. ಪಟ್ಟಡ್ಡೆ, ಪಟ್ಟಡ್ಡಿ).

ಪಟ್ಟಣ ಪಾಠನಾ = (ಪಟ್ಟ No. 9), ಪಟ್ಟನ. Tbh. of ಪತ್ತನ (Smd. 363. 364; ನಗರ Nn. 22. 40; ಪುರ 23; My.; Tē., T.). ಪಟ್ಟಣಕ್ಕೆ ಅರಸು ಬಲ, ಕಟ್ಟಣಕ್ಕೆ ಕಲ್ಲು ಬಲ. — ಪಟ್ಟಣಕ್ಕೆ ಹೋದರೂ ಕುಡ್ಡೋದು ತನ್ನದು. — ಪಟ್ಟಣದಲ್ಲಿ ಪಟ್ಟಾಭಿಷೇಕವಾದರೆ ನಟ್ಟವನು ಲ್ಲಿದ್ದವರಿಗೆ ಏನು? (Prvs.). See ಸಂಸ್ಥಾನಪಟ್ಟಣ, ಸನ್ನೆ ಪಟ್ಟಣ.

ಪಟ್ಟಣಿಗೆ ಪಾಠನಿಗ್ಠೆ. Cloth; dress, attire (ಹುಟ್ಟಿಗೆ, ದುಗುಲ, ಉಕ್ಕುಡಿಗ್ಗೆ, ವಸನ ಕೀ.; Čpr. 8, after 4; 8, 52; Abh. P. 3, 72).

ಪಟ್ಟತನ ಪಾಠತನಾ. (fr. ಪದು 1). Obtaining, incurring, feeling, etc. ಧೀರ ಪಟ್ಟತನ (ಫೈರ್ಯ No. 106).

ಪಟ್ಟನ ಪಾಠನಾ. = ಪಟ್ಟಣ. (Sk.).

ಪಟ್ಟನೆ ಪಾಠನೇ. = ಪಟಾರನೆ, etc. (My.). ಇದಾವೆಗಳನ್ನು ಪಟ್ಟನೆ ಬಡಿದು (B. 2, 43).

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

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

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

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

ಪಟ್ಟಲೆ ಪಾಠಲೆ. A district, a community. (R.).

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

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

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

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

ಪಟ್ಟಲೆ patṭalē. A district, a community. (R.).

ಪಟ್ಟವರ್ಧನ patṭa-varḍhana. (Śmd. 385). Elevated by the patṭa: a distinguished elephant (ಪುಷ್ಪಾಂಗ II, 50; Śm. 38; Kk. 92; Āpr. 2, after 91). 2, a vaidika Brāhmaṇa of much reading, but devoid of any practical knowledge (My.).

ಪಟ್ಟವರ್ಧನಗಜ patṭavarḍhana-gaja. = ಪಟ್ಟವರ್ಧನ (ಪುಷ್ಪಾಂಗ ಪಟ್ಟವಾಣಿ Nn. 61).

ಪಟ್ಟವರ್ಧನನಾರಸಿಂಹ patṭavarḍhana-nārasimha. N. (Bp. 56. 84).

ಪಟ್ಟಸರ patṭa-sara. (Śmd. 385). = ಪಟ್ಟಸರ. A large tank.

ಪಟ್ಟಶಾಲೆ paṭṭa-śālē. = ಪಟ್ಟಶಾಲೆ. A reading-hall (Čpr. 1, 117). 2, a silk-shop.

ಪಟ್ಟನ paṭṭasa. Tbh. of ಪಟ್ಟನ. (J. 12, 24).

ಪಟ್ಟನರ paṭṭa-sara. (Kk. 99). = ಪಟ್ಟನರ.

ಪಟ್ಟನಹನಿ paṭṭa-saṇṇi. A distinguished groom (Grj. 2, after 106; Rāv. 13, after 61).

ಪಟ್ಟಸಾಲಿಗ paṭṭa-sāliga. (Śmd. 233). A silk-weaver.

ಪಟ್ಟಶಾಲೆ paṭṭa-śālē. = ಪಟ್ಟಶಾಲೆ (Śmd. 376). A reading-hall (Abh. P. 7, after 47; V. 4, 54).

ಪಟ್ಟಳೆ paṭṭaḷē. (Tbh. of ಪಟ್ಟಳ). A jar (ಕರಗ Ūt. II, 88).

ಪಟ್ಟಲೆ paṭṭaḷē. (= ಪಟ್ಟ 1 No. 2). The broad strap tied round an ox's or horse's body, a girth, a martingal (ಉರಪಾತ Mr. 350; Tē. ಪಟ್ಟಲ, ಪಟ್ಟಲೆ; cf. ಪಟ್ಟ 3, No. 2; ಪಟ್ಟ 1, No. 3).

ಪಟ್ಟಾ paṭṭā. 1. = ಪಟ್ಟ 3, ಪಟ್ಟಯ. A long and broad sword (Mhr., H.; Tē. ಪಟ್ಟಯ, ಪಟ್ಟ, ಪಟ್ಟಸ; T. ಪಟ್ಟಯ; M. ಪಟ್ಟಯ, ಪಟ್ಟಸ = 8k. ಪಟ್ಟನ). — ಪಟ್ಟಾಕತ್ತಿ. = ಪಟ್ಟಾ. (My.; Si. 289). — ಪಟ್ಟಾವರನೆ. Brandishing of a paṭṭā (My.).

ಪಟ್ಟಿಕೆ paṭṭikē. = ಪಟ್ಟಿಗೆ, ಹಟ್ಟಿಕೆ. A tablet; a plate of metal; a kind of necklace (see ಲೇವಳ). 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 (Tc., = ಪಟ್ಟಿ 3 No. 2). See ಚರ್ಮ-, ದ್ವಿ-, ರತ್ನ-.

ಪಟ್ಟಿಗೆ paṭṭigē. 1. = ಪಟಿಸೆ, ಪಟ್ಟಸೆ, ಪೊಟ್ಟಸೆ. See ಗರವಟ್ಟಿಗೆ.

