

## DRAVIDIAN MODELS OF DECIPHERMENT OF THE INDUS SCRIPT: A CASE STUDY\*

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### Introduction

This paper offers a brief case study of the Dravidian models of decipherment of the Indus Script. The method adopted is to select one of the frequently occurring signs of the script and make a comparative and critical study of different interpretations of the sign proposed by scholars working within the Dravidian linguistic framework. For the purpose of the present paper, it will be assumed that the Harappan language was a form of Dravidian and that the Indus Script includes word signs. While these are still assumptions, there are good grounds to believe that they are likely to be true.

### The 'bearer' signs

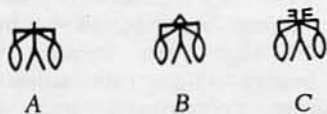


Fig. 1: The 'bearer' signs

The 'bearer' signs (Fig. 1) are among the more frequent anthropomorphic signs of the Indus Script.

Sign A is a clearly recognizable pictograph depicting a standing person carrying across his shoulders a long pole or yoke with loads slung from each end. Signs B and C are the principal modifications of the basic sign A with the ligaturing of the 'lance' and 'jar' signs respectively at the top. In this paper the signs illustrated in Fig. 1 will be referred to as the 'bearer' sign (A), the 'lance-bearer' sign (B) and the 'jar-bearer' sign (C), and collectively as the 'bearer' signs. Sign and Text Numbers and data are cited from my book *The Indus Script: Texts, Concordance and Tables* (1977).

### Pictographic Character of the 'bearer' sign

The pictographic character of the 'bearer' signs becomes obvious when one studies the graphic variants of the signs and their principal modifications (Fig. 2). The hands of the person holding the yoke are shown sometimes parallel to the yoke and at other times pointing upwards or downwards or bent at the elbows. The head of the person as well as his feet are occasionally depicted. In an unique example from Harappa

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(5123) the person seems to be wearing a robe and shoes with upturned toes. The loads are slung by ropes or sometimes directly attached to the pole. The loads are represented by larger or smaller ovals or circles or occasionally as triangles pointing upwards or downwards. In an unique example from Ur (9842) the loads are shown as waterskins, no doubt influenced by the West Asian tradition.


























				
7053	2293	2678	1563	2569
				
1360	4815	2421	8013	5515
				
5123	9842			
				
4036	1079	4254	2428	
				
1178	1475	4029	1287	5063
				
1436	4322	2108	1030	

Fig. 2: Graphic variants of the 'bearer' signs

### Frequency Distribution Analysis of the 'bearer' signs

The 'bearer' signs occur predominantly in the final position in the texts, as may be seen from the

following Table:

Position	Frequency		
	Sign A	Sign B	Sign C
Solus	1	-	3
Initial	1	-	1
Medial	9	2	30
Final	69	11	92
	<u>80</u>	<u>13</u>	<u>126</u>

Even in the medial positions, the 'bearer' signs are mostly quasi-final, that is, they are followed by a terminal sign (generally the so-called 'comb' sign) which is a separable suffix. In this respect the 'bearer' signs behave exactly like the 'jar' and the 'lance' signs showing that all of them belong functionally to the same class or category of signs. The affinity is revealed both graphically and syntactically; the 'bearer' sign is often found ligatured with the 'lance' or the 'jar' signs, especially with the latter. The 'bearer' signs can replace the 'lance' or 'jar' signs from otherwise identical texts. There are rare instances when the 'jar' sign is placed before the 'bearer' sign in a sequence instead of being ligatured. It is however possible that the two arrangements have different functions as the preceding sequences in either case are different. Another significant point is that even though the 'bearer' signs are mostly final, the 'jar bearer' sign can sometimes occur alone comprising the whole text (as in 2841) and also in quasi-initial positions, that is, where the preceding signs are clearly separable (as in 1178).

