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## NOTES ON THE CRETAN HIEROGLYPHIC SCRIPT

### I. THE CORPUS

#### 1. The publications

The Cretan Hieroglyphs occur in two forms, engraved and cursive. The first form is known mainly from stone seals or their impressions on clay, the second from the inscriptions incised on clay seals, bars, tablets and the like. Evans rightly regarded both forms as belonging to the same script, and this still seems the simplest and most satisfactory classification<sup>1</sup>.

In most instances, the engraved seals have been published without secure provenance or associations. The clay archives, however, were found in only two 'deposits', at Knossos and Malia, both of which were scientifically excavated, so that we know their archaeological contexts and the degree of association of their contents<sup>2</sup>.

Both Evans and Chapouthier were primarily interested in the recording of the inscriptions and in the identification and classification of their constituent signs. At the time when they wrote, there was less concern than now for the role played by these inscriptions, and by the objects on which they were engraved and written, in the activities of the communities which made them. Evans, indeed, published all his seal-impressions together, and separately from the cursive inscriptions, so that those sealings that carried both impressions and inscriptions are presented partly within one section and partly within another (Fig. 1).

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<sup>1</sup> Ernst Grumach proposed the term 'Proto-Linear' for the cursive script of the Knossos Hieroglyphic Deposit (Bull. John Rylands Library 46, 1964, 367-8), and in this was followed by Piero Meriggi (Kadmos 12, 1973, 116); but such a nomenclature would tend to conceal the evident kinship between the engraved seals and cursive scripts of the Deposits.

<sup>2</sup> Arthur J. Evans, *Scripta Minoa I*, Oxford 1909; Fernand Chapouthier, *Les écritures minoennes au Palais de Mallia*, Ecole franç. d'Athènes, Et créet. II, Paris 1930; L. Godart et J.-P. Olivier, *Ecr. hiér. créet. (Malia—Quartier Mu)*, Et. créet. XXIII 1978.

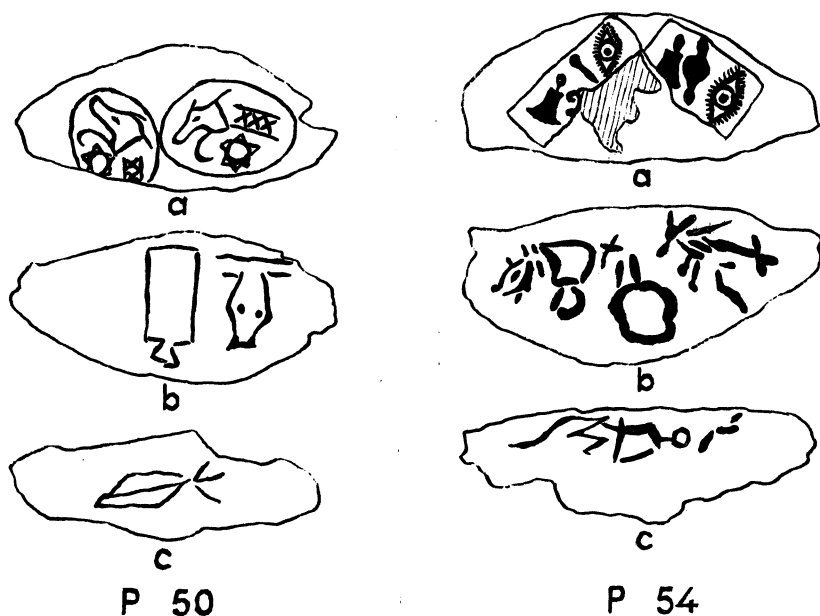


Fig. 1. Two sealings from Knossos. Sides a carry seal-imprints, sides b and c cursive inscriptions. In PM I Evans published the imprints separately from the inscriptions, and on disparate scales.

Taking this odd arrangement into account, the numbers of inscribed objects recorded by Evans and Chapouthier were as follows:

	<i>SM I</i>	<i>Malia</i>
Seals	(55)	(3)
Sealings ('boules')	29	2
Roundel ('pastille')	—	1(?)
Labels ('médailleurs')	18	7
Bars (four-sided)	29	6
Bars (three-sided)	1	—
Tablets (high)	—	6
Tablets (long)	1(+2)	6
Vases	—	2

The fifty-five seals published by Evans came from many sites and collections, and none was found in the hieroglyphic 'deposit' at

Knossos. The three seals recorded by Chapouthier all come from Malia, but again not from the hieroglyphic 'deposit'. One of the Malia seals had already been published by Evans (H1 = P6).