ಪಟ್ಟಿಗೆ paṭṭigē. 2. = ಹಟ್ಟಿಸೆ, q. v. See ಪರಣವಟ್ಟಿಗೆ, ಮಸಣವಟ್ಟಿಗೆ. Cf. ಪಟ್ಟಿ 3.

ಪಟ್ಟಿಸೆ paṭṭigē. Tbh. of ಪಟ್ಟಿಕೆ. See ಗನ್ನವಟ್ಟಿಗೆ, ಜೋಗ-, ದು-, ದೂ-, ಮದ-, ರನ್ನ-. A woman's zone (My.; T., = ಪಟ್ಟಿ 3, No. 3).

ಪಟ್ಟಿಶ paṭṭiśa. = ಪಟ್ಟಸ. A sort of weapon, a kind of axe; a spear with a sharp edge (cf. ಪಟಿ 3, etc.).

ಪಟ್ಟಿಸ paṭṭiśa. = ಪಟ್ಟಿಶ. A spear with a sharp edge. 2, a certain feat of wrestlers (Śāv. 4, 75).

ಪಟ್ಟಡಿ paṭṭu 2-adi 4. = ಪಟ್ಟಡೆ, q. v. (My.; Si. 399). 2, = ಪಟ್ಟಡಿಮನೆ (My.). — ಪಟ್ಟಡಿಮನೆ. A workshop (ಅವೇಶನ, ಶಿಲ್ಪಶಾಲೆ Si. 108; My.).

ಪಟ್ಟಡೆ paṭṭaḍē. (ಪಟ್ಟು 2-ಅದೆ 8). = ಪಟ್ಟಡಿ. An anvil, etc. (My., Tc.; T. ಪಟ್ಟಡ್ಡೆ, ಪಟ್ಟಡ್ಡಿ).

फडपूस (p. 313) *phaḍapūsa* f (फड & पुसणें) Public or open inquiry. फडफरमाश or स (p. 313) *phaḍapharamāśa* or sa f (H & P) 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.

फडनिविशी or सी (p. 313) *phaḍaniviśī* or sī & फडनिवीस Commonly फड- निशी & फडनीस. फडनीस (p. 313) *phaḍanīsa* m (H) A 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 Kárkún of a district-cutcherry who had charge of the accounts &c. was called फडनीस.

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. See under फड. 3 A retail-dealer (esp. in grain).

फडझडती (p. 313) *phaḍajhaḍatī* f sometimes फडझाडणी f 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.

फड (p. 313) *phaḍa* m (H) 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 खेळण्या- चा 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. 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. Gaṇeśa *pratimā*, Gardez, Afghanistan is an Indus Script hypertext to signify Superintendent of *phaḍa* ‘metala manufactory’



Cloth worn on Gaṇeśa *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 Gaṇeśa 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, Gaṇeśa 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 Gaṇeśa on a sculptural panel. Kailasanatha Temple, Kanchipuram.

பட்டை paṭṭalē. (= பட்டி 1 No. 2). The broad strap tied round an ox's or horse's body, a girth, a martingal (ஸரபாச Mr. 350; Tē. பட்டை, பட்டி; cf. பட்டி 3, No. 2; பட்டி 1, No. 3).

பட்டம்¹ paṭam , n. < paṭa. 1. Cloth for wear; சீலை. (பிங்.) மாப்பட நூலின் றொகுதிக் காண் டலின் (ஞானா. 14, 21). 2. Painted or printed cloth; சித்திரச்சீலை. (பிங்.) இப்படத்தெழுது ஞான வாவி (காசிக. கலாவ. 2). 3. Coat, jacket; சட்டை. பட்டம்புக்கு (பெரும்பாண். 69). 4. Upper garment, cloak; போர்வை. வனப்பகட்டைப் பட மாக வரித்தாய் (தேவா. 32, 7). 5. Body; உடல். படங்கொடு நின்றவிப் பல்லுயிர் (திருமந். 2768).

On the cloth worn by Gaṇeśa 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: *loh* 'copper' PLUS *gaṇḍa* 'four' rebus: *khaṇḍa* 'implements' (*lokhaṇḍa* 'metal implements') PLUS *phaḍā* ஈடா rebus: *phaḍā* ஈடா 'superintendent of metals manufactory'. Thus, the hypertext is superintendent of metals manufactory, of copper metal implements.



Hieroglyph: பட்டம் paṭam, n. < pada. Instep; பாதத் தின் முற்பகுதி. படங்குந்திறிற்றல் (சூடா. 9, 53).

ஈடா phaḍā f (ஈடா S) The hood of Coluber Nāga Rebus: phaḍa ஈட 'manufactory, company, guild, public office', keeper of all accounts, registers.

pāṭ, °ṭā 'throne' Rebus: *paṭṭaḍa*, 'smithy/forge, bronze-iron metalworkshop guild, manufactory'.

ayo 'fish' PLUS *khambhaṛā* 'fish-fin' Rebus: *ayo kammata* 'iron mint'

Ta. *aṭi* foot, footprint, base, bottom, source, origin; *aṭimai* slavery, servitude, slave, servant, devotee; *aṭitti*, *aṭicci* maidservant; *aṭiyavaṇ*, *aṭiyāṇ*, *aṭiyōṇ* slave, devotee. Ma. *aṭi* sole of foot, footstep, measure of foot, bottom, base; *aṭima* slavery, slave, feudal dependency; *aṭiyāṇ* slave, servant; fem. *aṭiyātti*. Ko. *ary* foot (measure); *ac* place below; *acgaṛ* place beneath an object, position after the first in a row; *ac mog* younger son. To. *ory* foot. Ka. *aḍi* foot, measure of foot, step, pace, base, bottom, under; *aḍime* slavery; *aḍiya* slave. Koḍ. *aḍi* place below, down. Tu. *aḍi*

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.) argi underneath; argita lower (Voc. 33). Koṇḍa 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'

<https://tinyurl.com/yb72o7za> Homa bird, श्येन śyena, sēṇa brings down Soma. Sellers of Mujavata Soma. Indus Script evidences बहुसुवर्णक, bahusuvārṇaka Soma Samsthā yāga.

