GOVERNMENT OF TAMIL NADU
1971

TAMIL NADU LEGISLATURE
PAPER PLACED ON THE TABLE OF THE HOUSE.

[Subject.—Committee on Government Assurance—Assurance No. 956/71—Summary of the speech delivered by Thiru J. Mahadevan, I.A.S. at the Third International Tamil Conference.]
METHOD OF PARALLELISMS IN THE INTERPRETATION OF THE PROTO-INDIAN SCRIPT.

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1. THE METHOD OF PARALLELISMS.

1.1. The long quest for an understanding of the Proto-Indian ('Harappan') script has entered an exciting and perhaps decisive phase with the recent publications of the preliminary results achieved by the Soviet and the Finnish scholars working in the field. The methodology adopted by both the teams is broadly the same, viz., (a) the determination of the functional characteristics of each sign by statistical-positional analysis carried out with the help of a computer; and (b) ascertaining the probable phonetic value by the technique of homophony applied after linguistic reconstruction. While there are differences in the identification of individual signs, both the teams are agreed on the fundamental result that the language of the inscriptions is Dravidian.

1.2. The purpose of the present paper is to suggest the possibility of employing an additional technique, that of the method of parallels, to identify the syntactic features of the proto-Indian inscriptions and to facilitate their linguistic interpretation.

1.3. Emil Forrer² (1932) pointed out that it was possible to acquire an objective comprehension of the contents of an inscription even before deciphering the script by the observation of parallel phenomena. Parallels can occur between a symbolical representation and a text associated with it (e.g., a text inscribed near the figure of a deity), between the written object and its designation (e.g., a text with numerals engraved on a bronze implement) or between the written symbol itself and its meaning (e.g., an ideogram whose pictographic origin is obvious). Parallels can also be set up by observing the similarities in the standard formulae employed in ancient inscriptions, e.g., the opening of the royal inscriptions, the formulae of curses and the introduction to letters. Forrer was able to show that such comparisons revealed the basic features of the grammar of a writing system even before its linguistic decryption.

1.4. Parallels will be valid only if the material used for comparison is relevant. Comparisons are proposed here on the basic assumption that the material relevant to an understanding
of the proto-Indian inscriptions must be primarily Dravidian. Thus the apparently votive inscriptions found on the 'tiny' seals and prisms at the lower levels of Harappa may be compared with the earliest extant Dravidian votive texts in the Tamil-Brahmi inscriptions. The proto-Indian seal texts may be compared with the earliest seal and coin legends in the Dravidian languages. The proto-Indian graffiti stand comparison with those found on the megalithic pottery in South India (B.B. Lal, 1960)⁵. The seal-texts which presumably consist mostly of names and titles can be usefully compared with Dravidian name-lists compiled from the earliest available sources like the Tamil-Brahmi inscriptions, the poems and the colophons in the Tamil 'Sangam' works and from the vast material in the medieval temple inscriptions. The names of Dravidian tribes and the non-Aryan ethnic names preserved in early sanskrit literature also constitute valuable comparative material. Since archaeological evidence tells us that the Proto-Indian polity was highly organized and well-administered, it is particularly useful to collect and study the technical terminology employed in Dravidian civic-administration and palace and temple organizations. The myths and legends embodied in Dravidian literature and the oral tribal traditions may tell us much about the scenes portrayed on some of the proto-Indian seals. Lastly, the survival of the proto-Indian script signs themselves can be looked for in the symbolisms of later Indian tradition, as in the iconography of the Hindu deities, the insignia of the priestly and the royal families and the totemistic symbols of Dravidian tribes.

1.5. One of the criticisms levelled against the methods of decipherment developed by the Soviet and the Finnish scholars is that there are too many choices available at too many levels to inspire confidence in the correctness of any of them. Choices have to be made in the interpretation of the pictorial and the positional values of the signs and in the selection of homophones. The method of parallels can help in narrowing down the choices and increasing the degree of probability until more and more parallels are thrown up which cannot all be reasonably ascribed to mere coincidence or clever contrivance.

