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THE COPENHAGEN DECIPHERMENT
OF THE PROTO-INDIC SCRIPT

At the time of writing, the decipherment of the Proto-Indic script by four scholars associated with the Scandinavian Institute of Asian Studies in Copenhagen has been published in five sources, which have been privately circulated. The authors are Asko Parpola, Seppo Koskeniemi, Simo Parpola and Pentti Aalto, and their publications:

1. A pamphlet entitled, Computing approach to Proto-Indian, 1965: An interim report.
2. Decipherment of the Proto-Dravidian Inscriptions of the Indus Civilization, Copenhagen, The Scandinavian Institute of Asian Studies, Special Publications No. 1, 1969 (hereafter, FA).
3. Progress in the Decipherment of the Proto-Dravidian Indus Script, Copenhagen, Scand. Inst. Asian Studs., Spec. Publ. No. 2, 1969 (hereafter, P).
4. Further Progress in the Indus Script Decipherment, Copenhagen, Scand. Inst. Asian Studs., Xerocopy 24. 9. 69 (hereafter, FP).
5. List of Deciphered Signs, Xerocopy 8. 10. 69 (hereafter, LDS). In addition, further publications are mentioned as to be expected (P 3, FP 3):
6. A revised edition of FA, to be available in bookshops.
7. A critical edition with concordance and indexes of the Indus inscriptions compiled by computer.

The five publications which have so far been received must therefore be regarded as provisional and capable of some further modification. Already, indeed, certain changes of opinion have been noted, and in this respect the series has something of the character of Ventris's Work-Notes. However, the authors are quite clear that the essential features of their achievement were secure

from the first day of February 1969 (FA 49—50) and that any changes so far effected or likely in the future have consisted and will consist only of minor qualifications or embellishments.

The decipherment was briefly noticed in *Kadmos* 8, 1969, 167 and, as mentioned there, its interest in the context of this journal rests on the claim (FA 47) that, apart from that of Linear B by Ventris, it is the only decipherment made without the aid of bilinguals. In fact, the manner of procedure is similar in several respects to that employed in the decipherment of Linear B, as will shortly become apparent, and raises several similar questions.

The authors are a Vedic philologist (AP), a statistician (SK), an Assyriologist (SP), and a veteran comparative philologist (PA), thus listed in the order in which they joined the enterprise.

The decipherment is based on three suppositions, that the script is essentially logographic, that it operated on the principle of the rebus or homophone, and that the language involved was of early Dravidian type.


The first and basic assumption, about the nature of the script, that it is "purely logographic" (FA 8) was modified later (P 4) when it was characterised as "logosyllabic". This shift of opinion is slightly disconcerting because it was asserted in FA 47 that an initial assumption that the script was logo-syllabic in character was a preconception that "proved the main obstacle to the decipherment." The decipherment proper began with the realisation by Asko Parpola on January 9, 1969 "that the script must be logographic, because the words were polysyllabic" (FA 49). But presumably the difference between the initial discarded view about a 'logo-syllabic' principle and that which was later accepted was one of degree, for in the interpretations proposed in P, FP and LDS the purely logographic element in the script is manifestly predominant. Now in view of the antiquity of this form of writing, of its generally sub-pictographic appearance, of the size of the signary, and of the very variable length of the individual inscriptions, a supposition that it was of an essentially logographic character would seem to be reasonable.




The assumption that the practitioners of the Proto-Indic civilization spoke a Dravidian language may also be accepted as likely. The arguments for such an opinion were set out most cogently by the late J. H. Hutton in Vol. I Part I of the 1931 Census of India (pp. 357—369 and 439—461). They involve the ethnic kinship revealed by census measurements between the present-day Dra-

vidian peoples, the 'Proto-Indic' folk, and the inhabitants of the northern Mediterranean peninsulas; the historical evidence for the 'colonization' of southern India following the break-up of the Indus Valley civilization; the indications of early agglutinating languages in several parts of the Near East; and the survival of Dravidian speech among the Brahui of Baluchistan.

The third assumption, which concerns the way in which the signs corresponded with elements of the language, is of course crucial. The principle involved in that of the rebus (P 4). It is taken by the authors as axiomatic that most of the signs are so clearly of pictographic form that there need be no hesitation in recognizing the object they portray, though sometimes early Sumerian usage is called in to help. But in general the real meaning conveyed by the sign, it is maintained, has nothing to do with the object portrayed in its shape. Instead, the sign is almost invariably the symbol of one or more objects or ideas (or occasionally syllabic sounds) the names of which are homophones, in an early Dravidian language,

Hunter

dative suffix—||  — *God's name* (A common 'formula')

U |||  ||| E   (M.I.C. p.376 No. 527)
Cup ↑ *(Commodity)* ↑ *Name (two elements)*
Numerals *ablative suffix*

Meriggi














   = *Overseer of the fields*
a *b*
    = *Grain for Officer Cadre(?) Mess*
d *c* *b* *a*
      = *Grain sack(?)—Horse load for...*
e *d* *c* *b* *a*
genitive suffix

Fig. 1

of the name of the object depicted by the sign. Thus the sign representing a comb (Dravidian *pentika*) signifies a woman (*pentī*). The discovery of this particular example was the first and critical instance from which the rest followed (FA 49). A highly important example, which was apparently arrived at independently by Fr. H. Heras as early as 1953 and by Professor Yu. Knorozov in 1965 (P 3), was the sequence 'fish' (*mīn*) = 'star' (*mīn*). This led to the recognition of an elaborate astral cult, involving not only five planets, represented by variant forms of the 'fish' sign, but also the Dioscuri ('fish' with numeral 'two') and the Pleiades ('fish' with numeral 'six'). Details of this astral cult are set out in Further Progress . . . , including the identification, with the aid of 'bilingual' seals (that is, seals which include both scene and inscription), of Śiva with Mars (FP 9ff.) and of Brahma with Jupiter (FP 17ff.).