### Earlier Ideographic Interpretations of the 'bearer' sign

The earlier ideographic interpreta-

tions of the 'bearer' sign flowed naturally from the self-evident pictographic identification of the sign. Langdon described the sign as 'a man carrying a yoke with baskets'. After noting that the sign occurred commonly in the final position in the texts, he expressed the view that it was "clearly a determinative of a profession, builder, carrier, etc." (Langdon, ed. Marshall:1931). Hunter (1934) described the sign as a 'water-carrier', no doubt basing himself on West Asian parallels. Flinders Petrie (1932) also described the sign as a 'man bearing water skins on a yoke' and connected it with the meaning of 'water supply'. Meriggi (1934) interpreted the sign as an ideogram for a load or weight.

### Interpretations of Heras

Father Henry Heras (1953) was the earliest scholar to propose a Dravidian solution to the riddle of the Indus Script. He described the 'bearer' sign as a 'man lifting something' and proposed the following ideographic interpretations of the sign:

- tūk* : (1) to weigh, (2) scale,  
 (3) justice,  
*tūk-an* : (4) lifter, (5) teacher,  
*tūk-il* : (6) in the scale (sign  
 B in Fig.1)

The root *tūk* (DED 2777) does have the meanings 'to lift, weigh' though the choice is arbitrary, as it is only one of many possible alternatives, and not the best possible one either, since usage as recorded in DED does not associate this word with the meaning 'to carry as yoke'. The meaning 'scale' ('balance') is also possible, but there is no evidence of Dravidian usage of the symbol

'scale' to indicate the concept of 'justice'. 'Lifter' may be alright, but it is not clear how Heras derives the meaning 'teacher' therefrom. Heras does not provide examples from texts to illustrate any of these meanings. In the only text cited by him the 'bearer' sign is interpreted to mean 'the constellation or the month of the Scale'. There is no evidence that the Harappans had the same names for the stellar constellations as found in later Hindu or Greek astronomy. The attempted decipherment by Heras has not won general acceptance of the scholars in the field.

### Interpretation of the Finnish Team

It is interesting that the Finnish attempt to decipher the Indus Script (Parpola et al:1969) began with the 'bearer' sign when Pentti Aalto asked "can (this) be plural suffix?". Starting with this 'clue' and taking into account the frequency distribution characteristics of the signs, the Finnish Team proposed the following paradigm of case suffixes (Fig.3).




	Singular	Plural
Nominative	Zero	
Genitive	𑀓	
Dative	𑀔	

Fig. 3: Paradigm of case suffixes according to the Finnish Team (the earlier model).

According to the original proposal made by the Finns, the plural suffix ('bearer' sign) was to be read after the case suffixes (the 'jar' or 'lance' signs) as the ligatured signs are generally to be read from top to bottom.

When Dravidianists pointed out that this morphemic order did not exist in any Dravidian language, the Finns withdrew their earlier suggestion and proposed that as an exceptional case, these ligatures were to be read from bottom to top on the ground that graphically the reverse order (i.e. placing the 'bearer' sign on the top) would offend 'the principles of economy and aesthetics governing ancient scripts'.

The Finnish Team (Asko Parpola: 1970) interpreted the 'bearer' sign as a 'picture of a man with a carrying yoke' and suggested the following Dravidian homophones:

\* *kaṛi* : 'carrying yoke' (DED 1155)

=\* *kaṛi* : 'much' (DED 1144)  
 : "an originally independent word suffixed to denote the plural concept, which in course of time has become shortened resulting in the modern plural suffix - *kaṛi*".

The cases where the 'bearer' sign is placed after the 'jar' sign in sequence are explained by another set of homophones, vis.

\**kaṛi* : 'carrying yoke' (DED 1155)

=\**kaṛi* : 'to wash' (DED 1154),  
 (which is supposed to stand for 'bath', or ritual bathing).