It is evident from even a cursory inspection that the 'bars' and 'tablets' contain, at least in some cases, lists with numerals, similar in form to those of the Linear Scripts, and that the seals, labels and roundels, again as with their equivalents in the Linear Scripts, are records of individual consignments or transactions, which appear to have been combined and consolidated into the account lists on the bars and tablets. Whether we have to do with the issue from central stores of rations to working parties, or with the assignment from palace magazines of raw materials to artisans, need not at this stage concern us. It is enough to note the strong likelihood that we are here in touch with a complex system of accounting which is in essence like those recorded in the Cretan linear scripts and, much earlier, in the Near East.

## 2. The identity of the cursive hieroglyphic scripts from Knossos and Malia

In presenting his material, Chapouthier closely followed Evans's style, and considered at length the classification and identification of his signs. In his Figure 12 (p. 31) he identifies 35 cursive signs with those of Evans, but lists 18 which he regarded as unique to Malia, a ratio, that is to say, of 2:1. However, on closer inspection, it appears that 16 of the 18 signs regarded by Chapouthier as peculiar to Malia can be matched with examples from Knossos. Figure 2 gives the evidence for this proposed revision of Chapouthier's list. The case of his New Sign No. 1 ('tête humaine de profil') is particularly worthy of note. It occurs once at Malia (on H 14a), sheltered under a curved branch (Evans No. 100). Evans's Sign No. 3 ('human bust or idol'), also in profile, is likewise, in two of its four occurrences, surmounted by a curved branch (on P 101a and P 102a); and Chapouthier (p. 36, note 4) remarks on the association of the two signs, head and branch, in the Hittite hieroglyphic script. The correspondence is so close that it would seem reasonable to regard the two forms, head-with-branch and bust-with-branch, as local variants of the same composite sign or ideogram.

As for the two residual Malia signs, which seem to be unique to that site, No. 15 𐀓, the 'sacral knot', and No. 16 𐀔, the 'house', the former

Malia (‘New signs’)		Knossos (Evans’s refs.)	
1			3
2			8
3			P 110 b
4			PM I 642 No. 10
5			64
6			86
7			124
8			92
9			48
10			
11			99
12			32
13			35
14		(on seal) —	—
15			
16			
17			114
18			108
19			9

Fig. 2. A comparison of Chapouthier’s ‘signes nouveaux’ from Malia with similar or variant forms from Knossos.

is only found once, the latter three times, and it may be simply fortuitous that they do not occur in the cursive hieroglyphic of Knossos<sup>3</sup>.

In short, there seems no reason to doubt that the signary of the Malia hieroglyphic deposit is essentially the same as that of the equivalent archive at Knossos. The further question of the resemblance between the two archives considering later finds at Malia (n. 2 above — 1978) will be treated in a further note.

### 3. The territorial extension of the script

Since relatively few seal-stones are found in situ, it is unsafe to draw firm conclusions from their recorded sources. For what it is worth, however, a rough count of the provenances of the hieroglyphic seals in Evans's catalogue shows that about a quarter were collected in East Crete, and three-quarters in Central Crete.

More important is the concentration, not only of the cursive inscriptions but also of the hieroglyphic seal-impressions, at the two sites of Knossos and Malia. Hieroglyphic impressions are virtually unknown on the roundels and sealings from other Cretan sites, where official identity or authority appear to have been asserted at all periods, not with script-signs but with thematic or pictorial designs.

The evidence is that the Minoan bureaucracy in the central part of the north coast of Crete used the hieroglyphic script almost exclusively, including seal-stones with hieroglyphic signs, whereas over the rest of the island, to East, South and West, Linear A was the regular style of writing. Linear A had, of course, an engraved variety, which was used for example on the stone offering-tables and hair-pins, but this was never applied to seal-stones.

