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"Mycenaean" doublets**

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THE LINEAR B SIGNS 8-A AND 25-A₂

(Remarks on the Problem of "Mycenaean" Doublets)

1. All authors, concerned with interpreting texts in Linear Script B,¹ agree in ascribing Bennett's sign I 8² (according to Furumark's progressive numbering sign 8³) the phonetic value [a], considering at the same time Bennett's sign II 1 (= 25) to be his doublet and transcribing it as A₂ or A.⁴ The correct reading of sign 8 may be said to be today beyond dispute; the famous tablet of tripods from Pylos (Ta 641),⁵ along with other documents that are considered to be satisfactorily deciphered, is a safe guarantee.

We still face the problem, however, to what extent the same phonetic value may be ascribed to the syllabic sign 25. J. Chadwick⁶ was the first to doubt the absolute identity of the two signs, when referring to the Greek interpretations of certain linear sign-groups, presented hitherto by different scholars, suggested the possibility of sign 25 representing syllable [ha], which originated from the prehistoric [sa] where this [s] occurred in the vicinity of vowels. Unfortunately, the author of this article has got acquainted with the above-mentioned Chadwick's hypothesis rather late — just before sending this study to the printers', nevertheless the conclusions he arrived at through the statistical analysis of linear sign-groups agree with Chadwick's view so far that this study could be regarded as having been written in complete conformation with Chadwick's hypothesis, wishing only to verify this theory by means of concrete material.

It is not, however, so simple to get convinced about the difference of signs 8 and 25 and to ascribe to either of them different phonetic value. Certain phenomena, encountered by scholars, analysing the basic linear B sources from the linguistic point of view, appear namely to speak rather in favour of the phonetical identity of the two signs. Thus a number of parallel readings have been found, one being represented in a certain place within otherwise identical sign-group by sign 25, while the other in the same place by sign 8. These readings are, e. g.

a ₂ -ke-te-re [8]	V 118	:	a-ke-te-re	Jn832,1
a ₂ -ne-u-te	Cn599,2	:	a-ne-u-te	Cn40,7.13 ⁷
a ₂ -ta	An209,2	:	a-ta	An39,r.9
qe-te-a ₂	Un138,1	:	qe-te-a	Fp363,1
pa-we-a ₂	MYC 127	:	pa-we-a	L 594 a al.
we-a ₂ -re-jo	Ta714,1	:	we-a-re-ja	Ta642,1

Of these parallels specially conclusive seem to be those that are found in texts the contents of which display evident affinity (this is the case specially with sign-groups a₂-ne-u-te: a-ne-u-te; a₂-ta: a-ta; we-a₂-re-jo: we-a-re-ja). But this type of parallel readings is not the only one that can be found in linear monuments

in connection with sign 25. It appears that in certain cases even signs 25-A₂ and 57-JA replace each other in turns, e. g.

a ₂ -ke-te-re ⁸	V 118 ⁹	:	ja-ke-te-re ¹⁰	Mn11,2
ko-ri-a ₂ -da-na	Un287,5	:	ko-ri-ja-do-no	Ga415 al. ¹¹

There are other cases demonstrating a parallel that concerns signs 25-A₂ and 43-AI, e. g.

a ₂ -nu-me-no	Jn389,12	:	ai-nu-me-no	An261,2
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and even signs 25-A₂ and 54-WA, e. g.

]me-nu-a ₂ ^{11a}	An218,14	:	me-nu-wa	An724,2; V 60,3; Sc233 ^{1a}
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On the basis of the last four hypothetical equations we are, of course, not entitled to jump to the presumptive conclusion that all the respective parallel readings must have been phonetically completely identical.¹³ But similarly one could doubt even the reciprocal identity of signs 8 and 25 and suppose that even the respective above-quoted sign-groups differed from each other both as far as the pronunciation of the first syllable was concerned and as to the idea expressed — or, at least in those cases, when the similarity of context on kindred tablets seems to speak in favour of identical meaning, we may think of another explanation: The sign-groups like a₂-ta: a-ta may have actually been used to express the same idea in the respective quotations, whereas the single signs by themselves, of which the first was used in one sign-group and the second in another one, need not have been identical from the very beginning and may have been employed even in the Linear Script B on other occasions retaining their respective difference. In favour of this possibility there seem to be certain disproportions between the two signs that can be ascertained statistically in reference to their occurrence.

The most important anomaly requiring explanation is the considerably different frequency of signs 8 and 25 in relationship to the place of occurrence (by far most documents containing sign 25 come from Pylos¹⁴) and as far as their location in the sign-group is concerned as well (even in Pylos sign 8 definitely predominates in the beginning of the groups, while in the middle both signs are more or less evenly represented, and at the end it is sign 25 again that appears much more frequently¹⁵). The following table demonstrates this tendency most clearly:

Frequency¹⁶ of Signs 8 and 25 by All Occurrences (by Discrete¹⁷ Sign-Groups).

		Initially ¹⁸	Medially ¹⁸	Finally ¹⁸	Total (according to place)
Knossos ¹⁹	8-A	494 ²⁰	37(18)	66(17)	597 ²⁰
	25-A ₂	1 (1)	1 (1)	4 (1)	6 (3)
Pylos	8-A	524 ²⁰	28(15)	5 (4)	557 ²⁰
	25-A ₂	25(22)	24(17)	78(15)	127(52) ²¹
Mycenae	8-A	17 ²⁰	—(—)	—(—)	17 ²⁰
	25-A ₂	—(—)	1 (1)	2 (2)	3 (3)
The Other Mainland	8-A	15 ²⁰	—(—)	—(—)	15 ²⁰
	25-A ₂	—(—)	—(—)	—(—)	—(—)
Total (according to position)	8-A	1050	65(33)	71(20) ²²	1186 ²⁰
	25-A ₂	26(23)	26(19)	84(18)	136(58) ²³

The table shows that nearly all the mentioned cases of sign 25 appearing in linear texts are from the Mainland. There are six²⁴ exceptions: sign-group]a₂-ta on tablet B 213,²⁵ three fragmentary final]-a₂ to be found in documents *Le786.B*; *787.B*;²⁶ *788.B*, the sign-groups a₂-ke-te-re [*V 118* (see Note 9) and pa-we-a₂ [*L 7378*.²⁷ As evident, all these occurrences of sign 25 found in Knossos are of a very indefinite character and one gets hardly convinced of this sign being normal member of Linear B inventory.

In contrast to these problematic documents from Knossos, sign 25-A₂ can be verified in the finds from Pylos and Mycenae altogether 130 times in 55 discrete sign-groups. And at the same time we have the impression that the nearer we approach the end of the sign-group, the more is sign 8 in Pylos ousted by its rival.

2. In the beginning of the word sign 8-A appears altogether 1050 times. Of this number approximately 50% are connected with Pylos, while nearly all the remaining instances come from Knossos.²⁸ Thus we find that in the case of both Knossos and Pylos the frequency of sign 8 in the beginning of words is represented by approximately the same percentage as the total frequency of the same sign, irrespective of the location of sign 8 in the word (Pylos ca. 47% of single occurrences, Knossos nearly all the rest).

The opening sign 25-A₂, on the other hand, is represented in all Linear B texts only 26 times, just one instance coming from Knossos. The instance in question is the above-mentioned rather problematic a₂-ke-te-re [*V 118*, interpreted by Georgiev as ἡιετῆρες or as ἀκεστῆρες.²⁹ It may really represent a parallel of the sign-groups a-ke-te-re Jn832,1 and ja-ke-te-re Mn11,2 from Pylos and may be related even to some other forms. All the remaining 25 instances come from Pylos. The 22 discrete sign-groups concerned are the following:

Sign-Groups	Occurrences	Interpretations	Possible Parallels ³⁰
A 1 a ₂ -di-je-u ³¹	An656,2	—	] a-di-je-wo <i>Dw747. a</i> ;] a-di-je[<i>Wb5555,1</i>
2 a ₂ -e-ta	An261,4	Ἀήτης, Αἰήτης; ³² <i>G</i>	—
3 a ₂ -ka-a ₂ -ki-ri-ja-jo	Cn3,7	ἀγγ-αγκριαῖοι <i>Mühl</i> ; ἀγγ-αγκριαῖοι <i>Risch</i> ; ? Αἰγα(τ) + Ἀγκρια <i>P</i>	see A 4
4 a ₂ -ka-a ₂ -ki-ri-jo	An661,12	cf. A 3	see A 3
5 a ₂ -ki-ja	An830,13	—	—
6 a ₂ -ki-ra	Na856	—	—
7 a ₂ -ku-mi-jo	Na926	—	—
8 a ₂ -ku-ni-jo	An656,12	—	—
9 a ₂ -ma-i-wa	Na1092	—	—
10 a ₂ -ne-u-te	Cn599,2	cf. Αἶνος <i>P</i> ; ? Ἀρνευτήρ <i>G</i>	a-ne-u-te Cn40, 7.13; a-ne-u-da <i>Vc215</i> .
11 a ₂ -nu-me-no	Jn389,12	Ἀρνόμενος <i>G, P</i>	ai-nu-me-no An261,2
12 a ₂ -pa-tu-wo-te	Cn599,3.4.5.7	(nomen loci) <i>T</i> ³³	a-pa-ta-wa[<i>Ch144,2</i> .
13 a ₂ -ra-tu-a	Cn3,3	? Ἀλασῶα <i>G</i> ; ? Ἀρῶας <i>G</i>	see A 14
14 a ₂ -ra-tu-wa	An519,4	= a ₂ -ra-tu-a Ἀραιθυρέα <i>Mühl</i>	see A 13
15 a ₂ -ri-e	An724,5	—	—
16 a ₂ -ri-sa	Eq213,1	? Ἐλισ(σ)α, <i>G</i> ³⁴ ? Ἄλισα	—
17 a ₂ -ro-[.]u-do-pi ³⁵	Ta642,1	halos hudot'phi „with waters of the sea“ (cf. Ἰ. λουσῶνη) <i>V</i> ^{35a}	—
18 a ₂ -ru-wo-te	An657,8	—	—

Sing-Groups	Occurrences	Interpretations	Possible Parallels
19 a ₂ -ta	An209,2	Ἄνθας	G a-ta An39,r.9
20 a ₂ -te-po	An519,10	Ἄντιφος or Ἄγρίπους	P, Mühl —
21 a ₂ -te-ro	Ma365,2	ἄτερος	VC —
22 a ₂ -zo-qi-jo ^{35b}	Un1193,4	—	—

It would, however, be a very premature undertaking if one attempted to draw from these interpretations regular concrete conclusions concerning the phonetic value of signs 8 and 25. The list informs us that the words are for the most part very likely proper names, whose phonetic aspect might have been reproduced only very approximately, owing to the not exactly precise transcription of Greek in Linear Script B. And even if we succeeded in finding some common criterion for all these interpretations, just in the case of such proper names we might run the risk of a grave mistake: the common denominator instead of characterising the beginnings of genuine Greek words may simply characterise the beginnings of our rather incidental, and in any case very subjective attempts at mere interpretations that are based above all on the knowledge of a stock of expressions which was employed more than five hundred years later. For many a proper name, specially if it was not of Greek origin, may have in the meantime ceased to be used or at least may not have occurred in written material of later date. We may therefore venture some more concrete conclusions only in connection with the general distribution of signs 8 and 25 within the linear sign-groups.

3. In the middle of the word sign 8-A occurs much less frequently than in the beginning. This fact surely corresponds with the general observation concerning syllabic systems of letters; the presence of a pure vocal sign in the middle of words is comparatively rarer than in the opening syllables. Bennett gives the following figures for the frequency of vocal signs or diphthongs in the documents from Pylos found in 1939:³⁶

	Initially	Medially	Finally	Total
8-A	325(158)	22(10)	6 (4)	353(172)
25-A ²	17 (14)	17(10)	37 (7)	71 (31)
38-E	388(123)	149(33)	40(20)	577(181)
23-I	63 (36)	42(33)	24(17)	129 (86)
61-O	298 (74)	116(22)	94(50)	508(146)
10-U	19 (13)	154(76)	117(65)	290(154)
43-AI ³⁷	30 (15)	1 (1)	—(—)	31 (16)

The table shows us that it is only the sign used for vowel [u] that displays a more distinct tendency to shift its gravitation from the opening syllable towards the end of the word. This phenomenon can be explained mainly by the frequent occurrence of nominal *u*-stems in the language employing the Linear Script B. The other signs are distributed between the two extremes, i. e. between U on the one side and A or AI on the other side. Not even the sign 25 shows such extreme use as the sign 10; its distribution is especially in contrast to sign 8 much more even,³⁸ and thus the difference in assertion of the two signs becomes more pronounced.

Sign 8-A was found medially in Knossos and Pylos altogether 65 times; it was in 33 discrete sign-groups (in Knossos 37 instances in 18 groups, in Pylos 28 instances in 15 groups, while in Mycenae no sign 8 has been found medially as far); sign 25-A₂ occurs in Knossos only once (see Note 25), while in Pylos and Mycenae,

on the other hand, we encounter this sign 25 times in the following 18 discrete sign-groups:

Sign-Groups	Occurrences	Interpretations	Possible Parallels
B 1 a-pi-a ₂ -ro	An192,1; Ea109;-270; -922; On300,2	² Αμφιάλος ³ Αμφίθαλος	VC; C ⁶ a-pi-ja-re[X 7568
(dp) ³⁹ a-[.]a ₂ -ro	Jn478,3	= a-pi-a ₂ -ro	—
2 a ₂ -ka-a ₂ -ki-ri-ja-jo	Cn3,7	see A 3	—
3 a ₂ -ka-a ₂ -ki-ri-jo	An661,12	see A 4	—
4]a ₂ -ke-wo[	Xa929	—	a-ke-wo <i>Ap628.1B</i> ; a-ke-u <i>Dw1133.b</i> ; <i>V 151,3</i>
(dp) .]a ₂ -ta ⁴⁰	An172,10	—	cf. B 6, B 13, B 18 and also]a ₂ -ta <i>B 213</i> ; perhaps even a ₂ -ta An209,2 and a-ta An39, r.9
5 ai-ki-a ₂ -ri-jo	Fn50,4; -1192,6	αγιάλιος	VC
6 ko-a ₂ -ta	Jn706,17	—	ko-a-ta <i>B 798,8</i>
7 ko-ri-a ₂ -da-na	Un287,5 ⁴¹	κοριάδων; κοριάδρον. κοριανός	VC ko-ri-ja-do-no <i>Ga415</i> al. (in <i>Knossos</i> only)
8 o-pi-a ₂ -ra	An657,1	? = o + pi-a ₂ -ra? ⁴⁶	—
9 pi-a ₂ -ra	Tn996,2	φιάλη Webster, Merlingen	—
10 pu-[.]a ₂ -ko	An340,7	—	—
11 ru-ko-a ₂ -[.]re-u-te ⁴²	Jn415,1	? Λυκόα ⁴³ ? Λύκος-in- Αλυαλεύς	G; P ru-ko Pn30,4
12 si-a ₂ -ro	Cn608,1	σταλος	VC
13 wa-a ₂ -ta	MYC 102,7	? Ἀήτης	G cf. B 14, B 15
14 wa-a ₂ -te-pi	Na1009	? Ἰαντεφι (Dat. Pl.)	G cf. B 13, B 15 , and also wa-te-u Na395.e ⁴⁴
15 wa-a ₂ -te-we	An207,9	? Ἰαντεύς, Ἰανθεύς ⁴⁵	G cf. B 13, B 14
16 we-a ₂ -re-jo	Ta714,1	cf. ἔαρινός < west.; ὄαλειος	V ^{35,1} we-a-re-ja Ta642,1 (see C 15)
17]-we-e-a ₂-[	Xn878,2	—	—
18] 85-to-a ₂ -ta	Cn314,3	—	—

on the Mainland

Sign 8-A, as we have pointed out, occurs in the middle of the word with almost the same frequency as sign 25, i. e. 28 times in the following 15 discrete sign-groups found in Pylos:

Sign-Groups	Occurrences	Interpretations	Possible Parallels
(dp)]a [47	Xn1015	—	—
(dp)]a[47	Xn1129	—	—
(dp) .]a-ke-re-se	Sn64,5.6	= o-a-ke-re-se	—
C 1 a-pi-ke-ne-a[	Xa1044	² Αμφιγένεια (nomen loci)	G; T
2 i-za-a-to-mo-i	Fn50,8	ixk ^w i-γερθμοιτι "den Wagnern" Mühl	—