Tri-dhātu Gaṇeśa 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 Gaṇeśa venerated from the days of Ṛgveda. Veneration of Gaṇeśa dates back to Rīgvedic times (See RV 2.23 *sukta gaṇānām tvā gaṇapatim havāmahe kaviṃ kavīnām upamaśravastamam*). In the tradition of Bharatam Janam, gana are related to *kharva*, dwarfs as part of Kubera's nidhi; rebus: *karba* 'iron'. See:

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

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

Hieroglyph: फडा (p. 313) phaḍā f (फटा S) The hood of Coluber Nāga &c. Ta. paṭam cobra's hood. Ma. paṭam id. Ka. peḍe id. Te. paḍaga id. Go. (S.) paṛge, (Mu.) barak, (Ma.) baṛki, (F-H.) bīrki hood of serpent (Voc. 2154). / Turner, CDIAL, no. 9040, Skt. (s)phaṭa-, sphaṭā- a serpent's expanded hood, Prākṛtam. phaḍā- id. For IE etymology, see Burrow, The Problem of Shwa in Sanskrit, p. 45.(DEDR 47)

Rebus: फडा 'manufactory, company, guild, public office', keeper of all accounts, registers.

फडपूस (p. 313) phaḍapūsa f (फड & पुसणें) Public or open inquiry. फडफरमाश or स (p. 313) phaḍapharamāśa or sa f (H & P) 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.

फडनिविशी or सी (p. 313) phaḍaniviśī or sī & फडनिवीस Commonly फड- निशी & फडनीस.

फडनीस (p. 313) phaḍanīsa m (H) A 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 फडनीस.

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. See under फड. 3 A retail-dealer (esp. in grain).

फडझडती (p. 313) phaḍajhaḍatī f sometimes फडझाडणी f 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.

फड (p. 313) phaḍa m (H) 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 खेळण्या- चा 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.
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.

गणे* श a[p= 343,2] m. (= °ण-नाथ) N. of the god of wisdom and of obstacles (son of शिव and पार्वती , or according to one legend of पार्वती alone ; though गणे*श 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 गणे*शाय विघ्ने*श्वराय ; 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 गणे*श ,

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 Ya1jn5. 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' ib 'needle' (writing stylus) ibbo 'merchant'
4. मूष mūṣa [p= 827,2] rat, mouse Rebus: मूष mūṣa [p= 827,2] a crucible Ma1rkP. Kull. L.
5. दन्त danta [p= 468,2] an elephant's tusk , ivory MBh. R. &c Rebus: dhātu 'mineral ore'
6. मेढ 'dance-step' Rebus; मेढ्है, मेढ '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 minerals which are:

goṭa 'laterite, ferrite ore' poḷa 'magnetite, ferrite ore' bicha 'haemite, 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.

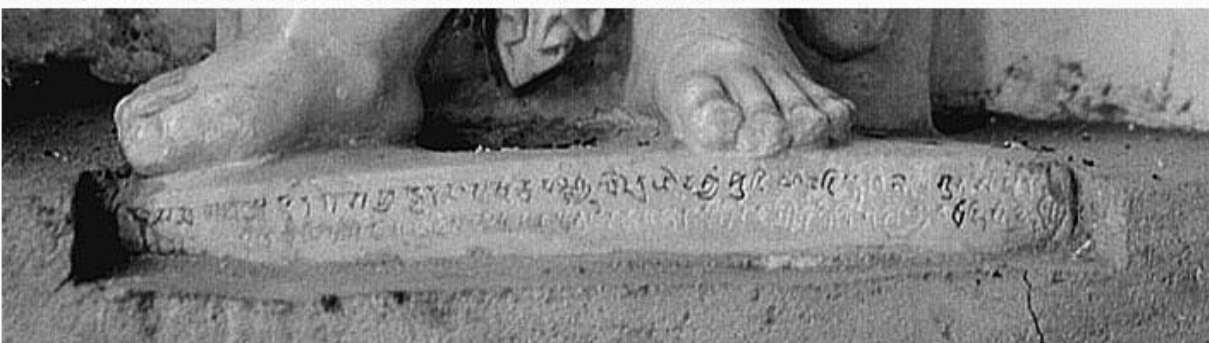
Historians divide the Shahi Period of Kabul/Gandhara into two eras: the so-called Buddhist Turk-Shahis (before 870 AD), and the so-called Hindu-Shahis (after 870 AD).

Despite numerous references to the Shahis as descendants 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>



Ganesha, Hindu-Shahi-Periode
Copyright © Dr. Volker Thewalt 1969 / 2001



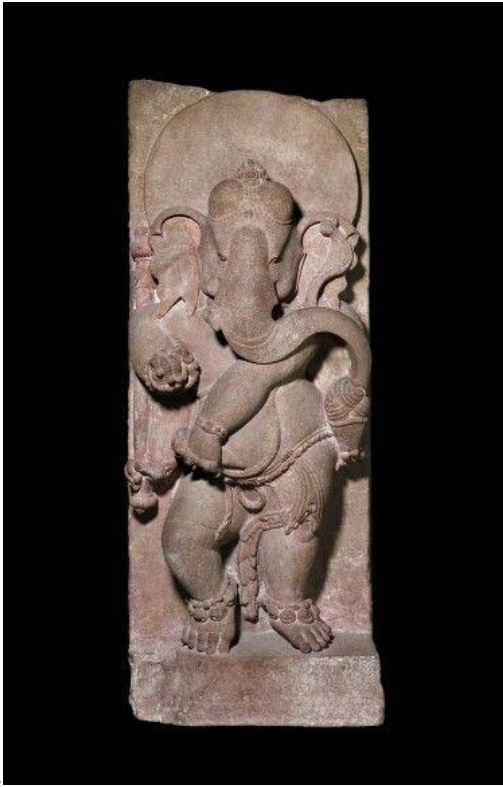
Inschrift am Sockel der Ganesha-Statue, Hindu-Shahi-Periode
Copyright © Dr. Volker Thewalt 1969 / 2001

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 Mahavinayaka" 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



Gaṇeśa. These cobra-hoods are also comparable to the glyphics shown on Sanchi sculptural frieze.