There are several difficulties in accepting these interpretations. There is no evidence from any Dravidian language that *kaṛi* 'much' (DED 1144) was ever used as a plural marker. The word meaning 'much, in excess' does

not have the plural signification of 'more than one'. It is doubtful whether *-kaṛi*, as a single plural suffix can be reconstructed for PDr. This difficulty is not got over by the Finns' argument that the "universal tendency of suffixes is to become shortened (*\*kaṛi* > *kaṛi* > *ka*, *k*, *!*), not to become longer (*k*, *!* > *kaṛi*)" as it is doubtful whether *kaṛi*- and *-kaṛi* can be considered homophones at all. While the 'bearer' sign when succeeding (and not ligatured with) the 'jar' sign may have a different function, there is no evidence to connect such occurrences with the meaning 'bath'. There is also no usage connecting the word *kaṛu* 'bathe, cleanse' (DED 1154) with 'bath' (water 'tank'). It appears that the Finnish Team has become aware of the problems connected with their interpretations of the 'bearer' sign, which is also excluded from Parpola's 1976 paper on 'suggested semantic and phonetic values of selected Indus pictograms'. (See Postscript on the revised interpretations recently proposed by Asko Parpola 1981).

### Interpretation of the Soviet Team

Gurov (1968) pointed out the most apt word in Dravidian to describe the 'bearer' sign (designated as the 'porter' sign by the Soviet Team): *kā*: 'poles with ropes hung on each end used to carry loads on the shoulder, a yoke'. (DED. 1193). Gurov also resorts to the technique of homonymy to explain the intended meaning of the sign. The homophone selected by him is: *kā*: 'to guard, protect' (DED.1192). Gurov interprets the bearer sign accordingly to mean 'Protector', an epithet applied to deities in the so-called 'sacrificial' inscriptions (engraved on tiny tablets occurring at Harappa). Gurov further suggests that the sign could also



represent a 'protective formula' (like Ta. *kāval*, *kāppu*) when used on amulets or donative texts as in the case of later Indian inscriptions. As regards the phonetic value of the 'bearer' sign, Gurov has this to say: "We should add we do not attempt to reconstruct the 'real' morphological appearance of the proto-Dravidian (or 'Harappan') word. We only try to point out that in our opinion the sign corresponded in the 'Harappan' language to some word derived from the root \**kā*- with the same meaning as the old Tamil *kāppu*". Gurov also suggests that the 'jar bearer' sign when preceded by 'numerals' may be an ideogram with phonetic value corresponding to *kā* 'a weight, burden'.

There can hardly be any doubt that the suggestions made by Gurov are linguistically more sophisticated and much more persuasive than those of Heras or the Finnish Team. Gurov has identified not only the most apt Dravidian word to suit the pictographic significance of the 'bearer' sign, but also the most satisfying homophone from linguistic as well as cultural considerations. If Gurov can be shown to be right, the Dravidian character of the Indus Script would be conclusively established as the pair of homophones *kā*: 'to bear/to protect' occurs only in Dravidian. The question however is whether Gurov is right when he claims that "the appearance of the sign (A) with its variants (C and B) in the same position can hardly be explained from the extra-linguistic point of view".

At the outset one can point out that Gurov himself provides an 'extra-linguistic' alternative when he suggests the ideographic value of 'weight, burden' to the 'bearer' sign. Other scholars (not necessarily

working with the Dravidian hypothesis) like Meriggi (1934) and Kinnier-Wilson (1974) have suggested this ideographic interpretation. If the sign signifies a 'unit of weight' the homonymy suggested by Gurov becomes irrelevant and phonetic values other than *kā* 'burden, weight' become possible even within Dravidian. If the interpretation is not based on homonymy, the unique Dravidian solution suggested by Gurov cannot be established with certainty.

Another and more serious problem with Gurov's interpretation is his treatment of the 'bearer' sign as a substantive, but the 'jar' sign as a derivational morpheme (the Dr. oblique case \*-t in the Soviet model). This conflicts with the well-established fact arrived at by textual analysis that the 'jar' and the 'bearer' signs belong functionally to the same class or category of signs. As mentioned earlier they can replace each other in otherwise identical texts. The ligaturing of the 'jar' sign with the 'bearer' sign is unlikely to represent as common a grammatical feature as the addition of the oblique case suffix to form an oblique stem as there are only three other similar ligatured signs in the Indus Script. (signs 352, 353 and 394). The Finnish Team attempted to fit all the three signs ('jar', 'lance' and 'bearer') in an integrated paradigm of suffixes on the basis of observed functional similarity - an attempt which failed for other reasons as noticed earlier. It is possible to build an alternative model in which all the three signs are substantives but placed in textual positions for syntactical reasons. What does not seem permissible is to treat one of them as a substantive and the others as suffixes or derivational morphemes as attempted

by the Soviet Team.