Sing-Groups	Occurrences	Interpretations	Possible Parallels
3 jo-a-se-so-si	Cn608,1	ὡς ἐσήσονται VC; ὡς ἀσήσονται P; (Fut., cf. ἄσαι) G οἱ (ὡς) ἀφήσονται	cf. jo-, e. g. jo-i-je-si Cn3,1; (= ὡς, ὄς, οἶ, δ ἔνεισι VC); jo-do-so-si Jn829,1 (= ὡς δώσονται VC); etc. ⁴⁸
4 ka-ra-a-pi	Ta722,2	k(a)raa ^t phi [Instr. Pl.] (cf. Hom. κρηάτος, κρηάτος [Gen. Sg.]) V ^{35a}	ka-ra-pi Ea808
5 o-a-ke-re-se	Sn64,2.7. 13.14.15. 16	δ ἀργησε VC	cf. o-, e. g. o-de-ka-sa-to Pn30,1; o-do-ke Un287,1; o-o-pe-ro-si Nn228,1; o-wi-de Eq213,1; Ta711,1; etc. ⁴⁹
6 o-re-mo-a-ke-re-u	Jn320,1	—	cf.] a-ke-re-u [Cn441,3 (= Ἀργεύς G)
7 pa-ka-a-ka-ri	Na926	—	—
8 pe-ra-a-ko-ra-i-jo	On300,8	Περ-ακράϊος, -οι < πέρα + ἄκρα F; πέρα + χώρα or Φεραί + ... P; Περ(α)-αγοραῖος < πέρα + ἀγορά G ⁵⁰	pe-ra-ko-ra-i-ja Ae398; pe-ra ₂ -ko-ra- i-ja Ng332; Wa114,2
9 pu ₂ -ra ₂ -a-ke-re-u	Nn228,3	Πυραργεύς or Φυλα + ... P	cf. also C 6
10 pu ₂ -ra ₂ -a-ki-ri-jo ⁵¹	Na425	Πυράργιος P	u-pa-ra-ki-ri-ja An298,1; .. u-po-ra-ki-ri-ja Cn45,4.5.6.7.11 (= ὑπεράγια VC)
11 re-a-mo	An209,8	Λέαμος G	—
12 se-re-mo-ka-ra-a-pi	Ta708,2	cf. σέλιμα „plank” + k(a)raa ^t phi V ^{35a} (see C 4)	se-re-mo-ka-ra-o-i Ta707,2; se-re-mo-ka-ra-o-i-je Ta714,2;
13 te-ko-to-a-pe	An5,1.2. 3.4.5	τεκτο(ν)-αφής < τέκτων + ἄπ-τω G τέκτων, ἀρπε-? VC ἄπ-ης C	te-ko-to-na-pe An18,2.7, and also te-ko-[.]na-[An852,3
14 u-me-ta-qe-a-po	Ea259	—	—
15 we-a-re-ja	Ta642,1	see B 16	we-a ₂ -re-jo Ta714,1 (see B 16)

While in the beginning of sign-groups the relationship of the two signs and their occurrence presents a very complicated picture on the Mainland, in the middle of words it is possible to draw a pretty clear line between the cases when sign 8 was used and those when sign 25 was employed. Nearly all expressions with sign 8-A in the middle evidently represent compounds, which justifies us to a certain extent to add these instances to the list of initial occurrences. This can be stated with certainty about sign-groups o-re-mo-a-ke-re-u, pu₂-ra₂-a-ke-re-u (cf.] a-ke-re-u { Cn441,3), or similarly about pu₂-ra₂-a-ki-ri-jo, pe-ra-a-ko-ra-i-jo (but cf. a₂-ka-a₂-ki-ri-ja-jo [see B 2] and a₂-ka-a₂-ki-ri-jo [see B 3] with sign 25 in the middle), te-ko-to-a-pe⁵², i-za-a-to-mo-i, and perhaps also about pa-ka-a-ka-ri, which is still without Greek interpretation. A genuine initial [a]

is to be found beyond any doubt in the sign-groups o-a-ke-re-se (add also the incomplete .]a-ke-re-se) and jo-a-se-so-si. Each of these instances represents as a matter of fact two detached words, reproduced graphically without interruption.

Of the total number of Pylian sign-groups with sign 8 in the middle there are, therefore, only several instances left in which a break of this kind before the sign cannot be demonstrated, provided we do not take into consideration the fragmentary]a [and]a[. And on the top of it one of these cases, namely the sign-group a-pi-ke-ne-a[is very likely a whole word, for lacuna probably did not occur until in the succeeding sign-group (cf. a-ti-ke-ne-ja MYC 110,2). That means that there are practically only the following instances of sign-groups with sign 8 in the middle that represent some difficulties for our theory: ka-ra-a-pi and its compound se-re-mo-ka-ra-a-pi⁵³, re-a-mo, u-me-ta-qe-a-po (the identity of the last but one sign is, however, rather doubtful) and we-a-re-ja (but cf. the kindred sign-group we-a₂-re-jo [see B 16], found in the same class Ta, so that the discrepancy may be explained by the unsteady line of discrimination).

Sign 25-A₂, on the other hand, appears in the middle chiefly in such places where one can hardly find a morphological suture. Of the 17 independent Pylian sign-groups those which possess beyond any doubt the character of a compound are the sign-groups a₂-ka-a₂-ki-ri-ja-jo, a₂-ka-a₂-ki-ri-jo⁵⁴ and ru-ko-a₂-[.]re-u-te only. Even though sign-groups like a-pi-a₂-ro, si-a₂-ro and ko-ri-a₂-da-na, from the historical point of view, appear to be linear transcriptions of original compounds, too, it is necessary to take into consideration the probable fact that here the second component did not represent an independent semantic unit in the same extent as it was presumably the case in most instances enumerated sub C.

The tendency we have indicated finds confirmation even in the documents from Mycenae,⁵⁵ as it may be seen from the tables B and C; in Knossos, on the other hand, we find no trace of such discrimination between the two signs. Sign 25-A₂ was found there in medial position only once (the above-mentioned sign-group on tablet B 213), while sign 8-A occurs as often as 37 times in 18 discrete sign-groups: ✓

a-pe-a-sa [*Ap*633,1;]de-a-ta *Dw*1222.B;]di-wo-a-ne[*X* 216; e-qe-a-o *V* 56.b; jo-a-mi-ni-so-me *Og*0467,1;] ka-a-na [*L* 728.e; ko-a-ta *B* 798,8; o-a-po-te *L* 641,1;

]a-da-no[*X* 5232 (uncertain whether the sign 8 is first sign of the word or not);]a-i (according to Bennett, but] a-i-ne-u according to Ventris) *As*5524,2b;]a-ja-me-na *X* 5727;]a-ka-pa[*X* 7727,1;]a-ko-ro-we-i[*D* 7100;]a-ma *E* 845.a;]a-mo-te-re[*X* 6026;]a-na-i-ta [*Sf*7451;]a-na-ro *D*1928.B;]a-pa-ni-jo [*Dw*5224;]a-pa₂-ro *Sc*233;]a-po-te *Od*562,3;]a-pi-re-we *V* 337,1;]a-ra[*W*65131,2;]a-ro *X* 5938;]a-ro-we *X* 668.r;]a-sa-mi [*X* 748,3;]a-se *C* 5091;]a-te-u-ke *Vc*150;]a-ze-ra[*X* 5905,1;]a-56-no *Dx*5686;]a-no-qa-ta *Ak*615,1;

a-me-a[*X* 765 (uncertain whether the second sign 8 is last sign of the word or not);]-jo-a[*X* 1596,2;]o-do-ro-we-a[*U* 625,5;] ro-we-a[*X* 5949,1 (according to Bennett; but even the transliteration pa-we-a has been suggested [see Knossos T., p. 95]); we-a-[*XmM*128,2; zo-a[*X* 359.a;]a[*X* M131.

The quoted examples show that in Knossos, in contrast to Pylos, words like ko-a-ta were graphically not reproduced differently than sign-groups like jo-a-mi-ni-so-de, o-a-po-te, which are very likely two independent units in disguise.

4. In final positions we encounter sign 8-A altogether 71 times in 20²² discrete sign-groups (Knossos: 66 times in 17 groups; Pylos: 5 times in 4 groups); sign 25-A₂ was found in Knossos four times and on the Mainland 80 times in the following 17 discrete sign-groups:

Sign-Groups	Occurrences	Interpretations	Possible Parallels
(dp) .[-]a ₂	Eq146,9	= o-da-a ₂	—
D 1 a-ke-a ₂	Vn130,2	ἀγγεα (Nom. Acc. Pl. of ἀγγος) ἀκεα Meriggi ἀγεα P ?Aive(ας) P	a-ke-i An661,10; a-ke-e Cn600,7 al.; a-ke-o An192,14; Cc660
2 a-ne-a ₂	MYC 101,1	—	—
(dp) .[-]da-a ₂	Eb317,1	= o-da-a ₂	—
3 e-ma-a ₂	Tn316.r7; Un219,8	Ἐρμάα(ς) VC	—
4 e-se-re-a ₂	An661,2	—	—
(dp)]-ke-a ₂	Sa843	? = we-je-ke-a ₂ (??)	]ke-a Wal148,2; R 0481bis (see also Note 22)
5 ke-re-a ₂	Ta641,1	σκέλεα (Nom. Acc. Pl. of σκέλος) Μενύαζ V	]ke-ra-a K 872,1
6]me-nu-a ₂ ⁵⁶	An218,14	Μενύαζ G	me-nu-wa V 60,3; Sc238
7 me-u-jo-a ₂	Sh733; -734; 735; -737; -738; -739; 740; -741; -742; -743; -744	μεφιῶα < μεφίωα (Nom. Acc. Pl. N.; cf. μετω)	me-wi-jo Ta641,2.3 (2×);]me-wi-jo Cn202,2; found also in Knossos
8 me-zo-a ₂	see sub D 7	μεγῶα < μεγίωα B	me-zo-e Ta 641, 2(2x); found also in Knossos
9 no-pe-re-a ₂	Sa682; -751; -790	νοπελέα (Nom. Acc. Pl. N. of νε-οπελ-)	no-pe-re-e Sa794
10 o-a ₂	Vn20,1	ὄα, οἶα (Nom. Acc. Pl. of ὄον, οἶον); ὄά, ὄά (of ὄόν, ὄόν); ὄαι, ὄαι, οἶαι (Nom. Pl. Fem.) G	—
11 o-da-a ₂	An218,1.9; Eb847,1; -901,1; En74,2.12.21; -609,4; -659,2.9.13.16.19; Eq146,1.3.4.5.11; -213,3.4.5.6; Ma90,2; -120,2; -123,3; -124,2; -193,3(2×); -221,2; -225,2; -365,2; -378,2; -393,3; Sn64,12; Un718,7.11 ⁶⁷	οὔδαα, οὔδαα (Nom. Acc. Pl. of οὔδας) αὐτάω VC	—
(dp) o[-]a ₂ ⁵⁸	Val5,1	= o-da-a ₂	—
12 o-de-pa ₂ -a ₂	On300,8	—	—
13 o-re-a ₂	Ep705,7	nomen pers. masc. gen.(!)	—
14 pa-we-a ₂	MYC 127	παρφεα < παρφεα (Nom. Acc. Pl. of παρφας) C ⁶	]pa-we-a Lc481,1 al.; pa-we-a ₂ [L 7378; pa-we-o X 651,1;]pa-we-pi L 104.a pa-we-si-jo MYC 111+136,2
15 qe-te-a ₂	Un138,1	κ ^ω εστέα (Nom. Acc. Pl. of κ ^ω εστέον) cf. Att. θεστέος < gh ^w edh- F, Mühl	qe-te-a Fp363,1; qe-te-o Fh348,2 al.

Sing-Groups	Occurrences	Interpretations	Possible Parallels
16 te-tu-ko-wo-a ₂	Sa882	τετυχ ₂ φοηα (Nom. Acc. Pl. N. of Perf. Part. Act. to τετυχ ₂ ω) C ⁸	te-tu-ko-wo-a Ld871.b
17 we-je-ke-a ₂	Sa787; -791		we-je-ke-e Sa487 al.; see also the above-mentioned]-ke-a ₂ Sa843

Instances with sign 8-A, discovered in Pylos (in Mycenae none has been found), are not so numerous. Here is the list:

E (dp)]-a	Na549	—	—
1 a ₂ -ra-tu-a	Cn3,3	see A 13	cf. A 14
2]-ke-a	Wa1148,2	—	]-ke-a ₂ Sa843 (see above sub D as(dp))
3 te-ro-a	Xa627	—	—
4 tu-we-a	Un287,3	θύφεα (Nom. Acc. Pl. of θύφοε) VC	tu-wo Un219,1; tu-we-ta Un287,2

When comparing both these types we can hardly determine in their final position a distinct difference in use, similar to the marked difference between signs 8 and 25 in the middle of sign-groups from Pylos. The situation here is about as confusing as it was in the beginning of words, the only difference being in distinct numeral superiority of sign 8-A in the latter case and in considerable superiority of sign 25-A₂ in the former case. And when we now, at the same time, think of the medial position and realize that the occurrence of the rival signs was here merely equal, we may simply regard this case as a certain fuse of the two other cases: sign 8 is here mostly the initial sign of the second component in compounds, while otherwise sign 25 predominates. From this point of view the whole complexity of distributing both signs in three basic positions might just as well be reduced by simply distinguishing the function of the two signs in a sign-group according to the following criterion: whether the sign occurs as an initial of a semantic unit (initial of a detached word or of the second component of a compound) or whether we find it in any other position. When attempting a statistical division according to this criterion we get in reference to signs 8 and 25 in the material from the Mainland the following figures:

Sign-Group	Initial ⁵⁹ (Absolute and Relative)	Other Position ⁶⁰ (Medial and Final)
8 - A	576 (556 + 20)	11 (6 + 5)
25 - A ₂	28 (25 + 3)	102 (22 + 80)

These data suggest to us quite convincingly that the favourite place of occurrence for sign 8 is that of an either absolute or relative sign-group initial, whereas sign 25 favours any of the other positions. Instances contrary to these two tendencies will very likely have to be classified as abnormal, and we shall have to look for an individual explanation of each of such cases.

In the number of these anomalies we must include first of all the above-quoted instances with sign 8-A in final position. We may add also the sign-group a-pi-ke-ne-a[, which, as we have already pointed out, represents probably a whole word. Thus, putting aside the considerably corrupted text of Na549 (sign 8 is here the only preserved syllabic letter) and Wa1148,2 (small fragment displaying

marked signs of corruption, too), the sign-groups that still require explanation are a_2 -ra-tu-a, te-ro-a, tu-we-a and a-pi-ke-ne-a[.

For the sign-group a_2 -ra-tu-a exists in Pylos a parallel reading, namely a_2 -ra-tu-wa. To the identity of these two groups bears witness the sign-group o-ka-ra₃, which in the text of both tablets is used every time next to a_2 -ra-tu-a and to a_2 -ra-tu-wa as well. The unsteady line between signs 54-WA and 8-A might speak here in favour of a phonetic similarity of these syllabic values in the period of time when [w] gradually ceased to be pronounced distinctly. And at the same time the view that sign 8 was phonetically identical with sign 25 appears to be contradicted even by the very conclusions one may come to when examining the sign-group a_2 -ra-tu-a itself. For if this view were correct, the scribe would have surely employed sign 25 finally as well, just as he did so initially, all the more so since in its final position this sign appears to have been favoured in Pylos.

The use of sign 8 at the end of the sign-group a_2 -ra-tu-a must therefore be taken for a mark of non-identity of both respective signs. But we can scarcely find an adequate sense in the occurrence of sign 8 at the end of the sign-group tu-we-a. Here we should much rather expect to find sign 25 at the end, as the other plurals of neuter s-stems — as I shall explain later — have generally this sign for their final letter. In this particular case the only feasible explanation would be that sign 8 was employed in conformation to an equal sign, used on the document as the initial of the succeeding word (tu-we-a a-re-pa-te). Such explanation about graphic assimilation is, however, uncertain, and one could hardly look for analogies in sign-groups a_2 -ra-tu-a, a-pi-ke-ne-a[and te-ro-a. The latter two words leave us quite short of any concrete explanation why sign 8 was used here in the final position, the only refuge being again the unsteady line of discrimination.

In spite of these difficulties we may take for granted that with the scribes from the Mainland it was habitual to prefer sign 25 to sign 8 in the final position, the same being true also about the medial position (with the exception of compounds). After all, the division between the second syllable and the third in a sign-group like a-ke-a₂ is in no way essentially different from the analogical division between the first syllable and the second in si-a₂-ro. And similarly, when we resort to a morphemic and [semantic analysis, we recognize in the fourth syllable of the sign-group o-re-mo-a-ke-re-u the same beginning of a special semantic unit as in the first syllable of the sign-group] a-ke-re-u [.

But at the same time, as we can see from Greek interpretations of the instances given sub **D**, a considerable number of sign-groups terminating in sign 25 and discovered both in Mycenae and in Pylos have one feature in common. Although even here we cannot rely too much on the hitherto suggested interpretations, it appears to be very probable that at least those linear sign-groups ending with sign 25 that may be designated as plurals of neuter s-stems (Nom. or Acc.) have been interpreted correctly (a-ke-a₂, ke-re-a₂, me-u-jo-a₂, me-zo-a₂, no-pe-re-a₂, o-da-a₂, pa-we-a₂, te-tu-ko-wo-a₂). Thus we meet here transliterations of such Greek forms that once upon a time had an [s] before the final [a] and after a preceding vowel. It is, however, generally accepted that this [s], before it ceased to exist phonetically, passed through an intermediate phonetic stage, characterized usually with the consonant [h], and it may be that the Continental sign 25 gave at least for a certain time expression to this transition stage.

