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## **NOTES ON LINEAR A\***

## V. THE LEGIBILITY OF THE ACCOUNT TABLETS

Even from superficial inspection, it is obvious that the general arrangement of the documentation on the Linear B tablets is much more clear than on those inscribed in Linear A.

Indeed, the scribes of the Linear A accounts appear to have made no concessions to the convenience of their readers. The tablets are very rarely inscribed with guide-lines, so that the writing sequence often strays from the horizontal; each line of writing continues to the very edge of the tablet (in modern printing parlance, the arrangement is 'justified'), regardless of whether sign-groups, or even sequences of numerals, must thereby be broken and continued on the next line; and no attempt is made to distinguish or separate the 'headings' or 'totals' from the body of the lists.

In order to render these accounts more comprehensible, Evans in his notes experimented with re-arrangements on more logical lines, and this work was continued by Myres to form the basis for the edition of 1961.

Reasonably enough, no such wholesale re-arrangement has been considered necessary in the publications of the accounts in Linear B. The techniques of writing by which the Mycenaean scribes ensured that the broad pattern of the information on the tablets should be instantly intelligible may be listed as follows:

- 1. The ruling of guide-lines, when deemed necessary in view of the length of the inscription, to ensure regularity in the alignment of the writing.
- 2. Care in the tracing of individual signs, so that the general standard of orthography is much superior to that of the Linear A scribes.

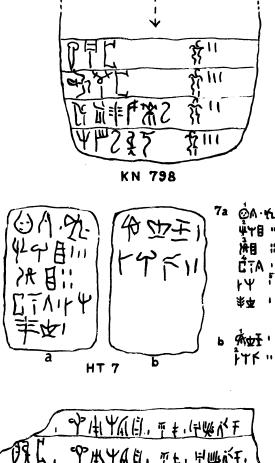
<sup>\*</sup> Parts III and IV of this series appeared in Kadmos 27, 1988, 155-165.

The hand-writing on the Linear A tablets often lapses into a rough scribble, as anyone who has been involved with their understanding will be painfully aware.

- 3. Where considered helpful to the reader, the lines of writing are left 'unjustified', that is, they are ended before the edge of the tablet was reached. The sacrifice of writing-space was evidently considered to be compensated for by the gain in legibility.
- 4. The use of majuscule writing to distinguish the 'titles' or 'headings' of the tablets.
- 5. The frequent use of 'pictographic' ideographs chariots, weapons and the like supplemented in many cases, if the current orthodox interpretation be correct, by the name of the object in syllabic writing (the system of 'double-writing').
- 6. The preference for scriptio plena to ligatured combinations. This is a question of degree, for both classes of Linear script made use of ligatures, and those in Linear A consist predominantly of commodity ideograms combined with qualifying signs. Even so, the 'textual' sign-groups in Linear A seem to include a higher proportion of ligatures than do those in Linear B.
- 7. Perhaps most significant of all, the Linear B scribes evidently preferred to repeat an ideogram, or even a phrase, after each item in a list, rather than, as in Linear A, to state it once at the head of the tablet, after which it would be understood as applying to every entry in the following series.

The point may be illustrated by comparing two lists of men, tablet 798 from Knossos, and tablet 7 from Hagia Triada (Fig. 1). The Linear B list (of which for convenience only the last four items are illustrated) repeats the 'man' ideogram after each item; whereas in the Linear A document the corresponding ideogram is drawn once only, in the heading, and is understood as applying to each item in the following list. The extra space required by the Linear B system is in this case small, but in other instances, for example KN 875 (Fig. 1) and the 'cadastral' series from Pylos, where whole phrases are repeated line after line, it is evident that considerably more writing room and scribal effort is called for than in the Linear A arrangement by headings.

We are dealing here, as in the case of the 'double-writing' mentioned in item 5 above, with the phenomenon known in information



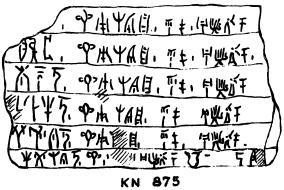


Fig. 1

theory as 'negentropy' or 'redundancy', when a message is repeated, sometimes in more than one style, in order to ensure its successful transmission. It is clear that the Linear B scribes, by the arrangement and contents of their work, were moving in this direction, whereas their Linear A counterparts were content with more cursory and abbreviated productions, at the expense of legibility.

If we turn now to an explanation of the difference, it might seem at first thought that the natural line of development would lead from a lengthy style of writing, with repetition, duplication, and the use of pictograms, to a more abbreviated system, with headings, ligatures and formal ideograms. However, if Linear A were, as is commonly supposed, the ancestor of Linear B, the evolution must have been in the opposite direction.

It might be preferable to consider the purpose for which the records were made. We can now be sure that the Linear A tablets were related to the stamped and inscribed nodules with which they are often found in association, and constituted composite records or totals of the transactions recorded on the nodules. Whether these transactions consisted predominantly of the issue of rations to working parties, as argued by Daniel Was, or of the release to artisans of raw materials from the palace store-rooms, as Judith Weingarten has noticed, is not at this stage important. In any event, the composite lists on the Linear A tablets seem to have been rough, short-hand records for the reference of the scribes themselves or of others who were conversant with their idiosyncratic style. They may well have been little more than 'office copies', for emergency reference only, and kept only a short while before 'repulping' when all need to refer to them had passed.