### A New Ideographic Interpretation

I have presented my ideas on the 'bearer' signs in a series of earlier papers (Mahadēvan 1970, 1975, 1980, 1982) and I shall only briefly recapitulate them here for purposes of comparative study.

It is possible to study the inscriptions in the Indus Script and comprehend their context in a broad manner by observing the parallels between the ideograms in the script and their possible survivals in the later Indian tradition. Such parallels can be found both in the Indo-Aryan and the Dravidian traditions and can be explained on the basis of the substratum influence of the Harappan Culture on later traditions. The advantage of the method is that it is not necessary to make any *a priori* assumption about the linguistic affinity of the Harappan language. The limitation of the method is that the diversity of the later traditions would preclude us from assigning any specific phonetic values to the ideograms of the Indus script.

It appears possible to interpret the 'bearer' sign (depicting a person carrying a yoke across his shoulders) with reference to the 'bearer' and 'yoke' motifs occurring in later Indian tradition. The term 'bearer' is applied both in Indo-Aryan and Dravidian idiomatically to a person who 'shoulders' any responsibility or 'bears' the 'burden' of any office. Examples are skt. *bhartṛ*, 'husband' from *bhṛ* 'to bear' and *kāryavāhaka*, 'office-bearer' (from *vah*, 'to carry'). The 'yoke' words are *Yugamdhara* and *dhuramdhara* (lit, 'yoke bearers') used as honorifics. One should naturally look for such terms among the

royal and priestly families who wielded power and authority in ancient times. It is significant that the most famous royal and priest family of the Vedic and Epic periods bore the name 'Bharata' (lit., 'bearer'). The Śatavahanas also had names derived from the 'bearer' motif (from *vah*, to carry). In the Tamil country the Cheras were also called *poraiyar* (lit., 'bearers' from *poru* 'to bear'). Copper coins from the Travancore area of Kerala depicting the 'bearer' motif probably preserve the Chēra/Poraiyar tradition (Elliot:1886, No.197). On the basis of the evidence summarised above we can interpret the 'bearer' sign in the Indus Script when suffixed to names as an ideogram with the approximate meaning 'officer, functionary'.

A comparison between the Soviet model and the one proposed by me is instructive. Basically the difference is that the Soviet interpretation is phonetic and based on Dravidian homonymy, while mine is extra-linguistic and based on ideographic depiction and cultural survivals in the later tradition. Fig. 4 brings out the comparison clearly.

### Evidence in Support of the Proposed Ideographic Interpretation

The interpretation of the 'bearer' sign proposed by me has proved more productive than other models considered above and has led to accumulation of evidence throwing light on related group of signs. For the first time, we are able to establish credible parallels between the ideographic signs of the Indus Script and royal names and titles recorded in the later Indian traditions. Only some examples have been given here. What is more, the ligatured signs,

viz. 'jar-bearer' and 'lance-bearer' have exact parallels in the Andhra

royal names. The evidence is worth repeating here (Fig.5).

