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#### SOME OBSERVATIONS ON THE LINEAR A INSCRIPTIONS

During the final arrangement of the edition of the inscriptions in the Linear Script A, which was begun by Evans and carried forward by Myres<sup>1</sup>, certain features of this system of writing were noticed. A few of these were set out on pages 4-6 of the preamble to that edition, but a number of others were considered too uncertain for inclusion in such a work. In some cases further study has clarified these observations, and they are described here in the hope that, taken together with those already published, they may throw some light on the guiding principles of this enigmatic script. Contextual references beginning with Arabic numerals relate to the tablets from Hagia Triada (series HT), and those beginning with Roman numerals to the miscellaneous inscriptions. Descriptive terms applied to certain signs refer only to their appearance and do not imply any opinion about their meaning.

# (1) The occasional repetition, within lists, of 'commodity' and 'transaction' signs

A comparison of 89 and 96a (Fig. 1) will show that while L 56 stands in the heading of the former tablet, and is understood as qualifying all the items in the subsequent list, in the latter case it only applies to three items in the list, each of which it prefaces separately. Similarly, on side a of 115, the "hand" sign, L 100, and a variant of the "corn" sign, Lc 8, refer to the whole list, while on side b the "corn" sign (L 42) is connected with the first item only, and L 100 with the third and fifth. The Proto-Elamite account tablets from Susa² provide like instances. In the light of these examples, and by comparison with 9a, it is possible that the transscription of 13 should be amended slightly, so that the "tree" sign (L 92) should stand with the three first items only (Fig. 1).

<sup>&</sup>lt;sup>1</sup> Inscriptions in the Minoan Linear Script of Class A, edited by W. C. Brice from the notes of Sir Arthur Evans and Sir John Myres (O. U. P. for Soc. Antiquaries of London, 1961)

<sup>&</sup>lt;sup>2</sup> Mém. Miss. archéologique de Perse (... en Iran), VI (1905), XVII (1923), XXVI (1935) (V. Scheil), XXXI (1949) (R. de Mecquenem)

Another possible improvement on the published transcription emerges from a suggestion in the notes of S. Davis for the London Mycenaean Seminar of 18/10/61: it is that in 1a the "rhyton and cross" formula should apply to the entire list, of which the three-sign group formerly shown as the heading is in fact the first item. This same group also occurs as an item within the lists on 3 and 95 a and b. In the cases of 17 and 19 also a similar rearrangement is possibly necessary, the "tree" and "wine" signs (L 92 and L 82) applying to all three groups. 9a may be regarded as an account of the subdivision of an amount associated with the item L 31-22, which appears second in the lists of 17 and 19 (Fig. 1). The device used in 1, 17, and 19, of placing the key to the list after the first item, is rare in the HT series, though it is quite common in the Proto-Elamite accounts.

(2) The rare repetition of the same list of items, in a different order, and under a different heading

The two cases are 9a and b (principal list), and 95a and b.

(3) Occasional instances of a list opening and closing with the same sign, alone or in combination with another

L 60 stands like this on 6a, and L 87 on 8b. The "winged priest" sign, in simple or variant or ligatured form, both opens and closes the lists on 27a and 100, and the "gridiron" sign, L 8, will be noticed in the same positions on 119 (Fig. 1).

(4) Occasional repetition of a sign-group in a list

There are four cases: L 97-37-23 in 10a, L 30-54 in 10a/b, and L 98-1-25 in 88 and 122a.

Taken along with the second and third observations, this would seem to show that there is some significance in the order of entries in certain lists.

(5) The clustering of single signs or pairs of signs in particular contexts

This may be connected with the last feature. Examples are L 91 and L 95 in 6, the "wheel" sign, L 29, in 11b, Lc 46 in 24a and the "scales" (L 85) on its reverse, the "rhyton" (L 103) and a ligature thereof on 37, L 30 in the second list of 117a, the combination L 30-54 on 122a/b, and L 87 on 123b. Fig. 1 illustrates the concentration of the pair L 30-98 at the head of groups on 103, and the clustering of L 72 and L 100 on IV 16. Thirteen groups with doubled signs

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Fig. 1

Fig. 2

Alternation of

"Double-Axe" and "Gate"

§ 10

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are set out in Fig. 1. Myres regarded such instances as possible 'Lallnamen'; but this could hardly be the case in 104 where L 78, suffixial throughout the list, appears to be doubled for the sake of emphasis.

## (6) Similar headings to adjacent lists

There are two instances of the repetition of complete sign-groups in this fashion, on 28a/b and 96a/b. More puzzling are adjacent headings, each consisting of a single group, which have certain signs in common; examples occur on 24a and 115a/b (Fig. 1).

(7) Three cases where a single initial sign replaces a sign-group in kindred contexts

These are illustrated in Fig. 2. Alternatively, the longer version may in each case be considered as a paraphrase of the corresponding single sign.

