## **BRONZE AGE WRITING: CONTACTS BETWEEN EAST AND WEST\***

## Part I

In 1973, in his contribution to the third edition of the Cambridge Ancient History, Sterling Dow characterized the dispersal of the Linear A script in the following words:

"Its distribution was wide but seemingly thin: Linear A has been found at no fewer than a score of sites in Crete, whereas outside Crete only one tablet is known at present (Kea) plus some individual signs on other objects, and of these signs many are potters' marks and the like, which may not be, properly, Linear A at all." 1

In the subsequent years, however, additional Linear A inscriptions began to appear in both southern Greece (Laconia, Tiryns) and especially the Cyclades (Melos, Thera, Kythera), and the fact that many of these inscriptions proved to be locally incised gave rise to a lively discussion as to the role of the Cyclades in the distribution of the Minoan script.<sup>2</sup> It seems, however, that the finds of the recent years, some of them still unpublished, may soon necessitate transferring the focus of the discussion to areas still more remote from Minoan Crete.

In 1991, Dimitris Matsas announced the discovery in Samothrace in the northeastern Aegean of the first in the series of five finds inscribed in Cretan Hieroglyphic and Linear A; the Linear A inscription was published by Matsas in 1995. The archaeological context places these finds — two roundels, two noduli and a nodule — as early as MM II/MM IIIA (the second half of the 18th century BC).<sup>3</sup>

In 1994, Louis Ğodart drew scholarly attention to the fact that among the objects discovered by Schliemann at the excavations of Troy there were two spindle-whorls incised with signs which Godart identified as belonging to Linear A; in his opinion, the objects should be regarded as locally made and as contemporary with Troy IV (2050-1900 BC).<sup>4</sup>

In 1996, the discovery by Wolf-Dietrich Niemeier at Miletus in Asia Minor of a Late Minoan IB potsherd which bears an inscription containing three Linear A signs was

<sup>\*</sup> I would like to express my gratitude to Eric H. Cline and Diane Harris-Cline, whose invitation to take part in the Aegean-Orient conference stimulated me to write this paper; to Itamar Singer who provided me with the opportunity to study the Lachish inscription and drew my attention to the Tel Haror graffito; to Wolf-Dietrich Niemeier and José Luis Melena who shared with me valuable information concerning the Miletus and the Kafkania inscriptions, and to Benjamin H. Isaac whose help made it possible effectively to update the relevant evidence. My special thanks are due to Emmett L. Bennett for allowing me to read his comments on the Lachish inscription.

S. DOW, "Literacy in Minoan and Mycenaean Lands," CAH, 3d ed, vol. II (1) 593.

See especially C.A. RENFREW and W.C. BRICE, "A Linear A Tablet Fragment from Phylakopi in Melos," Kadmos 16 (1977) 111-19; J.T. HOOKER, The Origin of the Linear B Script. Minos Suppl. 8 (1979) 46-47; R. JANKO, "A Stone Object Inscribed in Linear A from Ayios Stephanos, Laconia," Kadmos 21 (1982) 97-100; T.G. PALAIMA, "Linear A in the Cyclades: The Trade and Travel of a Script," Temple University Symposium 7 (1982) 15-18; Idem, "The Development of the Mycenaean Writing System," in J.-P. OLIVIER and T.G. PALAIMA (eds.), Texts, Tablets and Scribes. Minos Suppl. 10 (1988) 269-342; A. MICHALIDOU, "Ostrakon' with Linear A Script from Akrotiri (Thera). A Non-Bureaucratic Activity?," Minos 27/28 (1992/93) 18-20.

<sup>3</sup> D. MATSAS, "Samothrace and the Northeastern Aegean: The Minoan Connection," Studia Troica 1 (1991) 159-79; Idem, "Minoan Long-Distance Trade: A View from the Northern Aegean," in Politeia, 235-47.

<sup>4</sup> L. GODART, "La scrittura di Troia," Rendiconti dell'Accademia Nazionale del Lincei. Classe di Scienze morali, storiche e filologiche s. 9, v. 5 (1994) 457-60; Idem, "Les écritures crétoises et le bassin méditerranéen," CRAI (1994) 707-731.

announced in the press; the type of clay used indicates that the pottery was made locally, and it is clear that the inscription was made before the vessel on which it was written was fired.<sup>5</sup>

In 1996 again, Eliezer Oren and Jean-Pierre Olivier published a Middle Bronze Age III Minoan graffito discovered at the Canaanite site of Tel Haror in the western Negev; although the composition of the potsherd on which it was inscribed does not match the local Canaanite ceramics, the important fact about this find is that its composition does not match the Cretan ceramics either — actually, the only ceramic samples comparable to the Tel Haror sherd are those excavated in Israel at Tel Dan and in Cyprus.<sup>6</sup>

Finally, in the course of excavation directed by David Ussishkin, the Canaanite site of Tel Lachish produced a fragment of a limestone vessel bearing a Minoan inscription which was recently published in *Tel Aviv*; the composition of the stone indicates that the inscription was locally incised while the archaeological context suggests a surprisingly late date in the earlier part of the 12th century BC.<sup>7</sup>