1.6. Having regard to the time at my disposal, I shall only be able to illustrate the method of parallelisms with just two examples of signs in the proto-Indian script which can be demonstrated to be nominal suffixes on the basis of syntactic parallels from ancient Dravidian inscriptions⁶.
2. THE 'JAR' SYMBOL.

2.1. This is the most familiar symbol in the proto-Indian script. Previous work in the field has already established the following positional and functional characteristics of the symbol:—

(1) It is the most frequently used symbol in the script. According to the preliminary statistical data released by the Finnish team, the symbol occurs 873 times in 1944 inscriptions comprising 9,147 total occurrences of all the symbols^1. Thus almost one-tenth of the total material is accounted for by this single symbol.

(2) The most marked characteristic of the symbol is its terminal position at the end of the inscriptions. Kondratov has estimated that about thirty per cent of all the inscriptions end with this symbol^2. The Finnish count of 627 final occurrences^3 (32.25 per cent of the number of inscriptions) is in close agreement with the Soviet estimate.

(3) The symbol acts as a terminal sign even when it occurs in the middle of the texts. This was noticed by Gadd and Smith at the time of the first tabulation of the symbols and was rigorously demonstrated by Hunter and more recently by the Soviet and the Finnish teams^4.

(4) The symbol is found affixed to single signs or well-defined groups of signs which appear by themselves to be complete words as shown by Hunter^5. Kondratov has counted 146 different recurring 'blocks' or polygrammes with this symbol in the final position^6.

(5) The symbol occurs occasionally (12 times according to the Finnish team) at the beginning of the inscriptions^7.

2.2. The behaviour of the symbol as a suffix suggested to more than one scholar the possibility that it could be an inflectional case-ending, possibly the genitive. All three previous attempts at decipherment within the Dravidian framework, viz., those of Heras and the Soviet and the Finnish scholars, have proposed variants of the Dravidian genitive or oblique case-morphemes as linguistic equivalents of the sign in question^8. However comparisons with the earliest extant Dravidian texts in similar contexts (name-lists, votive inscriptions, legends on coins, etc.) show that the observed frequency and distribution characteristics of the sign are not matched by those of the Dravidian genitive suffixes. The Tamil-Brahmi inscriptions, in marked
contrast with the Prakrit votive texts, do not have even a single instance of a final genitive suffix. The ancient Tamil coin-legends, again in sharp contrast with the Prakrit and Sanskrit coin-legends, give the names of the rulers in the nominative case. The Dravidian genitive is, more often than not, implicit even in the medial positions in a sentence—the so-called zero genitive. Hence the 'Jar' sign, which is known to occur three times in a text\(^\text{12}\) of six symbols (in the initial, medial and final positions) and which ends nearly a third of all the seal-texts, is most unlikely to be the Dravidian genitive suffix.

2.3. It appears possible to identify the sign on the basis of the method of parallels by making the following assumptions:—

(1) Judging from our knowledge of seals used by contemporary ancient civilizations, it is reasonable to suppose that the bulk of the seal-texts would consist of names and titles with perhaps some minimal information relating to religious or economic activity.

(2) As the language of the texts appears to be Dravidian, the names and titles would be mostly in the nominative case, invariably so at the end of the texts.

(3) The most likely hypothesis which fits in best with the observed frequency, distribution and functions of the symbol would be to regard it as an integral element affixed to personal names and titles, generally as a suffix, but occasionally as a prefixed element.

(4) The best method to identify the value of the symbol would be to search for parallels among the most ancient extant lists of Dravidian personal names and titles in order to identify any frequently recurring element with positional and functional characteristics matching those of the symbol and connected with it by a suitable homophone.