(8) A tendency for certain signs or sign-groups to occur in the same contexts

This may be considered alongside the characteristic noted in paragraph 5 above. Goold and Pope have noticed the affinity of L 56, single or redoubled, for the "winged priest" 27a, 89, and 127b contain instances, and two other cases, in 85a and 97a, are drawn up on Fig. 1. In both 97a and 119a "winged priest" falls next to the rare "gridiron" sign, L 8, and in 27a and 94b close to the almost equally rare "prow" sign, L 35. On 94b, 102, and 105, a "winged priest" lies in a list headed by the group L 29-2. Further instances of this sort could be discovered by inspection.

(9) The common inversions of pairs of signs, either standing alone or included in larger groups

Sundwall<sup>4</sup> and Grumach<sup>5</sup> have remarked on this feature. The list on Fig. 2 is probably complete or nearly so. Many instances also occur in Linear B and in the Proto-Elamite inscriptions.

Four examples (Nos. 24-27) of the inversion of a sign with a sign-pair in Linear A are manifestly similar; in one case among

<sup>&</sup>lt;sup>3</sup> G. P. Goold and Maurice Pope, Preliminary Investigations into the Cretan Linear A Script (Report to Linear B Seminar of the Univ. of London Inst. of Classical Studies) (1955), Index, p. 11

<sup>&</sup>lt;sup>4</sup> J. Sundwall, "Weitere Bemerkungen zu den Hagia Triada Täfelchen III", Acta Acad. Aboensis. Humaniora, XV. 4 (1945), p. 26, fig. 51

<sup>&</sup>lt;sup>5</sup> E. Grumach, "Positionswechsel in den kret. Schriftsystemen H und A", Forschungen und Fortschritte 36, 1962, 115ff.

these, No. 26, although the signs are not identical in the two groups quoted, a study of their contexts (on 123a) will show that they are comparable. Grumach has remarked that this kind of alternation, namely the placing of a sign either at the beginning or at the end of a group of three signs, the other two of which remain unchanged, occurs not only in Linear A but also in inscriptions of the Hieroglyphic class<sup>6</sup>.

The large number of examples of inversion in Linear A is especially remarkable in view of the relatively small total of sign-groups which are preserved in this script, whose corpus is much smaller than that of Linear B. Such a high proportion of chance inversions would be most unlikely in a phonetic script. The alternative explanation, that the signs involved are logograms, is supported by the consideration that in some cases, as is apparent from Fig. 2, the inverted signs are separated by marks of punctuation.

### (10) The alternation of signs in the same context

The commonest case is the alternative use of the "double axe" (L 52) and the "gate" (L 32), of which five instances are shown in Fig. 2. But these signs are not mutually exclusive, and can both occur in the same group.

## (11) Arrangements of signs common to the miscellaneous inscriptions and to the archives of tablets from Hagia Triada

One such case is shown on Fig. 2 in the fifth list referring to paragraph 10, where part of the "libation formula" recurs three times in the HT series. Again, in the illustrations to paragraph 9, number 33 shows three comparable cases, two from the HT set, and one from the Kephala Tholos (V 15).

In conclusion it may be recalled that on page 4 of the Oxford edition of the Linear A texts it was remarked that the three main classes of entry in the tablets from Hagia Triada are

"sign-groups which, there is little doubt, were names read phonetically. That the signs are syllabic is indicated by the small number of signs in a group, seldom more than four, usually three, and commonly two. Since these names are so numerous and recur so seldom,

<sup>&</sup>lt;sup>6</sup> E. Grumach, op. cit., p. 115 f.

<sup>&</sup>lt;sup>7</sup> For 'interior punctuation' in Linear A, compare E. Peruzzi, "Groupes idéographiques minoens", Jahrbuch für Kleinasiatische Forschung 2 (1952-3), pp. 214ff.; W. C. Brice (ed.), op. cit., p. 6; and E. Grumach, op. cit., p. 116 Fig. 1

<sup>8</sup> As noticed by E. Grumach in "Zur Frage des x-Initials in den hieroglyphischen Inschriften", Minoica (Festschrift Sundwall) (1958), p. 190, fig. 6

it is clear that they must be names of persons, not of communities or districts."

This opinion was taken over from the notes of Myres, but on pages 5 and 6 some doubt as to its simple application was expressed, with special regard to the "hand" sign, L 100, following on a study of inversions and of the frequent occurrence of apparent prefixes, infixes, and suffixes. What has been set out above, notably in paragraphs 8, 9, and 10, may be regarded as casting further doubt on a straightforward phonetic interpretation of the sign-groups. The only alternative is that these entries were, at least to a considerable extent, logographic. But it is difficult to see how such a script, with a very limited signary, could have functioned, except in a closely circumscribed context. That it did in fact everywhere pertain to the same general topic may be inferred from the resemblances, a few of which are set out in paragraph 11 above, between the contents of the widely scattered miscellaneous inscriptions and those of the clay archives of Hagia Triada.

It remains to add that there is no more reason to link the miscell-aneous inscriptions with the Hagia Triada archives than with those of Knossos and the mainland; that many features of the A-script are also found in the B-script; and that there appear to be significant resemblances between the structure of the Minoan scripts, particularly as employed in the account tablets of Hagia Triada, and that of the Proto-Elamite script, written at Susa in the first half of the third millennium. It is hoped to write more fully on this last point in a subsequent issue of Kadmos.