In Greek interpretations of the other quoted expressions having sign 25 at the end vowel [a] is quite often preceded by some other phones, which have been either actually written in later Greek or whose existence may be assumed for the Mycenae-

an period; these phones are [j] (a-ne-a₂, e-ma-a₂, o-a₂) and [w]⁶⁰ (]me-nu-a₂, qe-te-a₂). It is specially the ie. consonant [j] that as an original initial before vowels sometimes resembled in the historical development of the Greek language the original initial or intervocalic [s], both of them being presumably transformed into [h], and not even the same process, next to vowels in other positions than initial, could be considered in certain phases of historical development altogether impossible, at least in exceptional cases.⁶¹ Even here, however, we cannot exclude the possibility that some of these hitherto suggested interpretations ending in [ja] or [wa] do not correspond with facts and that the respective linear sign-groups could now and then represent plural s- stems that in later times may no more be verified. This could be the case. let us say, with the sign-group qe-te-a₂, where we should for the Greek *κ^wεστέα < κ^wεστέ̄.ε̄.α*, suggested by Furumark, rather expect the form qe-te-wa. The absence of the syllabic sign, beginning with a bilabial spirant, is here really confusing.

In Knossos, however, of the two signs 8 and 25 it was only sign 8-A that appeared habitually in the final position (with the exception of the above-mentioned three cases of the fragmentary]-a₂ and the sign-group pa-we-a, with doubtful final A₂ [see Note 27]). The instances are the following:

a-me-a *Da1189*; a-ra-ru-wo-a *Ra1541*; -1543.b; -1548.b; -1551⁶²; a-ro₂-a *Lc586.A.a*; *Ld571.a*; -572.a; -583.a⁶²; *L 5920,2*; *So0430.b*; a-te-re-te-a *So894,1.b*; e-ke-a *V 831,1*;]-ke-a *R 0481bis*;]ke-ra-a *K 872*; ko-a *Dx737*;]-m̄e-a [*X 7785.B*;]-n̄e-a *Og7435*;]-no-a *F 760.a*;]-nu-a [*X 7807*; o-re-ne-a *L 593,1.b*; pa-we-a *Lc481,1⁶²*; -528.A; -530.A; -531.A; 532.A; -534.A; 535.a.A⁶²; -540.A⁶²; -560.A⁶²; -581.A; -592; *Ld571.b*; -572.b; -573.b; -574.b; -579.b; -580.b; *L 594.a*; -599.a; -7376.a; -7377.a⁶²; -7381.a⁶²; -7383.A⁶²; -7397.A⁶²;] po-ni-ke-a *Se880.B*; qe-te-a *Fp363,1*; ro-a *Fp148,1*;]-ra-ru-wo-a [*Ra1553.a*; te-tu-ko-wo-a *Ld871.b*; we-we-e-a *Le178*; *L 870*;]-wo-a *Ra1542*;]-wo-a [*X 7846,1*; zo-a *Fh343*; -355; -361.b; -369; -380; -5453,2⁶²;]-a *B 5666,1*; *Ld649.b*; *L 5920,2*; *Se1053.a*;]-a *Fh7335*; me-[.]a *As5863,2*.

5. Now we must try to sum up the preceding analytical comments and endeavour to deduct from them more concretely the phonetic value, depicted by the symbol known as sign 25. The following possibilities come into consideration:

a) Both signs represent precisely the same phonetic value. They are merely graphic variants and the scribes used them without any discrimination. This explanation, however, lacks probability, because the occurrence of either sign is characterized with sufficient specific distribution to exclude the possibility of arbitrary choice on the part of the scribe. If such choice had been possible, there might exist no sign-groups, containing both sign 8 and sign 25 (e. g. a₂-ra-tu-a, a-pi-a₂-ro, a-ke-a₂, a-ne-a₂), but neither alternate occurrence of the two signs in different words of the same document, and the „graphic assimilation” should assert itself more frequently. Specially instructive is tablet An 209. It contains three times sign 8 (line 3, 6, 8) and once sign 25 (line 2); it is worth noting that sign 25 was used in the sign-group a₂-ta, situated directly above the sign-group a-ke-ti-jo, in which sign 8 is employed. Doubtless proofs of the before-mentioned uncertain line of discrimination between signs 8 and 25 are on the Mainland rather rare (a₂-ta: a-ta; a₂-ne-u-te: a-ne-u-te; we-a₂-re-jo : we-a-re-ja). But even here we face most likely a phenomenon of secondary character, the primary causes of which were phonetical.

b) Either of the two signs represented in Pylos or in Mycenae a variant of one and the same phoneme, i. e. at least the language of the documents from Pylos or Mycenae disposed with two variants of vowel [a], the use of which was determined by their position in the sign-group, namely whether they were initials, absolute or relative, or whether their position was different. Either variant had

its own special sign, which was taken over from the writing of pre-Greek population, not belonging to the Indo-European group, in whose phonic system may have existed two independent [a]-phonemes. This hypothesis is supported by the discovery that of the ten doublets, given by Ventris in BISCUL 1, p. 10a, more than half belong to the syllabic series of vowel -a: $pa_2, a_2, ra_3, da_2, pa_3, ta_3, ra_2$ — which forms a marked contrast to doublets of other vowels: pu_2, ro_2 (the doublet ai_2 has not been taken into consideration).⁶³

This explanation meets, however, with nearly insurmountable difficulties in the beginning of words, for in this position the predominance of sign 8 does in no way exclude the occurrence of sign 25. We might do away with this incompatibility only by proving that all syllabic expressions with the initial sign 25 represent some special group of foreign words. Since a language includes foreign words in its phonic material generally after some longer period of time only, it might not be necessary to take such a group into account when determining phonemic conditions in ancient Pylos. But the work of interpreters has not yet confirmed this supposition and scarcely ever will (cf. specially the typically Greek a_2 -te-ro = $\acute{\alpha}\tau\epsilon\rho\omicron\varsigma$).

c) There is another explanation, which is a modification of that given sub b): sign 8 represents vowel [a] pronounced with an impact, which means that phonetically it is [ʔa], whereas sign 25 represents the same vowel without an impact. In this way we could explain all occurrences of initial 8, and perhaps even medial occurrences starting a new semantic component, but especially in the final position we would have to try to explain each case singly (resorting mainly to the hypothesis of the uncertain line of discrimination). Analogically we could explain all final occurrences of sign 25 and nearly all medial ones, but again it would be expressions with initial 25 that would land us in real trouble. Here, as well, the only explanation left to us would likely be the a priori speculation about the non-Greek character of these words and about the presence of sign 25 being a definite symptom of their foreign origin. This modification, to be sure, when compared to that given sub b), has the advantage of doing without the other of the unknown factors, namely the two assumed combinatory variants of vowel [a]. The difference between Knossos and Pylos in use of the two signs would have to be explained by the assumption that people in Knossos dropped a sign which merely indicated the beginning of a word much earlier than it was done on the Continent. But even the opposite view is possible, namely that the use of sign 25 is a Continental innovation — or at least that the sign 8, being sporadically only used in Knossos, became a normal member of Linear B inventory on the Greek Mainland in the course of the next two hundred years.⁶⁴

d) Sign 25 stands for a special phoneme of its own, different from that associated with sign 8 and yet comparatively akin to it. This phoneme may theoretically possess the character of a vowel and that of a diphthong as well. That could imply the following possibilities: a) long vowel [a:], whether original or created by substitutional lengthening; b) short vowel [a], differing in quality from sound [a] represented by sign 8 (one of the reasons of this differing pronunciation could be the position of this vowel in a closed syllable); c) a-diphthong. There are no proofs to support the third possibility. The parallel a_2 -nu-me-no: ai-nu-me-no is the only one we know of, and as we have mentioned before, the two linear expressions do not very likely stand for identical words. But the relationship between signs 8 and 25 can hardly be expressed in terms of length and shortness either, and neither can we argue here in favour of any opposition in quality.