2.4. The Dravidian material chosen for the comparative study are:—

(1) *The Corpus of the Tamil-Brahmi Inscriptions*\(^\text{14}\).—These inscriptions are dated from the Third or the Second Century B.C., and are the most ancient lithic records extant in any Dravidian language. Their votive context, their contents confined mostly to names and titles and their brevity make them the ideal linguistic material for the present comparison.
(2) The name-lists of Tamil 'Sangam' poets: About 473 names of poets have been preserved in the colophons to the poems of the 'Sangam' Age, datable to the first three or four centuries of the Christian Era. The names represent an almost complete cross-section of the ancient Tamil society and include those of princes and commoners, men and women and persons belonging to various clans and professions. There is little doubt that the names (which are among the most conservative elements in any language) represent a tradition going back much farther than the dates of the composition and the compilation of these poems.

2.5. The most frequently recurring element in the formation of old Tamil names turns out to be -an, the masculine singular pronominal suffix of the Third Person, meaning: 'he, that man'. The evidence on this point is conclusive.

2.6. The Corpus of the Tamil-Brahmi Inscriptions contains 98 composite personal names and titles, in which the suffix -an occurs 99 times. Twenty out of the 74 inscriptions (excluding two akshara-bandhas), i.e., about 27 per cent, end with -an in the final positions; (verbal forms ending in -an/on are not included in this count). In a number of composite names, the suffix -an occurs twice or even thrice, e.g., mani-y varnakkan tēna cattāya (TB1.72).

2.7. A random sampling of the first one hundred composite names from the alphabetical list of the 'Sangam' poets yields similar results. The suffix -an occurs 82 times in these names. The suffix occurs 61 times in the final position (ignoring the honorific -ar, conventionally added in the colophons to the poets' names). The relatively high proportion of the suffix in the final position is doubtless due to the fact that while these are purely name-lists, the Tamil-Brahmi inscriptions (and, presumably, the Proto-Indian seal texts) often contain in the final position the names of the objects owned or gifted. Again many of the composite names in the list of poets contain the suffix -an twice or thrice, e.g., Ikitāṇ centān karaṇ -ar).

2.8. In the light of this evidence from the nearest parallels, it seemed reasonable to suppose as a provisional working hypothesis, that the symbol in question probably represents the Proto-Dravidian equivalent of the masculine singular pronominal suffix of the Third Person (-an in Tamil).
2.9. Pronominal suffixes of the type -an are derived from a- (DED. 1), the demonstrative base expressing the remoter person or thing. Comparison of the forms Ta. aavan (‘he, that man’), etc., grouped under DED. 1 enables us to reconstruct PDr. *-anr. From a related series also formed from the demonstrative a-, e.g., ata (Kur.), atrya (Te.), etc., we can reconstruct *ant-. The old Tamil equivalent, recently recovered from the Tamil-Brahmi inscriptions is (a n)tai, literally meaning ‘he, that man’, but used as a honorific affix (both prefixed and suffixed) with male personal names. We can set up at the PDr level *-anr to represent both the series of pronominal affixes.

2.10. The identification of the sign as the masculine singular pronominal affix of the Third Person used as a honorific with male personal names and titles explains satisfactorily the high frequency of the sign and its normal terminal position in seal texts presumably consisting mostly of male names and titles. This identification also explains the multiple occurrences of the symbol in the same text. While the pronominal honorific was normally suffixed, there are a number of attested cases in the Tamil-Brahmi inscriptions (e.g. TBI. 13) where it is found in the initial position. There is, to my knowledge, no other recurring element in Dravidian name-formation which can so remarkably match the observed frequency, distribution and functional characteristics of the symbol under discussion.