In brief, it is suggested that the distinction between the hieroglyphic and linear scripts should be regarded not only as chronological but also as topographic.

## II. THE CLAY BAR FROM MALIA, H 20 (Fig. 1)

This document is of special interest in the Malia hieroglyphic archive, first because it is complete, with only one sign illegible and one other damaged; and, second, because it contains a list of ideograms which is unique at Malia, but which can be compared with similar account-lists

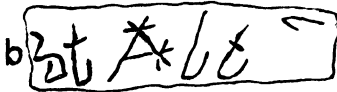
<sup>3</sup> The first of these two signs may be compared with ∞ in the opening group of P 121, the hieroglyphic tablet from Phaistos; the second with the Linear A sign L 59 E.



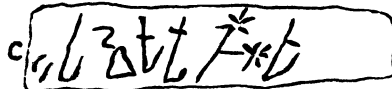
from the hieroglyphic deposit at Knossos and also from the Linear A archives of Hagia Triada.

The four-sided bar is best read in the sequence of sides as published by Chapouthier, and the document can then be analysed as follows:

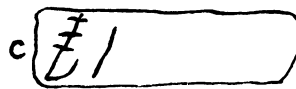
- a. Three sign-groups, the first of four signs, the second and third of three signs each, the groups being separated by a pair of vertical strokes, one long and one short. The three groups may be considered together as a 'heading', to be read syllabically.
- b. Six ideograms, each followed by numerals, in sequence 1.  $\wedge$  2 $\frac{1}{4}$   
2. \* 5 $\frac{3}{4}$  3.  $\overline{\text{w}}$  21 $\frac{1}{2}$  4.  $\text{f}$  240 5.  $\text{v}$  1 6.  $\text{v}$  1.



P 111



P 112



P 113

Fig. 2. Three fragmentary four-sided clay bars from Knossos, P 111, P 112 and P 113.

The main interest of the list attaches to the identity and associations of the six ideograms. In each case, this is their only occurrence at Malia, but the three hieroglyphic bars, P 111, 112 and 113 (Fig. 2), from the Knossos deposit offer parallels. These three documents from Knossos are unfortunately all fragmentary, but evidently include lists of ideograms associated with numerals and fractions (Evan's 'crook' signs, Nos. 32, 33 and 34, appear to be fraction signs). P 111 and P 112 contain the Malia ideograms  $\star\star$  and  $\nabla$ , and P 113 includes  $\star\star$  and  $\overline{\nabla}$ .

If now we turn to the Linear A account-tablets from Hagia Triada, we may first remark that among the 'commodity signs' there is a pair of similar ligatured ideograms, in the general shape of 'vessel with spray', Lc' 1  $\nabla^c$  and Lc' 2  $\nabla^s$ , and that these are found in association three times, on HT 23, 32 and 34. They clearly invite comparison with the final two ideograms in the Malia list,  $\nabla$  and  $\nabla^s$ .

The second of the six Malia ideograms,  $\star\star$ , Evans's No. 103, the 'fig-tree', is evidently the hieroglyphic equivalent of the Linear A sign L 60,  $\star$ , which is found on HT 30 (Fig. 3) in association with Lc' 2, a vessel with spray, as also in the hieroglyphic inscriptions P 111 and P 112, and on our Malia bar H 20.

In Linear A, the 'fig tree' L 60  $\star$  is regularly used in association with L 82  $\overline{\nabla}$ , the 'wine' ideogram. Further, in two contexts (HT 28, 91) it is also listed with L 44  $\nabla$ , and in two more (HT 90, 125) with L 67  $\uparrow$  ('barley'). Both these are clearly ideograms indicating commodities. The Linear A sign Lc' 5  $\nabla$ , which resembles the fourth sign on the H 20 list, is manifestly a variant or ligatured form of L 67  $\uparrow$ .

It is therefore proposed to equate the first of the ideograms on H 20,  $\nabla$ , with the Linear A sign L 44  $\nabla$ . This hieroglyphic sign on H 20b passed unnoticed by Chapouthier, who read it as part of a sequence of numerals, and it is not recorded in SM I. It should be included as a new item in any revised list of the Cretan hieroglyphic signs.