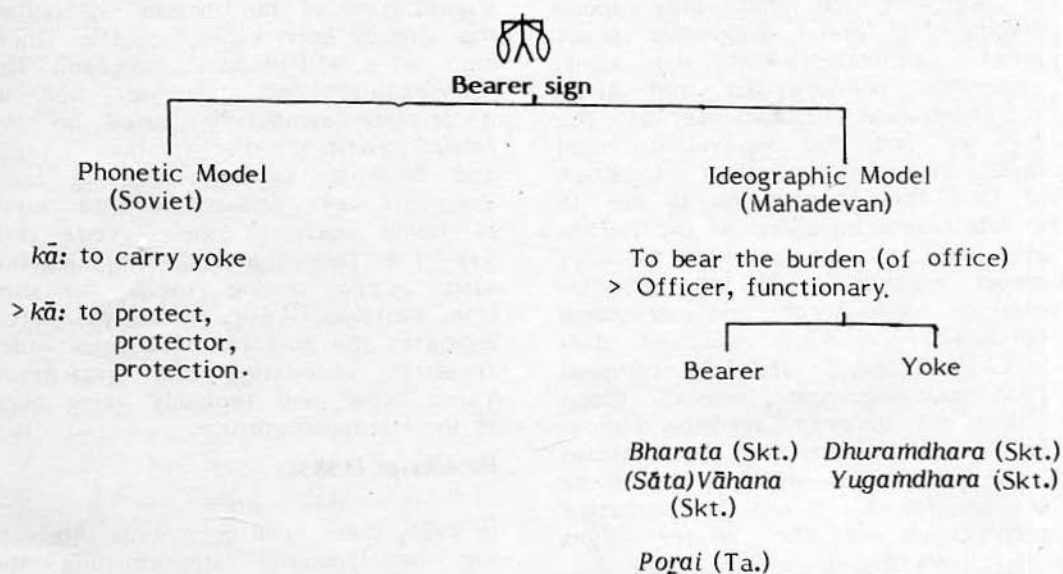


Fig. 4: Phonetic and ideographic models of interpretation of the 'bearer' sign.






Sign	Pictorial value	Equivalents in Sanskrit	Meaning
	Jar	<i>sata</i>	A kind of sacrificial vessel
	Lance	<i>salya</i>	Lance, Spear
	Bearer	<i>vahana</i>	Bearing, carrying
	Jar+Bearer	* <i>sata-vahana</i> > <i>Sātavāhana</i>	'Jar-bearing' n.pr of Andhra Dynasty
	Lance+Bearer	* <i>salya-vahana</i> > <i>Śālīvāhana</i>	'Lance-bearing' n.pr of Andhra Dynasty

Fig. 5: Indus Ideograms in Indian Historical tradition.

The striking parallels cited above have to be viewed with caution and circumspection. I am *not* suggesting that the Andhras ruled over the Harappan 'kingdom' or that they spoke Sanskrit! Nor am I suggesting exact phonetic equivalents of the signs. I am only pointing out that given the ideographic equivalents of the signs we get the equivalent royal names recorded in later tradition and that this phenomenon is due to the substratum influence of the Harappan culture and later survivals (possibly through loanwords and loan translations) in Indo-Aryan and Dravidian traditions. As I have explained elsewhere (Mahadevan 1982) the terminal signs including the 'bearer' group of signs are ideograms probably indicating the occupations and social status of the persons to whose names these signs are found suffixed. My tentative interpretation of the 'bearer' signs is as follows (Fig.6).






Sign	Pictorial value	Ideographic Meaning
	Jar (Sacrificial Vessel)	Priest
	Lance	Warrior
	Bearer	Officer, functionary
	Jar-bearer	Officer or functionary with priestly duties
	Lance-bearer	Officer or functionary with military duties

Fig. 6: Interpretation of the 'bearer' ideograms in the Indus Script.

It will be seen that the related signs ('bearer', 'jar' and 'lance' signs) are all treated as substantives and suffixed elements in name-formation. The signification of the 'bearer' symbolism has already been explained. The 'lance' sign is a self-evident ideogram. The interpretation of the 'jar' sign as a priestly symbol is based on the later tradition of 'jar-born' sages and Brahman families, starting from Vasishtha and Agastya as the myth is found even in the Rgveda (VII: 33). The fact that 'jar-born' legends also occur among royal dynasties (the Pallavas, Vēḷir, Chalukyas, etc.) indicates the survival of a priest-ruler tradition antedating the Indo-Aryan Varna order and probably going back to the Harappan culture.

#### Postscript (1983)

After this paper was presented in 1980, there have been some interesting developments strengthening the case for an ideographic interpretation of the bearer signs.

#### Revised Finnish Interpretation

Asko Parpola (1981) in his recent paper 'On the Harappan Yoke-Carrier Pictogram and Kāvāḍi Worship' has explicitly withdrawn the earlier Finnish Paradigm of case suffixes (Fig. 3) and has accepted the view that the terminal signs ('jar' and 'lance' signs) have to be regarded as substantives. His revised interpretation of these signs, based on Dr. Homonymy, are as follows:



	Possession
	Giving, gift

Fig. 7: Revised Finnish interpretation of the terminal signs.