Such in brief is the method of procedure. The kind of interpretation reached is necessarily somewhat repetitive in view of the nature of the inscriptions, and is not in principle different from those proposed, considerably more tentatively, by G. R. Hunter and (quite independently) by P. Meriggi more than a generation ago (Fig. 1)¹. By happy coincidence, in fact, Meriggi's 'genitive suffix' is identical with that now proposed from Copenhagen.

This is not an appropriate context in which to elaborate a critical assessment of this decipherment. In the absence of external corroboration, any decision about the validity of the proposed system must in any event reduce itself to an estimate of the chances of coincidence. However, in conclusion certain general questions which bear upon the issue of the likelihood of coincidence may perhaps be posed for consideration by the authors when they proceed to fuller and more definitive publication of their work:

1. How secure are the identifications of the original 'pictographic' significations of the signs? The question is asked partly because of the change of opinion on the part of the authors in the case of some signs, for example LDS No. 47 (= 'ear' [P 16], but later = 'sitting person' [FP 26]). In fact, with the exception of the series of human figures carrying objects, none of the signs is of such a

¹ The examples shown are taken from G. R. Hunter, rev. (with F. W. T.) of MIC (note 2 below) in Journ. Roy. Asiatic Soc. 1932, 469—70; and P. Meriggi, Zur Indus-Schrift, ZDMG 87, 1934, 231—33, Abb. 9 5, Abb. 10 v, θ. It is only fair to add that Professor Meriggi, in correspondence with the writer, points out that he would no longer necessarily hold with all the details of this early essay.

shape that its pictographic prototype can be recognised without question, and the task is rendered the more difficult by the lack of any apparent historical development or evolution in this script; the earliest examples of the signs are as abstract and as far removed from their pictorial originals, if ever they had such, as are the latest.

Even the generic identity of the series of 'fish' signs is open to doubt. The bifurcated 'tail' may suggest a fish to us, but we cannot be sure that it did so to the scribe. Its basic shape, without 'mouth', 'eye' or 'fin', might equally well have represented originally a sack, a leaf or a fruit, or it may simply have been an abstract design, like the recurrent oval or lozenge, which could be elaborated by the addition of various inserts or appendages. It is, doubtless by coincidence, very similar in shape to the Cretan hieroglyph SM I No. 60, about the pictographic identity of which there has been difference of opinion, for it has been variously referred to as the 'sepia', 'fish', and 'octopus' sign.

Even if the shape of a sign is identifiable, there will certainly be some doubt as to which of the nouns of a kindred series might be applicable to it. This would leave the decipherers some latitude in their search for an appropriate homophone, as in the case of LDS No. 39 which was identified as 'wing' rather than 'flying bird' since "None of the words for 'flying' in the DED (Dravidian Etymological Dictionary) has a suitable homophone" (FP 29).

2. Why was the tortuous and cryptic device of 'rebus' substitution used here in a quite supererogatory fashion as a fundamental principle, when in other early writing systems it was only employed as a supplement to straightforward pictography or ideography, generally in order to express proper names?

3. Why, at the same time, do a minority of signs still retain a vestige of their pictographic significance, for instance the 'field' sign (FA 37) and the 'horned demon', LDS No. 22 (P 11ff.)?

4. How rigorous and disciplined was the use of the Dravidian dictionaries in finding homonyms? In particular, what is the significance of the terms "good" and "better" in such phrases as "A good word for 'woman' other than *pen(ti)* . . . is DED 3798 *mata* . . ." (FP 24); and "We were now in a position to find a better homophone . . ." (P 8)?

5. How much more latitude of interpretation was allowed by the principle, announced in P 4, that a sign can stand for several homophonous words, or parts of words (for instance, LDS No. 1,

man with carrying pole, which is taken as standing both as a plural suffix and for the word for "bath")?

	H 36
	H 19
	H 11
	MIC 344
	MIC 146
	H 94
	MIC 393
	H 51

MIC 1172	H 266	H 17	H 54

Fig. 2

6. On what principles are the sequences of strokes interpreted either as a numeral (FA 44), as a homonym of a numeral (FA 38), as diacritic signs (FP 4), or as bracketting 'frames' (FP 25)?

7. How satisfactory can be any attempt to recognize 'words' (FA 11) or 'sign-blocks' (FP 7) in view of sequences such as the following (Fig. 2), where each entry comprises a full inscription², and the conclusion seems to be that, under rigorous scrutiny, sign-groups are capable of almost indefinite regrouping and fragmentation?

8. Why, in view of what may be described as an obsession on the part of these Proto-Indic folk with astral cults, are there no representations of celestial objects in the designs on the seals, but only the seemingly interminable series of animals, real and imagined? Surely a common-sense approach to these seals would be to regard them as personal or official possessions, used to make imprints conveying identities, guarantees, or the like. These must presumably have had a social significance, possibly within a broader religious context. The animal figures may well have been totemic, while the script symbols may have indicated the identity, office, seniority or status of the owner. Such a view would explain the very repetitive nature of these inscriptions, and their habitual use of variant forms of certain basic symbolic shapes.

² The references to inscriptions are as follows:

MIC — Mohenjo-daro seals as numbered in J. H. Marshall ed., *Mohenjo-daro and the Indus Civilization*, London 1931

H — Harappa seals as numbered in the above

FEM — E. J. H. Mackay, *Further Excavations at Mohenjo-daro*, Delhi 1938

EH — M. S. Vats, *Early Harappa*, Delhi 1940.