Should the analysis of Greek interpretations which different scholars offered for sign-groups with initial 25 attract our attention to the fact that most of these Greek words begin with vowel [a] in a closed syllable, we should above all recall to our mind the problematic subjective value all these interpretations have.

e) We encounter here the contrary character of a syllabic combination of consonant and vowel on the one hand (sign 25) and of an independent vocal phoneme [a] on the other (sign 8). At the same time the vocal component of sign 25 is probably identical with the phoneme, represented by sign 8, while the consonant component might be a spirant, rather hard to determine more precisely. This explanation finds support specially in the considerably frequent occurrence of sign-groups in which sign 25 is preceded by a sign of the *a*-series, e. g. e-ma-a₂, o-da-a₂, o-de-pa-a₂, wa-a₂-ta, wa-a₂-te-pi, wa-a₂-te-we. If we wanted even in these instances to interpret sign 25 as mere [a], we should have to assume the repetition of sound [a] in succession, and this is highly improbable with sign-groups not representing compounds. Such repetition might have perhaps occurred in the pronunciation of expressions like pe-ra-a-ko-ra-i-jo, i-za-a-to-mo-i etc., but just in these words we mostly find sign 8. Even the confrontation of the two phenomena itself seems to indicate the biphonemic quality of sign 25, at least negatively, and positive support of this explanation is found, on the other hand, as we mentioned before, mainly in the last syllables of those linear sign-groups which represent plurals of neuter *s*-stems; less confirmation can be found in the hitherto offered interpretations of sign-groups with medial signs 25 (reliable instances are only a-pi-a-ro = Ἀμφιάλος < Ἀμφίθαλος; ai-ki-a₂-ri-jo = αἰγιάλιος < ?αἰγιθάλιος), and still fewer indications exist in the beginning of words (reliable very likely only a₂-te-ro = ἄτερος < ἡτέρος < *smteros.⁶⁵

It might therefore not be quite appropriate to postulate with authority the syllabic transcription [h] for sign 25, but it seems that such an explanation or an analogical one, contrasting the combination of two phonemes (= sign 25) with a monophonemic interpretation of sign 8 would appear to be the most acceptable hypothesis.⁶⁶ Even here, of course, the source of the greatest difficulties are those sign-groups with initial 25 for which no interpretations with opening [h] have yet been given, and also sign-groups with initial sign 8 which have hitherto been interpreted as Greek words with initial [h]; but these difficulties do not impress us as being so essential and so insurmountable as those sub b) and c), all the less since we know from some Greek dialects of later date that phone [h] may quite often appear as an initial even when its existence is in no way historically justified. And similarly we can see in other dialects that phone [h] often gets altogether lost, without any trace whatsoever, even in the beginning of the word.⁶⁷ The greatest incompatibility, however, consists in the fact, that according to this explanation consonant [h] would be represented by a special sign in connection with vowel [a] only and not with other vowels. (Cf. e-u-me-de-i Gn 1184,2 = ?Εδμήδεη < Εδμήδεσι (Dat. Sg.); pe-ri-me-de-o Sn 64,7 = ?Περιμήδεος < Περιμήδεος). A certain part may have been played here, however, by the possibility that in the language of the non-Greek pre-Indo-European population there existed two *a*-phonemes. When the older system of letters (Linear Script A), which reproduced graphically this language, was being adapted to the requirements of Greek, some of the excessively numerous signs of the *a*-series may have been put aside, and thus it was quite possible for one of them, which in respect to articulation was very akin to the phonetic value [ha], to turn into a current graphic reproduction of this very value. As to other syllables beginning with phone [h], such possibility very

likely did not exist, no such out-of-use signs of similar phonetic character being here at the disposal. To be sure, little can be said as yet in support of even this explanation, which neither surmounts satisfactorily the above-mentioned incompatibility, nor finds an adequate reason for the fact that sign 25 was in current use on the Mainland only.

6. When summing up we realize that it would be wrong to make the reciprocal relationship of signs 8 and 25 the subject of isolated research. All the differences and disproportions that concern them will have to be confronted with a detailed analysis of the other syllabic doublets, and last but not least, with the analysis of their occurrence on the Continent and in Knossos as well. For the time being it may be wise to abstain from any far-reaching conclusions, but, nevertheless, one cannot help asking at least one question, namely whether it will not be possible at some time in the future to find in connection with the study of just these anomalies some weighty material to support Furumark's hypothesis concerning the origin of Linear Script B on the Continent.⁶⁸

NOTES

¹ The basic work dealing with the deciphering of Linear Script B is *M. Ventris — J. Chadwick, Evidence for Greek Dialect in the Mycenaean Archives*, *Journal of Hellenic Studies* 73 [1953], 84—103.

² See *E. L. Bennett, Jr., A Minoan Linear B Index (further only Index)*, New Haven 1953, p. 1.

³ *A. Furumark, Ägäische Texte in griechischer Sprache*, *Eranos* 51 [1953], 112.

⁴ To mark doublets, or other signs connected with a syllabic value that is already engaged, numeric indices placed after the expression of the respective syllabic value are used; only some authors like Georgiev, Carratelli and Meriggi, prefer discriminating accents ($pa_2 = p\acute{a}$; $pa_3 = p\grave{a}$).

⁵ The tablet was published first by *C. W. Blegen, An Inscribed Tablet from Pylos, Ἐφημερίς Ἀρχαιολογική (Eis mēnym Oikonomou)*, [1953], 59—62; see also *M. Ventris, King Nestor's Four-Handled Cups*, *Archaeology* 7 [1954], 15—21. A Czech reader may consult the study by *A. Bartoněk, Nynější stav v luštění krétského lineárního písma B (Present State of Deciphering the Cretan Linear Script B)*, *Sborník prací filosofické fakulty brněnské university (Journal of Studies of the Philosophical Faculty of the University of Brno)*, Series A 4 [1956], 108—122.

⁶ *J. Chadwick, Mycenaean: a Newly Discovered Greek Dialect*, *Transactions of the Philological Society* [1954], 9 (Note 1).

⁷ The epigraphic code of practice accepted by the author, does not differ, upon the whole, from *M. Ventris'* proposals, summarized in his *Mycenaean Epigraphy: Suggested Code of Practice*, *Bulletin of the Institute of Classical Studies of the University of London* 1 [1954], 3—10. Transliterations of the Knossian inscriptions as well as references to them are based upon *E. L. Bennett, Jr., J. Chadwick, M. Ventris, The Knossos Tablets (further Knossos T.)*, *BICSUL, Suppl. Papers, No. 2*, London 1956; the references to Pylos are in whole conformity with *E. L. Bennett, Jr., The Pylos Tablets, Texts of the Inscriptions Found, 1939—1954 (further Pylos T.)*, Princeton University Press 1955, and those to Mycenae with *E. L. Bennett, Jr., The Mycenae Tablets (further Mycenae T.)*, *Proceedings of the American Philosophical Society* 97 [1953], 422—470. The references to the finds from Knossos are printed in Italics, those to Pylos and Mycenae in Roman type, the references to the texts from Mycenae being indicated by adding MYC in capitals.

⁸ For the indication of lacunae the following conventions, partially based on Knossos T., p. III, and differing from the code of practice given in *BICSUL* 1, 1. c., must be pointed out:

]xy-xy The state of the tablet (or reliable analogies) indicate that the word is not complete.

]xy-xy There is insufficient evidence to determine for certain whether the word is complete or not.

]xy-xy The state of the tablet (or reliable analogies) indicate that the word is complete.

⁹ In *Evans-Myles, Scripta Minoa II*, London 1952 (further SM II), the quoted sign-group

(tablet No. 118) is written as two detached words (25 44-4-27), but the transliteration a_2 -ke-te-re is now usually preferred.

¹⁰ V. Georgiev in Supplement au Lexique des inscriptions créto-mycéniennes, Sofia 1955, p. 4, gives in addition also the sign-group a-ke-te-re An 207,6, in contrast to Bennett, who transliterates it as a-de-te-re. This is very likely Georgiev's own interference; but a misplacement of signs 44-KE and 45-DE, effected by the scribe himself, is not excluded, all the less since the two signs are very similar.

¹¹ The difference between . . . -da-na and . . . -do-no does not reflect any phonetic variety. The case merely demonstrates graphical vocal harmony in connection with syllabic reproduction of the singular and plural forms of the word *καζιαννον* (= Att. *καζιαννον*).

^{11a} See Note 56.

¹² Cf. also parallel transliterations a_2 -ra-tu-a Cn3,3; a_2 -ra-tu-wa An519,4, where signs 8-A and 54-WA are used alternately.

¹³ Thus, Georgiev may be right in not believing in the identity of the sign-groups a_2 -nu-me-no: ai-nu-me-no, having suggested in the former case the interpretation *Ἀρνόμενος*, while in the latter the Greek *Αἰνόμενος* (see his Lexique des inscriptions créto-mycéniennes, Sofia 1955, p. 21 and 18).

¹⁴ Cf. Bennett's statement, The Pylos Tablets, a Preliminary Transcription, Princeton 1951, p. X, in which the author, evidently ignoring several really problematic instances from Knossos which will be alluded to in this treatise, restricts the use of the syllabic sign 25 to Pylos only.

¹⁵ The same tendency may be observed in Mycenae, too, where, owing perhaps to the relatively small number of documents discovered, no opening A_2 has been found as far.

¹⁶ Numbers quoted in this table are based on the works mentioned in Note 7. When compiling the statistical material the author respected, on the whole, principles put forth by Bennett in Statistical Notes on the Sign-Groups from Pylos, *Minos* 1 [1951], 100 — 137 (it is necessary to add that no occurrences "in erasure" and no restorations of signs 8 and 25 have been taken into consideration. Statistical data concerning all linear B sign-groups (when representing whole words only) were treated most recently by *Ktistopoulos*, Statistical Data on Minoan Words, *Minos* 3 [1954—1955], 100—106.