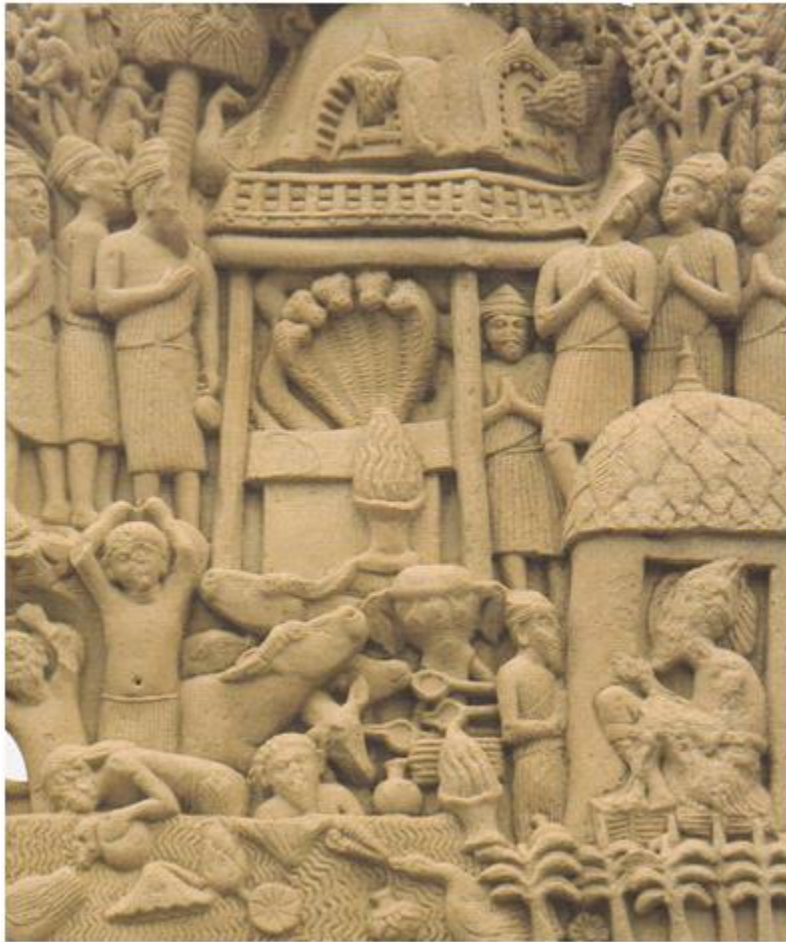


membrum virile of charioteer. Daimabad.

Cobra hoods arching over



ਫੜ, phaða, 'cobra hood' rebus: ਫੜ, phaða 'Bhāratīya arsenal of metal weapons lo 'membrum virile' rebus: loh 'copper'



Sanchi. Cobra hoods.

Southern pillar, East Torana.



Sanchi. Sculptural frieze. 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-avertter). (Ibid., p. 49)

For statement that "Fifty-nine manuscripts of the Ādiparvan were consulted for the reconstruction of the critical edition. The story of Gaṇeśa acting as the scribe for writing the Mahābhārata occurs in 37 manuscripts", see: Krishan, Yuvraj (1999), Gaṇeśa: Unravelling An Enigma, Delhi: Motilal Banarsidass Publishers, p.3, note 4 loc. cit.
<https://en.wikipedia.org/wiki/Gaṇeśa>

See: 'Omkara: the creation of Gaṇeśa' by Nanditha Krishna

http://www.india-seminar.com/2013/651/651_nanditha_krishna.htm

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.



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



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



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



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



Figure 5: *Ganesha under the Pipal tree.*



Figure 6: *Ganesha 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.

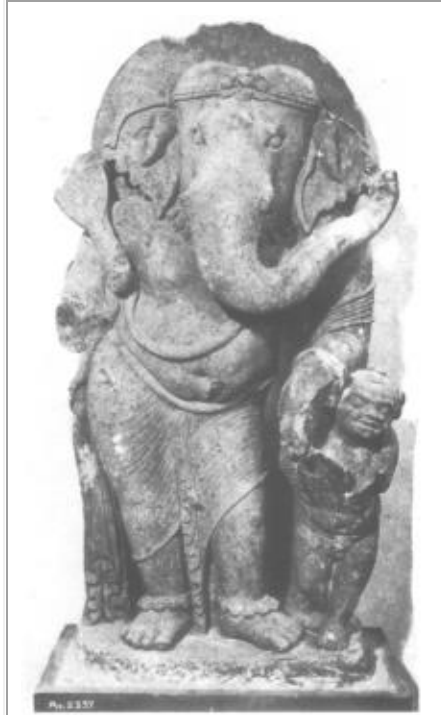


Figure 10: *Gaṇeśa, Samalaji, Gujarat, 5th century CE.*



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.

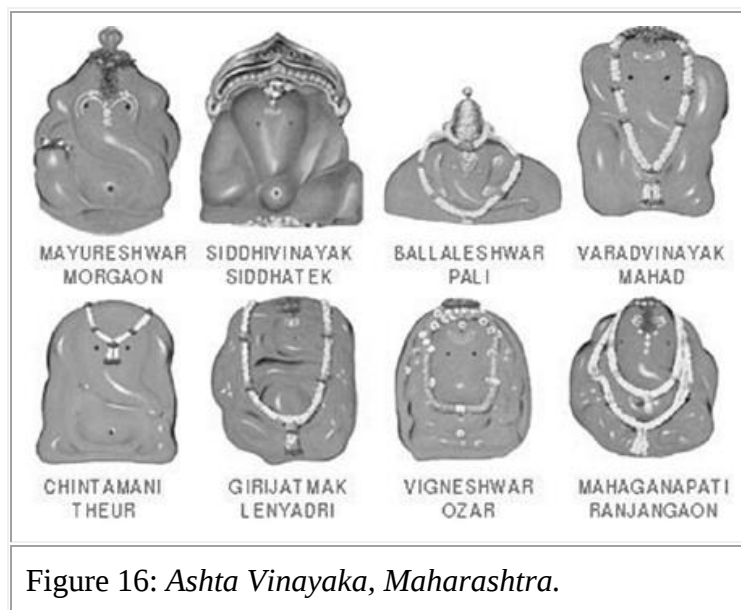


Figure 16: Ashta Vinayaka, Maharashtra.