2.11. The pictogram seems to suggest some kind of a vessel with handles or pronounced rim or lip at the mouth and a tapering bottom. The following etyma denoting several types of vessels of a generally similar form suggest themselves as good homophones for comparison with *anr:-

DED. 110: antai (Ta.), squirt; ande (Ka., Tu.): vessel made of hollow bamboo, etc., generally with a handle; anay (Ko.); milk-pot, bamboo pot; ady (To.): clay-pot;

DED. 107, 109: andige. (Ka.): one pannier; andenu, adigamu (Te.): ibid.; andu (Ka.): bottom of a vessel; Ta. Lex.: antai (Ta.): an ancient weight (measure !).

2.12. The following etyma having the general meaning ‘male, elder person’; appear to be connected with the pronominal honorific *anr-, meaning ‘he, that man’:-

DED. 111: andra (Kui.): a male; andrā (Kur.): male (of animals); andṛā (Kur.): a haughty man; andrin (Po., Mand.); male, man; andira (Skt., lex.): a male.
DED. 2494: tantai (Ta.): father; tandri (To.): ibi, etc.,

2.13. The following personal, clan and dynastic names of Dravidian rulers are perhaps ultimately derived from the honorific usage of the pronominal affix *sur*:

- antiran: a personal name of Ay, a Vél Chieftain (Puram., 129)
- aonar: clan name of chieftains of cow-herds, (Akam., 59);
- andhra (Pkt., andho) name of Andhra Kings and the tribe.

3. The 'arrow' symbol.

3.1. The main characteristics of this symbol are its position as a terminal sign and its functional similarity with the 'jar' symbol. Both the symbols function as terminal signs not only at the end of texts but also in medial positions. In the quasi-final positions both are followed by the same set of single variable signs. The preceding symbols or sequences can be shown to be complete words by themselves, probably names and titles. There is, therefore, reason to believe that the 'arrow' symbol, like its functional twin, the 'jar' symbol, is also an integral suffix used in name-formation as suggested by Hunter10. He was, however, mistaken in thinking that the sequences preceding the two signs are mutually exclusive. Subsequent discoveries have shown that there are several sequences which can end with either of these two signs.

3.2. The Soviet and the Finnish scholars regard the 'arrow' sign as an inflectional or case ending on account of its terminal position and its alternation with the 'jar' sign 11. Since however, it has been suggested here that the 'jar' sign is a suffix used in Dravidian name-formation, it appears likely that the 'arrow' sign also fulfills a similar function.

3.3. It is prima facie likely that the 'arrow' sign represents another grammatical category, say, the plural or the non-masculine suffix. However the common sequences preceding the two signs make it unlikely that the suffixes represent mutually exclusive grammatical categories. The dominant 'fish' signs which appear in the bulk of names and titles more often have the 'arrow' sign than the 'jar' sign as their suffixes. This makes it unlikely that the 'arrow' sign represents the feminine ('non-masculine') gender. Thus it appears that the 'arrow' symbol represents another and less frequent element in the formation of Dravidian personal names and titles.

3.4. The comparative statistical data relating to the two symbols are instructive. According to Kondratov, the number of blocks ending with the 'jar' and the 'arrow' symbols is respectively
146 and 48 (approximately 3:1). He also calculates that the percentage of inscriptions ending with either symbol is respectively 30 and 7 (4.5:1)\(^{15}\). According to the Finnish team, the total occurrences of the two symbols are respectively 873 and 146 (approximately 6:1)\(^{19}\).

3.5. It seems possible to interpret the symbol through the method of parallelisms as illustrated in the case of the 'jar' symbol. The Dravidian linguistic material chosen for comparative study was subjected to a formal analysis to identify any recurring nominal element with characteristics matching those of the 'arrow' symbol. It turns out that the nominal endings occurring most frequently with old Tamil personal names and titles, next to the pronominal suffixes, are -ai and -i which may be considered together. The comparative statistics are as follows:

<table>
<thead>
<tr>
<th>Pronominal Nominal</th>
<th>Approximate Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Names and titles occurring in</td>
<td>suffix. endings. material.</td>
</tr>
<tr>
<td>(-an)</td>
<td>(-i, ai)</td>
</tr>
<tr>
<td>Tamil-Brāhmī Inscriptions</td>
<td>99</td>
</tr>
</tbody>
</table>

Alphabetical list of Sangam poets (first 100 names).

| Tamil-Brāhmī | 82 |
| Alphabetic list | 33 |

The parallel is close enough to suggest that if the 'jar' symbol represents the pronominal honorific (-an, -ant-in Ta.), then the 'arrow' symbol is likely to represent the Dr. nominal endings (-a, -ai in Ta.).