¹⁷ As discrete sign-groups are classified in accordance with Bennett, Statistical Notes, 101, all complete sign-groups as well as all incomplete discrete sign-groups, and because we study the finds from Knossos and the finds from Pylos each extra, the incomplete semidiscrete sign-groups must also be included (explanation of these terms is given in Note 39). To be sure, according to this criterion it is not possible to ascertain an exact number of „words“ in the very sense of this expression even among discrete sign-groups — one and the same word may be taken into consideration more than once in its different grammatical forms —, but because it is sometimes in Linear Script B extraordinarily difficult to distinguish a pure grammatical difference from that which bears distinct semantic marks, this criterion of Bennett, though formulated before Ventris accomplished his deciphering, still holds its ground as the comparatively most objective basis for statistical research.

¹⁸ Under the heading Initially we find all the instances of the signs in question, definitely assuming the initial position in their sign-groups (the type] xy - xy including). The heading Finally does the same for its respective category of signs, the type xy - xy [including. All the other cases are mentioned under the heading Medially, also those taken of a fragmentary character where it is hard to determine whether they represent a whole word or not. When counting the single instances up, for the Knossian sign-groups the indication of brackets given in Knossos T. has been here quite consequently taken into consideration (see the three types mentioned in Note 8); in the sign-groups from the Greek Mainland the same practice, upon the whole, has been maintained, in spite of rather different way of indication especially in Pylos T.:] xy - xy (Pylos T.) =] xy - xy (Knossos T. and this article); ?] xy - xy =] xy - xy ; xy - xy (if the text is fragmentary, but the respective sign-group itself seems to be complete, no brackets are used in Pylos T.) =] xy - xy .

¹⁹ When various readings are recorded in Knossos T., the first transliteration given has been always taken into consideration.

²⁰ The number of discrete sign-groups has been omitted here, as it is hardly possible to give it quite precisely.

²¹ The total of the sign-groups should be reduced by two because the expressions a_2 -ka- a_2 -ki-ri-jo An661,12 and a_2 -ka- a_2 -ki-ri-ja-jo Cn3,7 are owing to the double occurrence of sign 25 included in the Pylos sign-groups twice.

²² The total of the sign-groups should be reduced by one final instance, because the sign-group]-ke-a occurs not only in Knossos, but also in Pylos; even in the latter case it may be adjoined to the Knossian e-ke-a V 831,1 as a dependent sign-group.

²³ Owing to reasons, given sub 21, the vertical total of the sign-groups is two less, when compared to the horizontal total.

²⁴ Add also Ventris' transliteration a_2 -ru-[*B 806,7* (but ru-[only according to Bennett) and Chadwick's transliteration ka-ka-re- a_2 *R 0481bis* (ka-ka-re-a Ventris, ka-ka re-ne SM II, Index); see *Kro 1303 T. 12. and 70.*

²⁵ Here we have a considerably fragmentary tablet, containing three signs and one numeric designation for number „two“. The former two signs may perhaps be transliterated as βa_2 -ta, immediately after comes without punctuation (see SM II, tablet No. 213) the third sign, representing evidently ideogram No. 103 (according to numbering given in Pylos T. 202). But see also Index 119, where the second sign of this fragment, now transcribed as A_2 , is ascribed ideographic character.

²⁶ The document *Le787* is an incomplete tablet, consisting of two Myres' fragments, No. 787 and No. 1009 (= *Le787* and *Ld1009* according to Index). The mentioned fragmentary βa_2 belongs to the document No. 1009. Cf. *E. L. Bennett, Jr., Junctions of Fragments of Minoan Inscriptions in the Iraklion Museum, Minos 3 [1954—1955], 123.*

²⁷ The identity of the last sign, however, is very uncertain, as indicated by an asterisk in Knossos T. 105.

²⁸ The number of instances from Mycenae and the other Mainland represents a very small percentage.

²⁹ Georgiev, *Lexique 19*; instead of $\eta\eta\epsilon\tau\eta\epsilon\varsigma$ we should rather expect $\eta\eta\eta\epsilon\tau\eta\epsilon\varsigma$. But in *Suppl. 4 ἀκροτῆρε* (Du.) is the only interpretation given.

³⁰ Only such similar sign-groups are mentioned that suggest at least some probability of indicating the same or at least an akin expression. When selecting such parallels we may, of course, be occasionally influenced by our subjective point of view.

³¹ At the beginning of the same line a very similar sign-group a- β -je-u was erased.

³² The formulations of interpretations and references to their authors are mainly taken from Georgiev's *Lexique* and *Supplement* and could not be always verified sufficiently, owing to the inaccessibility of some articles. Only a few interpretations have been added from some new works (see Notes 6 and 35a). The interpretations of nomina are given in *Nom. Sg.*, as long as this case does not differ in linear transliteration from the linear transliteration of the case form used in the text; no asterisks for denoting unpreserved Greek alphabetical forms are used — otherwise nothing has been changed when compared with Georgiev. Explanation of abbreviations: *B* — Bartoněk, *C* — Chadwick, *Carr* — Carratelli, *F* — Furumark, *G* — Georgiev, *Mühl* — Mühlestein, *P* — Palmer, *T* — Turner, *V* — Ventris, *VC* — Ventris-Chadwick.

³³ Greek interpretation has not been given by Turner.

³⁴ For interpretation "Αλισα see Georgiev, *Lexique 53, s. v. o-wi-de* (here we find the form of Gen. Sg. [*Αλισας*]).

³⁵ In Pylos T. 217 we find the transliteration a_2 -ro[-] - β -u-do-pi, but no more than three signs were probably between A_2 and DO. Though Bennett does not use dots in Roman transliterations of his *Vocabulary*, the syllables RO and U are dotted in this article, as their reading is uncertain (see Pylos T. 186 [normalized ccp'es]).

³⁶ M. Ventris, *Mycenaean Furniture on the Pylos Tablets, Eranos 53 [1955], 109—124*, prefers Roman letters when giving suggested Greek interpretations.

³⁷ In Pylos T. 217 we find this transliteration, but on p. 112 (line drawings of the inscriptions) we read some hing like di zo ϵ -jo.

³⁸ Bennett, *Statistical Notes 1223q*; data for medial position are the results of calculations implying data of the other positions which Bennett gives in the quoted place.

³⁷ I have not given figures for signs 34 and 35, both of which Ventris in *BISCUL 1, p. 10a* interprets as Al_2 , because this interpretation appears to be rather doubtful (see Knossos T. 127).

³⁸ The figure for all occurrences of sign 25 in the last syllable appears to be high out of proportion, especially when compared with the figure for discrete sign-groups (given in the bracket), but it is due to the fact that the sign-group o-da- a_2 was found in Pylian documents of 1939 as often as 27 times (in all documents from Pylos this sign-group appears at least 36 times [see Pylos T. 233]).

³⁹ (dp) stands for *incomplete dependent sign-groups*, i. e. those which can be, although they need not be, parts of other known sign-groups; in the other cases we have to do either with *complete sign-groups*, or with *incomplete discrete sign-groups*, i. e. those which cannot be parts of other known sign-groups, or with *semi-discrete sign-groups*, i. e. those which are discrete in their own body of inscriptions, but dependent when the whole of the material is considered (see Index, p. VIII).

⁴⁰ The sign-group]-a₂-ta, of course, need not be a fragmentary part of either ko-a₂-ta or wa-a₂-ta or 85-to-a₂-ta.

⁴¹ On the preceding line another ko-ri-a₂-da-na was erased.

⁴² See Bennett's restoration ru-ko-a₂[ke]re-u-te in Pylos T. 218.

⁴³ Georgiev's interpretation concerns only the group of signs before lacuna.

⁴⁴ The identification of this expression, interpreted as Ἀστὺς (cf. Ἀστῆς, Φαστῆς) *G. Carr*, with wa-a₂-te-pi, is, however, rather doubtful, in spite of the affinity of the two tablets.

⁴⁵ We should expect the forms Ὀαντῆρες, Ὀανθῆρες in Georgiev's Supplement 23, because wa-a₂-te-we is probably Nom. Pl.

⁴⁶ It is not quite impossible that in o-pi-a₂-ra two detached words are concealed, the first sign representing a pronoun or an adverb (cf. below C 5).

⁴⁷ The present indication of lacunae as well as the dotting of signs rather differ from those of Bennett in Pylos T. 212, but both tablets are of no importance for our purposes.

⁴⁸ Cf. also the Knossian sign-group jo-a-mi-ni-so-de *Og0467,1*.