In the light of the Linear A evidence it would seem reasonable to identify the third of the H 20 ideograms,  $\overline{\nabla}$ , Evans's No. 116 ("... resembles the forepart of a ship with a high prow and with two or three masts") with the Linear A 'wine' sign L 82  $\overline{\nabla}$ .

Likewise, the fourth ideogram on Malia H 20  $\nabla^s$ , may be matched with the Linear A Lc' 5  $\nabla$ . Chapouthier identified the sign on H 20 as Evans's 'crook' sign with two bars, a variant not found at Knossos: but an analysis of the contexts of Evans's 'crook' signs (Nos. 32-35) appears to show that they are all fraction signs, at all events in the cursive inscriptions, and the layout of H 20 calls for an ideogram rather than a fraction at this point.



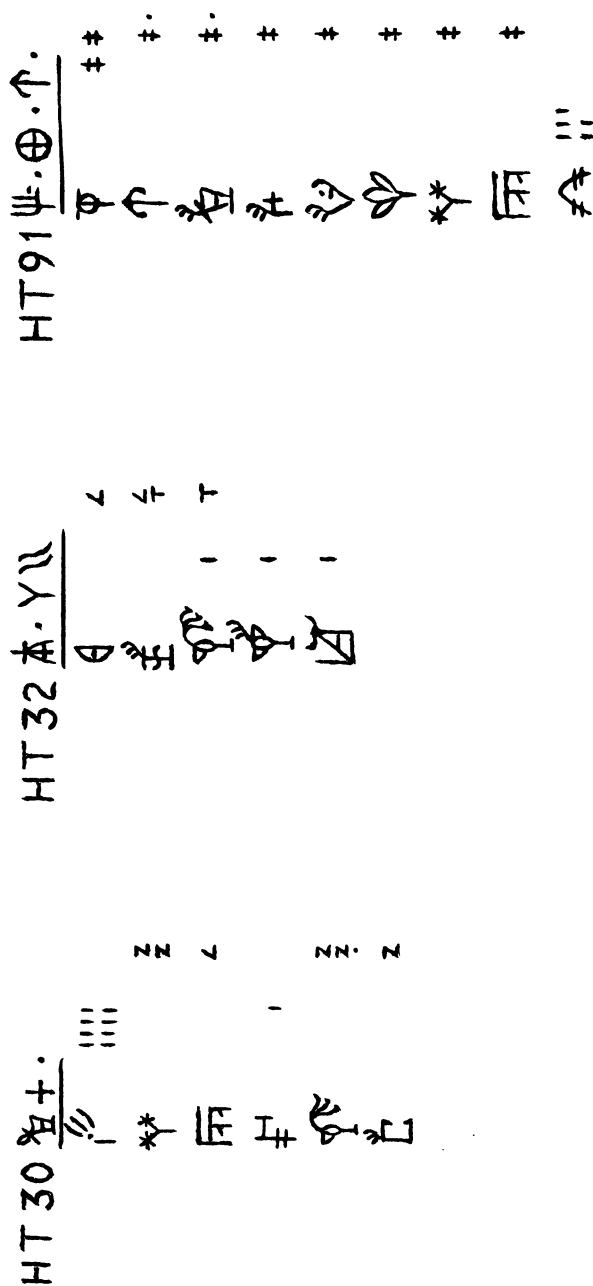


Fig. 3. Transcriptions of parts of three Linear A tablets from Hagia Triada.

In summary, an analysis of the structure of the Malia inscription H 20 makes it possible to revise the identification of one hieroglyphic sign,  $\overline{\text{vv}}$ , and to recognize two which do not appear in the published signaries,  $\wedge$  and  $\#$ . Further, more features have appeared in common between the cursive hieroglyphic inscriptions of Malia and Knossos; and between these account lists and those in Linear A from Hagia Triada<sup>4</sup>.

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<sup>4</sup> In Documents, p. 30—1, Ventris and Chadwick remark on the resemblance between the ideograms in the Phaistos 'Hieroglyphic Tablet' P 121 and those in the Linear Scripts, both in shape and sequence. A fuller analysis of this tablet was attempted by the writer in Kadmos 8, 1969, 125, and further remarks on the inscription appear in Kadmos 27, 1988, 164—5.