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 paṇi, 'market')'; 2. lokhaṇḍa paṇe (paṇi) 'metal implements
production, metals quarry'. Thus, the charioteer is described to be a paṇikkaṇ, 'a metals worker, a
master metallurgical artificer'. Alternative: mēṇḍhra -- m. 'penis' (Samskritam)(CDIAL 9606)
rebus: मृदु mr̥du, mēṇhēt, 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: मेढा [mēṇḍhā] A crook or curved end (of a stick, horn &c.)
rebus: मृदुmr̥du, mēṇhēt, meḍ 'iron' meḍ 'iron, metal' (Ho.Mu.)

Ta. paṇṭi cart, waggon, carriage; vaṇṭi id., cartload; vaṇṭil cart, carriage, bandy, wheel; pāṇṭi cart
with a top, bullock cart; pāṇṭil two-wheeled cart, horse-drawn chariot. Ma. vaṇṭi, vaṇṭil wheel,
cart, bandy. Ko. vaṇḍy cart. To. poḍy bullock-cart. Ka. baṇḍi bandy, cart, carriage, wheel. Tu.
baṇḍi, bhaṇḍi cart. Te. baṇḍi carriage, cart, any wheeled conveyance. Kol. baṇḍi bullock-cart for
freight. Ga. (P. S.&super2;) baṇḍi cart. Kuwi (Su. Isr.) baṇḍi id. / Skt. (Hem. Uṇ. 608) Or. baṇḍi.
Ultimately from Skt. bhāṇḍa- goods, wares, as carrying these; for an IE etymology for bhāṇḍa-
,(DEDR 50)

Hieroglyph: dula 'pair' rebus: dul 'metal casting' PLUS pōlaḍu, 'black drongo' rebus: pōlāda
'steel', pwlād (Russian), fulādh (Persian) folādī (Pashto). पोलाद [pōlāda] n (or P) Steel. पोलादी a
Of steel. (Marathi) bulad 'steel, flint and steel for making fire' (Amharic); fULAd 'steel' (Arabic).

Hieroglyph: कोला (p. 105) kōlā m (Commonly कोल्हा) A jackal. For compounds see under कोल्हे.
कोल्हा (p. 105) kōlhā m A jackal, Canis aureus. Linn. कोल्हें (p. 105) kōlhēm n A jackal. Without
reference to sex. Pr. अडलें कोल्हेंमंगळ गाय Even the yelling jackal can sing pleasantly when he is
in distress. कोल्हें Ta. kol working in iron, lacksmith; kollan blacksmith. Ma. kollan blacksmith,
artificer. Ko. kole'l

smithy, temple in Kota village. To. kwala'l Kota smithy. Ka. kolime, kolume, kulame, kulime,
kulume, kulme fire-pit, furnace; (Bell.; U.P.U.) konimi

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

Hieroglyph: barad, 'bullock': balivārda (balīv° ŚBr.) m. 'ox, bull' TBr., balivanda- m. Kāṭh.,
barivarda -- m. lex. [Poss. a cmpd. of balín -- (cf. *balilla --) and a non -- Aryan word for 'ox'
(cf. esp. Nahālī baddī and poss. IA. forms like Sik. pādō 'bull' < *pādḍa -- : EWA ii 419 with
lit.)] Pa. balivadda -- m. 'ox', Pk. balīvadda -- , balidda -- , baladda -- m. (cf. balaya -- m. <
*balaka -- ?); L. baledā, mult. baled m. 'herd of bullocks' (→ S. baledo m.); P. bald, baldh,

balhd m. 'ox', baled, baledā m. 'herd of oxen', ludh. bahld, balēd m. 'ox'; Ku. balad m. 'ox', gng. bald, N. (Tarai) barad, A. balad(h), B. balad, Or. baḷada, Bi.barad(h), Mth. barad (hyper -- hindiism baṛad), Bhoj. baradh, Aw.lakh. bardhu, H. balad, barad(h), bardhā m. (whence baladnā 'to bull a cow'), G. baḷad m. balivardin -- .Addenda: balivārda -- [Cf. Ap. valivaṇḍa -- 'mighty', OP. balavaṇḍā]: WPah.kc. bōḷəd m., ktg. bōḷd m. (LNH 30 bōḷd), J. bald m., Garh. baḷda 'bullock'.(CDIAL 9176) Rebus: भरत (p. 353) bharata n A factitious metal compounded of copper, pewter, tin &c.; भरती (p. 353) bharatī a Composed of the metal भरत.; भरताचें भांडें (p. 353) bharatācē mbhāṇḍēm n A vessel made of the metal भरत. (Marathi)