⁴⁹ Cf. also the Knossian sign-group o-a-po-te *L 641,1*.

⁵⁰ The interpretation of pe-ra-a-ko-ra-i-jo has been formulated by the author of this article according to the interpretations of the kindred place-names pe-ra-ko-ra-i-ja Ae398 and pe-ra₂-ko-ra-i-ja Ng332,1, Wa114,2, as we find them in Georgiev's *Lexique* 56.

⁵¹ Lur'je, *Vestnik drevnej istoriji* 1955, 3, p. 62, transcribes sign 29 as PE₃ in contrast to Ventris' PU₂, thus pe₃-ra₂-a-ki-ri-jo.

⁵² In the parallel sign-group te-ko-to-na-pe (see sub C 13) the two components form an indivisible unit. This word serves at the same time as an important testimony against the view (thus: *Georgiev*, *Nynešnje sotojanije tolkovanija krito-mikenskih nadpisej*, Sofia 1954, p. 48 and 66), that [n] in the final position disappeared in the language of the Linear Script B (cf. J. Chadwick, *TPS* 1954, p. 3). And the sign-groups u-pa-ra-ki-ri-ja, u-po-ra-ki-ri-ja (see sub C 10) do the same service to consonant [r].

⁵³ On the tablet Ta 708 as well as in kindred documents of the class Ta we find many other sign-groups ending in -a-pi (mostly in -ja-pi), but only in ka-ra-a-pi and in its compound se-re-mo-ka-ra-a-pi sign 8 was used after a sign of a-series (while no -a-a₂-pi was found at all). The explanation will be, of course, scarcely given before these sign-groups are interpreted sufficiently.

⁵⁴ But it is also possible that the second A₂ was used here by way of analogy with the initial 25 (graphical assimilation?).

⁵⁵ To be sure, the evidence of Mycenaean texts is not of great importance, as only a relatively small number of linear documents was found in Mycenaean.

⁵⁶ This sign-group has been transliterated as me-nu-a₂ in Pylos T. 215 (vocabulary), but neither the drawing on p. 25 nor the normalized copy on p. 124 altogether exclude the possible fragmentary character of this sign-group.

⁵⁷ When compared with Pylos T. 233 (vocabulary), all the references to o-da-a₂, where sign 25 has not been preserved in the documents themselves and was restored by Bennett only, are here omitted, viz. En609,11 and Ma397,3.

⁵⁸ In Pylos T. 192 (normalized copy) as well as on p. 233 (vocabulary) we find this sign-group restored as o-[da]-a₂; but on p. 3 (drawing) the sign ME is written instead of A₂ and the opening O is omitted altogether (an error of Bennett's handwriting?).

⁵⁹ Sign-groups with signs 8 and 25 in medial position have been given their place in the table according to whether they make the impression of being compounds whose second component is still rather autonomic, or not (the fragmentary]a [and]a[have not been taken into consideration; the second A in a-pi-ke-ne a[has been re₂a.ded as medial here — in confirmation with the table on p. 46).

⁶⁰ But see what has been said above (p. 54) of the pair a₂-ra-tu-a : a₂-ra-tu-wa and of the non-identity of A and A₂ (which means there also the non-identity of WA and A₂).

⁶¹ Cf. Schwyzer I 304,3.

⁶² The type] xy-xy and xy-xy [has not been indicated here.

⁶³ Cf. also the supposition about the influence of the pre-Indo-European substratum upon the Ionic change [a:] > [a:], Schwyzer I 62.

⁶⁴ Cf. *G. Pugliese Carratelli's* thesis of the unsteadiness of Knossian orthography in contrast to the Mainland (*G. P. C., La decifrazione dei testi micenei e il problema della lineare A, Annuario della Scuola archeologica di Atene e delle missioni italiane in Oriente, vol. XXX—XXXII, n. ser. XIV—XVI [1952—1954], Roma 1955, p. 7*).

⁶⁵ As for some of the linear expressions which have already been interpreted with opening [h] and whose initial syllabic sign is sign 8, we have to stress once more the fact that these are mostly proper names, and that it will hardly ever be possible to determine the genuine

Greek form of these words. Besides, the initial Greek [h] developed now and then also from the initial [j], and in such cases, in the times when the scribes of Pylos and Mycenae were writing on their tablets, this old [j] need not have had its later phonetic form [h] yet, but it may have had another value, still differing — slightly at least — from the contemporary substitute for old [s]. It, therefore, need not have necessarily been joined to vowel [a] by sign 25 (cf. derivatives of the Greek root *ἀγ-* [ie. **jar-*], e. g. the Greek form *ἀγμοστῆφος* written as a-mo-te-wo Ea121 al., not as a₂-mo-te-wo). On the other hand, however, we have come across certain cases (e. g. e-ma-a₂, a-ne-a₂, o-a₂), which would rather support the opposite view, provided their interpretation was correct. Cf. Carratelli's suggestion that A₂ has the value [ja] (l. c.), and above all, Palmer's view that A₂ represents a vowel with palatal on-glide, i. e. [ja], or with palatal off-glide, i. e. [aj]; see L. R. Palmer, *Observations on the Linear „B“ Tablets from Mycenae*, BICSUL 2 [1955], 37. Palmer's hypothesis — which reached me not long before this article was published — would not be in contradiction with my own view, as presented here, if it might be formulated as follows: „A₂ represents the vowel [a] with some on-glide (and sometimes, on the other hand, with palatal off-glide), no matter whether this glide goes back to the IE.[s], or to [j]“; but it should be added that even in these cases sign A sometimes used, owing to the unsteady line of discrimination.

⁶⁶ Should the interpretation of sign 25 as the phonetic value [ha] prove to be correct, and if we could assume at the same time that this sign had the value [ha] already when it was adopted by the Linear Script B — and above all that it is not a mere Continental innovation —, the date of this adoption, being probably simultaneous with the date of the origin of Linear Script B itself, would at the same time fix the term ante quem for the Greek change of [s] > [h] in the vicinity of a vowel.

⁶⁷ In accord with the latter phenomenon would rather be, to a certain extent at least, the habit of the scribes of Knossos, in contrast to those on the Continent, although, to be sure, this observation implies just the act of comparing tendencies and not a concrete indication of traits of development.

⁶⁸ Furumark, o. c. 107.

Translated by S. Kostomlatský

ZNAKY 8-A A 25-A₂ V LINEÁRNÍM PÍSMĚ B

V lineárním písmě B, pravděpodobně nejstarším písemném systému, jímž byl zachycován řecký jazyk, se objevují často dvojice, případně i trojice znaků, kterým se obvykle přiřkládá též fonetická hodnota. Jak se však zdá, byly asi i pod takovýmito dubletami namnoze skryty nějaké fonetické rozdíly. Autor této studie se to pokusil dokázat pro dvojici znaků 8—A a 25—A₂. Na rozdílnou fonetickou hodnotu obou těchto znaků ukazuje zejména odchylnost jejich frekvence v různých postaveních ve slově (znak 8—A převládá na začátku slov a na začátku druhého komponentu složenin, znak 25—A₂ v ostatních případech uprostřed slov a na jejich konci). Na podkladě sebraného materiálu (zahrnuty jsou všechny doklady, objevené do konce roku 1954) dochází pak autor k závěru, že znak 25—A₂ měl na rozdíl od znaku 8—A fonetickou hodnotu [ha], jehož [h] náležitě vzešlo v samohláskovém okolí z ie. [s]. Nevyřešena zůstává zatím otázka, proč je znak 25—A₂ dosvědčen téměř výlučně jen na řecké pevnině.

ЗНАКИ 8-А И 25-А₂ В ЛИНЕАРНОМ ПИСЬМЕ Б

В линейном письме Б, по всей вероятности древнейшей системе письма, в котором были обнаружены записи на греческом языке, часто появляются 2, а иногда и 3 знака, имеющие одинаковую фонетическую значимость. Однако, как предполагают, и под такими дублетами открывались некоторые фонетические различия. Автор настоящего исследования пытался доказать этот пункт для пары знаков 8-А и 25-А₂. На разную фонетическую значимость обоих выше упомянутых знаков особенно ясно указывают неодинаковая частота их употребления в разных положениях в слове (знак 8-А преобладает в начале слов и в начале второго компонента сложных слов, знак 25-А₂ в остальных случаях в середине слов и в конце их). На основании собранных материалов (все материалы, обнаруженные до конца 1954 г.) автор приходит к заключению, что знак 25-А₂ в отличие от знака 8-А имел фонетическую значимость [ha], [h] которого закономерно возникло в соседстве гласных из индоевропейского [s]. Неразрешенным остается пока вопрос, почему знак 25-А₂ встречается почти исключительно только на греческом материале.

Перевел: С. Жажга