3.6. The archaic use of the independent suffixes -i, -y and -iy occurring in the earliest Tamil-Brāhmī inscriptions should be specially noted; (e.g.) Kani-i (TBI, 3); kani-y (TBI, 1); tantai-y (TBI, 2); kaniiti-y (TBI, 3) and varuti-iy (TBI, 1). We may therefore, expect to find, after the names and titles occurring in the seal-texts, a nominal suffix corresponding to TBI-i(y) and -a-i(y), (PDr -a-yi,-ey.)

3.7. It is easy to recognise the object in the pictogram. It is an arrow or a spear-head. Large numbers of copper and bronze spear-heads have been recovered from the sites of the Proto-Indian cities. The recognition of the object in the pictogram as arrow
of spear and the probable use of the symbol as a nominal suffix immediately suggest the following etyma with the meanings, "arrow, to shoot (as an arrow), to throw (as a spear), etc." DED. 691: sy, s (Ta.); sy-, ty- (Ko.); cyu (Te.); etc.

4. Evidence.

4.1. The identifications proposed in this paper are tentative. However the following parallelisms from later Indian tradition seem to lend some support to the identifications.

4.2. It can be established from purely formal analysis that the 'jar' symbol functions as a suffix at the end of what are most probably names and titles on the seal texts. This deduction is quite independent of any phonetic value or meaning that may be proposed for the sign. It may be assumed that the names and titles occurring on the seals would mostly be those of the ruling classes. There is some archaeological evidence that the Proto-Indian civilization was ruled by a priestly oligarchy. "The general indication of a combined kingly and priestly rule fits the habit of the Third Millennium" (Wheeler, 1966). It is, therefore, significant that 'jar' names and 'jar' legends occur in later Indian tradition among priestly and ruling classes.

4.3. The legend of the 'jar-born' sages is indeed very ancient and is even found in the Rigveda (VII: 33), where it is said that Vasishtha and Agastya were generated by Mitra and Varuna from a jar. Consequently Agastya was known as Kumbhayoni, Kumbhasambhava and by other synonymous names and Vasishtha was called Kundina ('the vessel'). A very similar story is told in respect of Drona (whose name also means a 'vessel').

4.4. Two significant aspects of these 'jar' legends merit attention as they both seem to indicate that the myth has a Dravidian origin.

4.5. The myth of miraculous birth from a jar was shared by the Brahmanas and the Kshatriyas, or rather by the families which were both Brahmana and Kshatriya by tradition. Vasishtha was called Devaraj. Agastya was the reputed leader of the southern migration of the Velir clan which gave rise to many southern ruling dynasties. The Velir chieftains seem to have had sacerdotal origin. (It is instructive to compare O.Ta. vel.
... texts associated with the on especially popular with South Indian paliorization. When the memory of the pictographic script was lost. The Pallavas, the Salankayanas and the Brahphalayanas belonged to Brahmanical gotras. 22.

4.6. It is sometimes considered that the existence of the Brahmana-Kshatriya families indicated greater mobility among the varnas in the early Indo-Aryan society. However the discovery of a pre-Aryan and probably Dravidian civilization ruled over by a priestly oligarchy provides a new explanation of the phenomenon. It now appears likely that the Brahmana-Kshatriya or priest-ruler tradition is pre-Aryan and possibly a survival of Proto-Indian priest-rule.