Asko Parpola also gives up explicitly the earlier Finnish interpretations of the 'bearer' sign and turns towards an ideographic interpretation based on the pictorial motif of the 'Yoke-carrier'. After citing many iconographic and literary parallels from IA. and Dr. traditions, Parpola presents the following revised interpretations of the bearer signs (A and B):



-  "One who carries sacrificial offerings with a carrying Yoke with baskets or pots hanging from either end". (cf. Ta. *Kāvaḍi*).
-  "The bearer of a palanquin (of the deity)". (cf. Ta. *Kōḍiyān*: bearer of Palanquin).

Fig. 8: Revised Finnish interpretation of the 'bearer' signs.

It will be seen that Parpola's revised interpretations agree broadly with my approach in treating the 'jar' and 'lance' terminal signs as substantives and trying to ascertain the meanings of the 'bearer' sign ideographically with the help of both IA. and Dr. parallels. I consider this broad convergence of ideas as more important than the differences in the actual details of interpretations which will get sorted out in due course. The only note of caution is that all the proposed interpretations should be considered provisional and should not be accepted in the literal sense. Other interpretations based on different parallels from later traditions are possible. It is to be hoped that all such interpretations will get narrowed down and converge to point out the original significance of the Harappan ideograms, which may not be identical with the later traditions.

## A Vedic Parallel and a Dravidian Sequel

K.V.Ramesh (in this vol.) adds to the growing number of ideographic interpretations of the 'bearer' signs. His interpretations are also based on the 'load-bearer' motif, and he points out to the corresponding names and titles in early Vedic literature (Fig.9).




-  *bhārabhṛt*, *bhartr* (RV): Load-bearer
-  *vāja* (RV) : Sacrificial vessel containing an oblation of rice offered at the obsequial ceremonies.
-  *bharadvāja*, *Vājambhara*: Names/titles occurring in Vedic texts.

Fig. 9: Ramesh's Interpretation of the 'bearer' signs.

It may be asked why I have included these Sanskrit equivalents in a paper dealing with Dravidian interpretation. I have two reasons for doing so.

In one of my earlier papers (1980), I had pointed out to the name Bharadvaja as one based on the 'bearer' motif. Ramesh has gone further and has been able to show that the name fits in with both parts of the ligatured 'jar-bearer' sign (*bharad*: 'bearer'); *vāja*: 'container for offerings'). It is interesting to compare this with my parallel interpretation of the jar-bearer sign as corresponding to the name Sātavāhana (*sata*: sacrificial

vessel; *vahana*: carrying). The multiplicity of parallels is only to be expected. In an elaborate discussion of the situation (Mahadevan 1975) I had pointed out that the original Harappan tradition would have, in course of time, over a wide area and in a bilingual milieu, split up into numerous 'streams and layers of parallelisms'. All are equally valid if one knows how to handle them with circumspection, not to regard any of them as literal meanings or readings, but only as pointers towards a distant and possibly very different reality represented by the Harappan ideogram.

Ramesh's strictly Sanskritic interpretations of the 'bearer' signs may have a Dravidian sequel! The Cheras (also called the *Poraiyar*) claimed that one of their ancestors fed the

Kaurava and the Pandava armies during the Mahabharata war (*Puram.* 2). While interpreting this legend, scholars have suggested that the technical expression *peruñcōru* (lit. 'big feast'), used in this context denoted the offering of *piṇḍam* (obsequial food offerings) to remote forbears in an act of ritual ancestor worship (P. Arunachalam 1966; also see M.A. Durai Rangaswamy 1966). I am intrigued by the parallelism between Skt. *bharad* and Ta. *porai* (both meaning 'bearer') and between skt. *vāja* and Ta. *Peruñcōru* (both meaning obsequial rice offerings). It may well be that the ultimate source of both parallelisms is the idea (whatever be its original import) represented by the Harappan ideogram 'load-bearer' passing into and evolving within the rich Indian historical tradition.

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