karukku-pani embossed work (Ma.)(DEDR 1280) Ka. paṇe ground that is worked, tillage, quarry; paṇṇeya, paṇya farm, landed estate. Tu. (B-K.) paṇe quarry. (DEDR 3891) Ta. paṇ service, work, business, employment, decoration; paṇi act, action, performance, work, service, decoration; paṇati workmanship, action, creation, ornament; paṇiti work, structure, ornament; paṇikkaṇ master-builder, carpenter; paṇikkam, paṇikku accuracy of design, elaboration in a work; paṇinar servants; paṇpu action, deed; paṇṇu (paṇṇi-) to make, effect, produce, adorn; paṇṇu (paṇṇi-) to do anything with consideration and skill. Ma. paṇi work, labour, service, building, exertion; paṇikkaṇ workman, artificer; paṇiyuka to build; paṇiyan a caste of cultivators in hilly districts; game-trackers, living chiefly in Wynad; paṇṇuka, paṇṇikka vb. denoting coitus (obscene). Ko. paṇynman of a caste at Gudalur in Wynad; fem. paṇc; ? paṇ anvil. To. poṇy work. Ka. paṇṇu to make ready, prepare, equip, decorate; paṇṇika, paṇṇige, paṇṇuge arranging, making ready, equipping. Koḍ. paṇi work. Tu. paṇipuni to give a shape (e.g. to a vessel). Te. pani work, labour, act, deed, workmanship, art; (inscr.) paṇi work; pannu to contrive, plan, design, invent; (K. also) be ready, make ready; (K. also) n. suitability. Kol. (SR.) pannī work, labour. Nk. pani work. Pa. paṇḍp- (paṇḍt-) to make, do. Ga. (Oll.) paṇḍ- to be able. Go. (LSI, Kōi) paṇi, (Grigson) paṇi, (Ko.) paṇi work (Voc. 2092); paṇḍ- (G.) to build (house), (Mu.) to make, build, repair, (Ma.) to make, construct; (L.) paṇḍānā to make, repair (Voc. 2093). Konḍa paṇḍ- (-it-) to prepare, construct, devise, plan; paṇi work (DEDR 3884)

gaṇḍa set of four (Santali); rebus: kaṇḍ 'fire-altar, furnace' (Santali) rebus: kāṇḍa 'tools, pots and pans and metal-ware' (Marathi) खंडा [khaṇḍā] m A sort of sword. It is straight and twoedged. खांडा [khāṇḍā] m A kind of sword, straight, broad-bladed, two-edged, and round-ended. खांडाईत [khāṇḍāīta] a Armed with the sword called खांडा. (Marathi) PLUS phaṇin 'cobra hood' rebus: phaṇi 'tin or lead foil'.

Hieroglyph: lo 'penis Go<luGguy>(Z) [IUGguy'] {NB} ``male ^genitals, ^penis, ^scrotum".(Munda etyma) loe 'penis (Ho.) Rebus: loh 'copper, iron, metal' (Indian sprachbund, Meluhha) लोह [p= 908,3]mfn. (prob. fr. a √ रुह् for a lost √ रुध्, " 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: ``^penis':So. laj(R) ~ lij ~ la'a'j ~ laJ/ laj ~ kaD `penis.Sa. li'j `penis, esp. of small boys.

Sa. lO'j `peniś.Mu. lOe'j ~ lOGgE'j `peniś. ! lO'jHo loe `peniś.Ku. la:j `peniś.@(C289)
``^peniś':

Sa. lOj `peniś.Mu. lOj `peniś.KW lOj@(M084) <lO?Oj>(D),,<AlAj>(L)//<lAj>(DL) {N}
``^peniś'. #43901.

<ului>(P),,<uluj>(MP) {NB} ``^penis, male organ, male^genitals'. 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.
#33031.So<lO?Oj>(D),,<AlAj>(L)//<lAj>(DL) {N} ``^peniś'.<lohosua>(D) {NI} ``^dance".
#20141.

Hieroglyph: फणि 1 [p= 716,1] m. a serpent (only gen. pl. फण्/ईनाम्) Suparn2.; in comp. for
फणिन् m. " hooded " , a serpent esp. Coluber नाग) Ka1v. Katha1s.

Pur. phaṇin ' hooded (of snake, esp. cobra) ' Kathās. [phaṇá -- 1] Pk. phaṇi -- m. ' snake ' ; P.
phaṇī ' flat -- headed (of snake) ' ; A. phaṇī ' snake ' ; Or. phaṇī ' hooded ' , sb. ' snake ' ; H. phaṇī
' hooded ' ; G. phaṇī m. ' snake ' , Si. paṇiya.(CDIAL 9046) phaṇa1 m. ' expanded hood of snake
(esp. of cobra) ' MBh. 2. *phēṇa -- 2. [Cf. phaṭa -- , *phēṭṭa -- 2 and *phaṇati2. -- For mng. '
shoulder -- blade ' &c. cf. association of shape in phaṇāphalaka -- Bhartṛ. ~ aṁsaphalakā -- ŚBr.
and cf. phēṇa -- n. ' cuttlefish bone ' Car.] 1. Pa. phaṇa -- m. ' expanded hood of snake ' , Pk.
phaṇa -- m., °ṇā -- f.; Wg. paṇ -- śī ' big snake ' (+śai ' head ' ? NTS xvii 287); K. phan m. '
expanded hood of snake ' , S. phaṇi f., L.awāṇ. phaṇ, P. phaṇ, °ṇu f., ludh. phan m., WPah.
(Joshi) faṇ m., Ku. phaṇ, °ṇi, N. phani, A. phaṇā, B. phan, °ṇā, Or. phaṇā, Mth. phaṇā, Bhoj.
phan, H. phan, °ṇā m., G. pheṇ (< *phaṇi), phaṇī f., M. phaṇ m., °ṇī f., Si. paṇa, peṇa. -- S. phaṇi
f. ' shoulderblade ' ; H. phaṇī f. ' wedge ' ; G. phaṇo m. ' fore part of foot ' . 2. A. phenā '
expanded hood of snake ' , Or. pheṇā. phaṇin -- , phaṇakara -- .phaṇá -- 2 ' froth ' see phāṇita --
.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.ktg. phōṇ m. ' cobra's hood ' ;
Garh. phaṇ ' snake's hood ' . (CDIAL 9042) phaṇakara m. ' cobra ' lex. [Cf. phaṇākara -- , phaṇa-
dhara -- , phaṇādh° m. lex. -- phaṇa -- 1, kará -- 1]L. phaniar m., P. phanyar m., WPah. (Joshi)
fanā'r m. (all with n, not ṇ?) Addenda: phaṇakara -- : WPah.ktg. phōṇar m. ' cobra ' , J. fanā'r m.
(ktg. phōṇir m. poss. ← P. Him.I 127). (CDIAL 9043)