Thus the discoveries of the recent years bear witness to the fact that in the second millennium BC considerable scribal activity involving the Linear A script took place along the entire eastern coast of the Mediterranean and not only in Crete itself. Today, not only southern Greece and the Cyclades, which have always been regarded as Crete's natural sphere of influence, but the entire Eastern Mediterranean, from Samothrace in the north and to the Negev in the south, should be taken into account in this connection. And if the dates suggested for the Troy spindle-whorls on the one hand and the Lachish limestone fragment on the other are valid, this will enable us to enlarge substantially not only the geographical but also the chronological horizons of Minoan writing. These horizons would spread now from the Pre-palatial and the Protopalatial Period in the case of Troy and Samothrace to the Postpalatial period in the case of Lachish and Tiryns, for Tiryns too has produced what was identified by J.-P. Olivier as a Late Minoan IIIB Linear A inscription which, similar to the Lachish find, does not easily lend itself to interpretation in terms of the conventional chronology of Aegean writing.<sup>8</sup>

It is obvious that, as distinct from the Minoan artifacts, which may or may not involve the actual presence of the Minoan speakers, the use of the Minoan system of writing can well indicate the presence of such speakers in the places where the locally incised Linear A inscriptions were found. Consider indeed the following. According to Palaima's interpretation of the Miletus inscription,

"Sign no. 1 (L 1/AB 56) occurs infrequently also in Mycenaean Greek Linear B, but in a pattern of alternative spellings that clearly shows that the sign was retained by the Mycenaean scribes to render in precise spellings Minoan anthroponyms, theonyms, toponyms, and two Minoan loan words for a special kind of vessel and a particular color used in dyeing textiles. As such AB 56 (along with AB 22 and AB 29) are closely

Scientific American (July 1996) 20. See now also W.-D. NIEMEIER, "A Linear A Inscription from Miletus (MIL Zb 1)," Kadmos 35 (1996) 87-99.

<sup>6</sup> E. OREN, J.-P. OLIVIER, Y. GOREN, P.P. BETANCOURT, G.H. MYER, and J. YELLIN, "A Minoan Graffito from Tel Haror (Negev, Israel)," *Cretan Studies* 5 (1996) 91-117, esp. 113, 116-17.

M. FINKELBERG, A. UCHITEL, and D. USSISHKIN, "A Linear A Inscription from Tel Lachish (LACH Za 1)," Tel Aviv 23 (1996) 195-207; Y. ESHET, "Micropalaeontological Examination of a Chalky Bowl from Lachish," Tel Aviv 23 (1996) 208. As Ussishkin points out (supra, 196-97), "Significantly, numerous Aegean pottery vessels were found in association with the Late Bronze Age levels at Lachish. Relevant to our inscription are the finds of the British Expedition in Locus K.16:1031...The finds include fragmentary Egyptian hieratic bowls dating to the reign of Ramses III, fragments of a Mycenaean chariot krater, and a large Late Minoan IIIB amphoroid krater with octopus decoration."

<sup>8</sup> See J.-P. OLIVIER, "Tirynthian graffiti," AA 17 (1988) 255 (no. 11), 262-63; cf. GODART, CRAI 1994 (supra n. 4) 715-16 n. 18.

connected with the phonological peculiarities of the Minoan language. This makes it nearly certain that the Linear A on MIL Zb 1 represents a Minoan word."9

It seems, therefore, that the cumulative evidence provided by the recent discoveries is about to cause a dramatic change in the current picture of the extent to which the Minoan scripts and probably also the Minoan language itself were disseminated. Does this mean that we should speak now of the phenomenon of a "Minoan diaspora" which surpassed both geographically and chronologically the limits of the Minoan civilization as we know it? Or should we rather abandon the "Cretocentric" perspective and start seeing in Crete only one among several focal points of dissemination of linear scripts in the Eastern Mediterranean? Although in the present state of our knowledge no definite answer to these questions can be given, the fact that not all the manifestations of the extra-Cretan scribal activity are in strict conformity with the graphic conventions of Linear A as we know it seems to speak against an unqualified "Cretocentric" approach. This point can be illustrated best by the evidence provided by the Lachish inscription.

## **Part II**

The Lachish inscription (Pl. XXVIIIa) is incised upon the surface of a limestone vessel from right to left. It consists of five signs, a fraction, and two word divider marks ('). The signs can be identified as Linear A/B and represented in the common transnumeration system of GORILA V as follows:

(?) '\*53-\*01-\*10 '\*09 \*732

T.G. PALAIMA, "Linear A from Miletus," AEGEANET 25 July 1996; cf. NIEMEIER (supra n. 5) 93-94. Note, however, that according to the new evidence supplied by the Linear B archives from Thebes, AB 56 should be identified as ko2, or something to this effect; cf. V. ARAVANTINOS, L. GODART, and A. SACCONI, "Sui nuovi testi del palazzo di Cadmo a Tebe," Rendiconti dell'Accademia Nazionale del Lincei. Classe di Scienze morali, storiche e filologiche s.9, v. 6 (1995) 829-33; M. LEJEUNE and L. GODART, "Le syllabogramme \*56 dans le linéaire B thébain," Rivista di filologia e di istreizione classica 123 (1995) 272-77.