4.7. The second aspect of the 'jar' legends worthy of notice is their special association with the Dravidian South. They were current among many Dravidian dynasties like the Velir, the Pallavas and the Calukyas. The Brahmanical sages Agastyas and Vasishthas (Devaraj/Kundina) with whom the 'jar' legends are associated are the ones especially popular with South Indian and Dravidian tradition 23.

4.8. The occurrence of the 'jar' symbol in the Proto-Indian seal-texts seems to provide a clue to the ultimate origin of the 'jar' legends. The 'jar' symbol was connected, probably through homonymy, with the priest-rulers of the Proto-Indian civilization. When the memory of the pictographic script was lost, the 'jar' sign continued to be associated with the priestly and the ruling classes of the composite Hindu society and became a symbol around which myths grew up. In a parallel development, the Dravidian honorifics-'kar', homophonous with a 'vessel' word, was borrowed into Sanskrit in the latter sense at various periods in different translations, as personal and family names of the priestly and the ruling classes.

4.9. The 'arrow' symbol had also a similar development. The Velir clan was also known as Evvi 24 (itiom'cy) which seems to be connected with the symbolism of the arrow. A popular suffix
for the names of the Yadavas (who are connected in tradition with the Andhras and the Vélir)\textsuperscript{23} was—sena, or 'spear', probably to be traced to the pietrophic sign which depicted a spear-head or arrow.

4-10. Finally attention may be drawn to a frequent digraph consisting of the 'fish' and the 'arrow' signs in the seal-texts. From positional analysis it can be inferred that the digraph represents an important name or title, probably the generic name of the ruling priestly class. According to my interpretation\textsuperscript{24}, the digraph approximately corresponds to *min/le-ey. The term *miley may be compared with O.Tu. miś, mūki, 'Chief' (lit., 'the shining one') and also with Skt. mleccha (Probably from *mil-te), the name by which the indigenous people were known to the early Indo-Aryans. Here we seem to have evidence for a very early loan-word from Dravidian into Sanskrit.

Notes.


2. Forrer, E., The Hittite Ideographic writing, Chicago (1932); A summary of the method will be found in Voices in/Sons decipherment of ancient scripts and writings, E. Dobhnofer, tr. by M. Savill, London (1961).


5. First Announcement, pp. 7, 19.
17. Soviet Studies, p. 21; First Announcement, pp. 18-19.
20. Mahabharata, I : 130.
22. "The Bharadvaja Pallavas were not the only Brahmanas who adopted the military career in those days in the Dakshirapathas. There were the Gautamas, Vasishitas, Kavyas, Kaundinyas, Haritas, and the Manavyas of the earlier epoch who intermarried with the reigning dynasty and other ruling families in the Satavahana period. The history of Andhra up to the middle of the Seventeenth Century abounds in instances where Brahmanas, adopted the military career"—B. Venkatakrishna Rao, A History of the Early Dynasties of Andhradesa, Madras (1942) P. 148, n. 3.
23. "The seven main brahmin clan progenitors may go back to hoary Sumerian or Indus antiquity as the 'seven sages'......The adoption of such 'jar-born' seers into the high Aryan priesthood was a fundamental innovation. By such recombination
of the Aryan and autochthonous, a new class of speciali-t developed which would eventually claim monopoly of all Aryan ritual—the brahmin caste". D.D. Kosambi The Culture and Civilization of India in Historical Outline, (1970) p. 83.

24. Puram., 24, 202, etc. It is interesting that the titles Ervi and Antiran were borne by the same Chieftain Vel Ay, providing parallels for both the nominal suffixes under discussion.

25. M. Raghava Iyengar, Velir Paralāru, Third Ed. (1964); the relevant portions are summarised in my Dravidian Parallels pp. 245-247.


References.

D.E.D.: A Dravidian Etymological Dictionary, Oxford (1961), T. Burrow and M. B. Emeneau; Supplement (1968); (The system of transliteration and abbreviations of Dravidian languages used in this Paper follow DED.)