Rebus 1: tin or metal foil: फणिन् [p= 716,2] n. (prob.) tin or lead Ka1lac. paṇī f. ' tinfoil
' (Sindhi); P. pannā m. ' leaf, page ' , pannī f. ' gilt leather ' ; H. pān m. ' leaf ' , pannā m. ' leaf,
page ' , pannī 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, pāin, pāin a
surname? (CDIAL 8949)

Rebus 2: पाणि [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: <loha>(BD) {NI} ``^iron". Syn. <luaG>(D). *@. #20131) laúha -- ' made of copper or
iron ' GrŚr., ' red ' MBh., n. ' iron, metal ' Bhartṛ. [lōhá --] Pk. lōha -- ' made of iron ' ; L. lohā '

iron -- coloured, reddish ’; P. lohā ‘ reddish -- brown (of cattle) ’.lōhá 11158 lōhá ‘ 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. li°, lihi, obl. elhās, as. loa JGLS new ser. ii 258; Wg. (Lumsden) "loa" ‘ steel ’; Kho.loh ‘ copper ’; S. lohu m. ‘ iron ’, L. lohā m., awāṇ. lō`ā, P. lohā m. (→ K.rām. ḍoḍ. lohā), WPah.bhad. lōu n., bhal. lōtilde; n., pāḍ. jaun. lōh, pañ. luhā, cur. cam.lohā, Ku. luwā, N. lohu, °hā, A. lo, B. lo, no, Or. lohā, luhā, Mth. loh, Bhoj. lohā, Aw.lakh. lōh, H. loh, lohā m., G. M. loh n.; Si. loho, lō ‘ metal, ore, iron ’; Md.ratu -- lō ‘ copper ’.WPah.kṭg. (kc.) lóo ‘ iron ’, J. lohā m., Garh. loho; Md. lō ‘ metal ’. (CDIAL 11172).

lōhakāra m. ‘ iron -- worker ’, °rī -- f., °raka -- m. lex., lauhakāra -- m. Hit. [lōhá -- , kāra -- 1]Pa. lōhakāra -- m. ‘ coppersmith, ironsmith ’; Pk. lōhāra -- m. ‘ blacksmith ’, S. luhāru m., L. lohār m., °rī f., awāṇ. luhār, P. WPah.khaś. bhal. luhār m., Ku. lwār, N. B. lohār, Or. lohaḷa, Bi.Bhoj. Aw.lakh. lohār, H. lohār, luh° m., G. lavār m., M. lohār m.; Si. lōvaru ‘ coppersmith ’.WPah.kṭg. (kc.) lhwā`r m. ‘ blacksmith ’, lhwārī f. ‘ his wife ’, Garh. lwār m. (CDIAL 11159).lōhaghāṭa 11160 \*lōhaghāṭa ‘ iron pot ’. [lōhá -- , ghāṭa -- 1]Bi. lohrā, °rī ‘ small iron pan ’.\*lōhaphāla -- ‘ ploughshare ’. [lōhá -- , phā`la -- 1]WPah.kṭg. lhwā`l m. ‘ ploughshare ’, J. lohāl m. ‘ an agricultural implement ’ Him.I 197; -- or < †\*lōhahala -- .(CDIAL 11160) lōhala ‘ made of iron ’ W. [lōhá -- ]G. lohar, lohariyo m. ‘ selfwilled and unyielding man ’.(CDIAL 11161).\*lōhasālā ‘ smithy ’. [lōhá-- , sā`lā --]Bi. lohsārī ‘ smithy ’. (CDIAL 11162).lōhahaṭṭika 11163 *lōhahaṭṭika ‘ ironmonger ’. [lōhá -- , haṭṭa --] P.ludh. lōhṭiyā m. ‘ ironmonger ’.†*lōhahala -- ‘ ploughshare ’. [lōhá -- , halā --]WPah.kṭg. lhwā`l m. ‘ ploughshare ’, J. lohāl ‘ an agricultural instrument ’; rather < †*lōhaphāla -- .(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.



The hieroglyph on Seal m0304 ligatured to the buffal-horns of the seated person. Hieroglyph: *thattār* 'buffalo horn' Rebus: *tattār* 'brass worker' urukku, *n.* < உருக்கு-. [T. *ukku*, K. *urku*, M. *urukku*.] 1. Steel; எஃகு. (கூடா.) 2. Anything melted, product of liquefaction; உருக் கினபொருள். செப்புருக் கனைய (கம்பரா. கார்கா. 91). உருக்குத்

தட்டார் urukku-t-tattār, *n.* < id. +. Goldsmiths; பொற்கொல்லர். (சிலப். 5, 31, உரை.) பணித்தட்டார் paṇi-t-tattār, *n.* < id. +. Goldsmiths; பொற்கொல்லர். பணித்தட்டார் பணி பண்ணுமிடங்களில் (சிலப். 6, 135, உரை). தட்டார் பாட்டம் tattār-pāṭṭam, *n.* < தட் டான்¹ +. Profession tax on goldsmiths; தட்டார் இறுக்கும் அரசிறைவகை. (S. I. I. ii, 117.) தட்டாரப்பாட்டம் tattāra-p-pāṭṭam, *n.* < தட்டார் +. See தட்டார்பாட்டம். (S. I. I. iii, 115.) அட்டமுட்ட [tattumuttu] or அட்டமுட்ட *tattu-muttu*. [Tel.] *n.* Things, utensils, furniture, tools, household stuff. அட்டமுட்டாடு to surround (as poverty) அட்டமுடு. அட்டமுடு [tatrapuvāḍu] *tatrapuvāḍu*. [Tel.] *n.* A goldsmith.