The Linear B tablets, by contrast, seem not to have been associated so closely with 'transaction nodules'. They covered business of a much wider variety than did their Linear A counterparts, including personnel, armaments and, it seems, landholding. The care with which they were drawn up, the high degree of redundancy in their contents, and their storage in sealed wooden boxes, would point to an intention that they be available for reference over a long time by readers other than specialist scribes.

In conclusion, we may refer briefly to the question<sup>2</sup> of why Linear B was not used for purposes other than inscribing commercial records

<sup>&</sup>lt;sup>1</sup> Jeremy Campbell, Grammatical Man, London (Lane) 1982, Chap. 5.

<sup>&</sup>lt;sup>2</sup> The question is well discussed by Thomas G. Palaima, The development of the Mycenaean writing system, in J.-P. Olivier and Th. G. Palaima (eds.), Studies in Mycenaean Epigraphy and Economy, Minos Suppl. 10, 1988, 334.

and painting on jars; for it seems, from the present state of discovery, that Linear A was the basic syllabic script used to express the koine of the island, most notably in the widespread and very uniform texts of the 'libation tables'.

The account-tablets of Hagia Triada and elsewhere, by contrast, employed a specialized and egregious writing style, derived from the Linear A syllabary, and including many idiosyncratic abbreviations, ligatures and ideograms. These special features were nevertheless used and understood in palaces and villas over a wide part of the island.

Linear B was a further derivative of this accounting system, doubtless developed, as argued above, to cover a wider range of undertakings, and for purposes rather different from those of the Linear A accounts. Its use was confined to the main late palaces, and it never replaced the fully syllabic Linear A as the general-purpose script of Bronze-Age Crete.

## VI. HIEROGLYPHIC ANTECEDENTS OF LINEAR SIGNS

It is noticeable that the signs on the 'monumental' Linear A inscriptions, whether engraved on stone or metal, are not only more regularly shaped, but are also often more elaborate in form than their equivalents that were incised with a stylus on the clay tablets. The difference is closely similar to that between the 'formal' style of the Cretan hieroglyphic signs on the seal-stones and their cursive variants on the inscribed clay bars from Knossos and Malia.

It appears that sometimes the finished and 'pictorial' shape of a sign in the Linear A inscriptions on stone or metal gives a clue to the hieroglyphic form to which it may be related. One such case was noticed in the publication of the silver hair-pin from Mavro Spelio<sup>1</sup>, where the sign C4 (p. 119) takes on a shape intermediate between the hieroglyphic sign H40, the spouted ewer, and the cursive Linear A sign L61, which would not by itself evoke such a comparison. A form very similar to that on the silver pin can be observed in the third sign of the gold ring, also from Mavro Spelio, and drawn as Figure 3 (p. 119) in the publication of the pin (here Fig. 1).

Another instance is slightly more complicated. In the second study in this series, on the inscribed sealings and roundels from Khania, it

Stylianos Alexiou-William C. Brice, A silver pin from Mavro Spelio with an inscription in Linear A: Her. Mus. 540, Kadmos 11, 1972, 113-124.

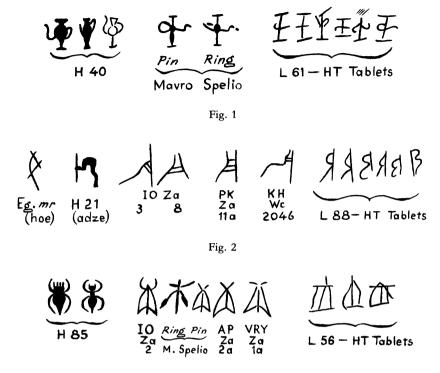


Fig. 3

was suggested (Kadmos 22, 1983, 100) that the Linear A sign L88 A might be related to the Cretan hieroglyph H21 h, the 'adze' sign, but that the cross-hatchings between 'handle' and 'blade' observed on eight examples of the sign at Khania might indicate lashings to strengthen the hafting of the implement, as in the case of the ancient Egyptian hoe. Since those remarks, two further examples of the Linear A sign with the 'lashings' (which do not appear on the sign in the Hagia Triada tablets) have been noticed on the newly-discovered stone libation tables from Mount Juktas.<sup>2</sup> These confirm the form of the sign on a somewhat worn table from Palaikastro, and re-inforce the conclusion that this was the full and original shape of the sign (Fig. 2).

<sup>&</sup>lt;sup>2</sup> Alexandra Karetsou—Louis Godart—Jean-Pierre Olivier, Inscriptions en linéaire A du sanctuaire de sommet minoen du mont Iouktas, Kadmos 24, 1985, 89—147.

A third instance may be L56, which appears on one of the libation tables from Mount Juktas (IO Za 2) in a shape which instantly suggests an insect with antennae, such as a bee. The authors of the initial publication (here Footnote 2, p. 120) compare, with insight, the example on the gold ring from Mavro Spelio, which also has convex antennae. On the stone tables from Apodoulou and Vrysinas the forms of the sign are closely similar, but the antennae are concave. The equivalent sign in the hieroglyphic repertory may be H85, of which Evans has two examples (Fig. 3). The legs here seem to correspond to the main outline of the Linear sign.