Hieroglyph: kuṇḍa³ *n.* ‘ clump ’ e.g. *darbha* -- *kuṇḍa* -- Pāṇ. [← 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: (अग्नि-)कुण्ड, (*agni-*) *kuṇḍa* 'fire-pit'. *kuṇḍa* -- 1: S.kcch. *kūṇḍho* *m.* ‘ flower -- pot ’, *kūnnī* *f.* ‘ small earthen pot ’; WPah.ktg. *kūṇḍh* *m.* ‘ pit 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.*, °rī *f.* ‘ pot ’. (CDIAL 3264)

Glyph: clump between the two horns: *kuṇḍa* *n.* ‘ clump ’ e.g. *darbha*-- *kuṇḍa*-- Pāṇ. (CDIAL 3236). *kundār* turner (A.) (CDIAL 3295).. *n.* ‘ clump ’ e.g. *darbha*-- *kuṇḍa*-- Pāṇ. [← 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. *kwiḍy* 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) *goṇḍī* = mañjarī-; Turner, CDIAL, no. 3266; cf. also Mar. *gōḍā* cluster, tuft. (DEDR 2081) *kuṇḍī* = crooked buffalo horns (L.) rebus: *kuṇḍī* = chief of village. *kuṇḍi-a* = village headman; leader of a village (Pkt.) i.e. *śreṇi jeṭṭha* 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: *aḍar kuṭhi* 'native metal furnace'; *soḍu* '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. *miṇḍ* 'ram', *miṇḍāl* 'markhor' (CDIAL 10310) Rebus: *meḍ* 'iron' (Ho.); *med* 'copper' (Slavic) *kumḍa* -- n. 'heap of crushed sugarcane stalks' (Prakritam) Rebus: (*agni-*) *kuṇḍa* '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): $\square\square\square\square$ *paṭṭaṭai* 'corn-rick' Rebus: *paṭṭaḍi* 'smithy, forge' (Kannada) Rebus: *phaḍā* फडा '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 gold 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: *kuṇḍī* = chief of village. *kuṇḍi-a* = village headman; leader of a village (Pkt.lex.) I.e. śreṇi 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 kumḍa* '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: *mēṭhēt*, *meḍ* 'iron (metal)' 'copper' (Slavic languages).

Hieroglyph: Pk. *kumḍa* -- n. 'heap of crushed sugarcane stalks'; WPah. bhal. *kunnū* 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. [अस् m. L.], a bowl-shaped vessel, basin, bowl, pitcher, pot, water-pot Ka1tyS3r. MBh.&c;कुण्डी f. (Pa1n2. 4-1, 42) a bowl, pitcher, pot Hcat. Prasannar.; कुण्ड n. ifc. a clump (e.g. दर्भ-क्, a clump of दर्भ grass) Pa1n2. 6-2, 13

(Three-faced hieroglyph-multiplex, hypertext)



Glyphics 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 *Tvaṣṭṛ Triśiras* or *tri-dhātu mūh* 'face' Rebus *mūhā* 'iron furnace output' *kolom* '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 *dhāvḍ* 'iron-smelter'

Hieroglyph: *dhā'tu* 'strand' Rebus: mineral: *dhā'tu* n. 'substance' RV., m. 'element' MBh., 'metal, mineral, ore (esp. of a red colour)' Mn., 'ashes of the dead' lex., '*strand of rope' (cf. *tridhā'tu* -- 'threefold' RV., *ayugdhātu* -- 'having an uneven number of strands' KātyŚr.). [√dhā]Pa. *dhātu* -- m. 'element, ashes of the dead, relic'; KharI. *dhatu* 'relic'; Pk. *dhāu* -- m. 'metal, red chalk'; N. *dhāu* 'ore (esp. of copper)'; Or. *dhāu* 'red chalk, red ochre' (whence *dhāuā* 'reddish'; M.*dhāū*, *dhāv* m.f. 'a partic. soft red stone' (whence *dhāvḍ* m. 'a caste of iron -- smelters', *dhāvḍī* 'composed of or relating to iron'); -- Si. *dā* 'relic'; -- S. *dhāī* f. 'wisp of fibres added from time to time to a rope that is being twisted', L. *dhāī* f. (CDIAL 6773).

Rebus reading of the 'face' glyph: *mūhe* 'face' (Santali) *mūh* opening or hole (in a stove for stoking (Bi.); ingot (Santali) *mūh* metal ingot (Santali) *mūhā* = 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 mērhēt* = iron smelted by the Kolhes and formed into an equilateral lump a little pointed at each of four ends; *kolhe tehen mērhēt ko mūhā akata* = the Kolhes have to-day produced pig iron (Santali) *mleccha-mukha* (Skt.) = *milakkhu* 'copper' (Pali) The Sanskrit gloss *mleccha-mukha* should literally mean: copper-ingot absorbing the Santali gloss, *mūh*, as a suffix



Hieroglyph: *karā* n.pl. 'wristlets, bangles'. (Gujarati) S. *karāī* f. 'wrist' (CDIAL 2779) Rebus: *khār* खार् 'blacksmith' (Kashmiri)

sekeseke, *sekseke* covered, as the arms with ornaments; *sekra* those who work in brass and bell metal; *sekra sakom* a kind of armlet 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. *kāṇḍā* 'rhinoceros' rebus: *kaṇḍa* 'implements'

Mērhēf. Iron.
 Mērhēf iēna. The iron is rusty.
 Ispat mērhēf. Steel.
 Dul mērhēf. Cast iron.
 Mērhēf khaṇḍa. Iron 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) कौंद कौन्दा 'engraver, lapidary setting or infixing gems' (Marathi) Rebus: *kunda* 'nidhi', *kuṇḍaṇa* 'fine gold'
5. *meḍ* 'body' rebus: *meḍ* 'iron' *med* 'copper' (Slavic) *kaṇḍaka* '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) *kaṇḍaka* 'spread legs' rebus: *kaṇḍī* '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* खार् 'blacksmith' (Kashmiri)



4. *sal* stake, spike, splinter, thorn, difficulty (H.); *sal* 'workshop' (Santali) PLUS 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. [√kṛ1] Pa. *karaṇa* -- n. 'doing'; NiDoc. *karana*, *kaṁraṁna* 'work'; Pk. *karaṇa* -- n. 'instrument' (CDIAL 2790) *karṇī* '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: *karṇī* '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. *śreṇi 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 Gaṇeśa is a celebration of the superintendent of the gaṇa, '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 Ṛgveda 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 Takshasila to Anuradhapura and on Sohgaure 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)



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

S. Kalyanaraman

Sarasvati Research Centre

September 23, 2017.