<sup>10</sup> OLIVIER in OREN et al. (supra n. 6) 104.

On this ending, see M. LEJEUNE, "Mycénien QAQARO / minoen QAQARU," in M. LEJEUNE, Mémoires de philologie mycénienne. Vol. II (1972) 203-209; M. FINKELBERG, "Minoan Inscriptions on Libation Vessels," Minos 25/26 (1990/91) 43-44.

The reading of AB 65 as ju was originally proposed on the basis of the Linear B ri-\*65-no (KN U 49), which is a spelling variant of the well-attested Cretan place-name ri-jo-no, written also as ri-u-no (KN Xd 149). Cf. also the suggestion by Lejeune that the sequence i-\*65-, attested several times at Pylos, should be read as i-ju = uiós: M. LEJEUNE, "Doublets et complexes," Mémoires de philologie mycénienne. Vol. III (1972) 91-104; cf. ARAVANTINOS et al. (supra n. 9) 828. This interpretation can be further supported by functional commensurability between a-ra-u-, which is a part (probably, the stem) of the sequences a-ra-u-da attested on KH 5, and a-ra-\*65, found twice in the Hagia Triada corpus. For interpretation of these two Minoan words as related to Hittite, Luwian, and Lycian arawa-, "free," see A. UCHITEL, "Records of Conscription, Taxation and Monthly Rations in Linear A Archives," forthcoming in Minos, see also FINKELBERG et al. (supra n. 7) 202-203.

Or, using the Linear B phonetic values, as:

(?) ' ri-da-u ' SE JE[

Considering, first, that the fractional sign \*732 is characteristic of Linear A only; second, that the sign \*10 can only be properly identified if, again, Linear A is taken into account; and third, that the direction of writing from right to left has not been attested in Linear B either, we have to conclude that the Lachish inscription is written in Linear A. On the other hand, it is hard to ignore the fact that the second sign of this inscription can be identified as AB 53 (= ri) only if referred to the Linear B graphic variants of the latter, because no sign of a strictly comparable form is attested among the Linear A graphic variants of AB 53. That is to say, both Linear A and Linear B should be taken into account in interpretation of the Lachish inscription, which can only mean that the script in which this inscription is cast is not reducible to either of the two.

Note now that the form of the Lachish sign AB 53 is irregular from the standpoint of Linear B as well: of its two characteristic features in Linear B, the front "leg" and the horizontal "belt" in the middle, only the former is found on the Lachish inscription. According to Bennett:

"All instances [of the Linear B sign \*53] at Knossos, and almost all at Pylos, have a horizontal element at the waist above the legs and below the body. At Pylos, while a few omissions of the horizontal element occur, they are counterbalanced by a fair number where the horizontal is doubled." 16

This seems to suggest a development which I have described in detail elsewhere, <sup>17</sup> the first stage of which supplied the graphic prototype of the Linear B sign \*53 with the front "leg" as in the Lachish inscription, and the second with the horizontal "belt" as in the graphic variants of this sign in the Linear B script. If correct, this would mean that the second sign of the Lachish inscription is in fact the graphic prototype of the Linear B sign \*53 (= ri). It goes without saying that this conclusion makes the Lachish inscription an important piece of evidence concerning the graphic history of Linear B. Comparison with the Samothrace inscription on the one hand and the Tel Haror graffito on the other provides some useful parallels.

As Matsas pointed out, two of the three signs of the Samothrace inscription (Pl. XXVIIIb) should be regarded as archaisms. These are the numeral "10" in the form of a thick dot and the fractional sign A 708 in the form of the Latin T: the former, although characteristic of Cretan Hieroglyphic and the earlier, MM II and MM III, samples of Linear A, was later replaced by a horizontal stroke, whereas in the overwhelming majority of the Linear A occurrences of the latter its vertical shaft is approximately of the same length as the horizontal bar. Certainly, the archaic character of the Samothrace signs is entirely consistent with their early date in the second half of the 18th century BC. Significantly, however, although the form T for the fractional sign A 708 had become obsolete in Linear A, it was this form that was adopted by the Linear B script, a fact which can only be explained if we assume,

According to E.L. BENNETT, this sign "doesn't have a very good Linear B shape" (personal communication). On the other hand, it corresponds almost exactly to the Linear A variant of AB 10 appearing on PK Za 12c as the first element in the well attested Minoan formula *u-na-ru-ka-[ ]-ja-si*; see further FINKELBERG et al. (supra n. 7) 198.

<sup>14</sup> Cf. N. DIMOPOULOU, J.-P. OLIVIER, and G. RETHEMIOTAKIS, "Une statuette en argile MR IIIA de Poros/Irakliou avec inscription en linéaire A," *BCH* 117 (1993) 513, where the direction of writing from right to left is taken as proof of the Linear A provenance of PO Zg 1.

On the latter see L. GODART and J.-P. OLIVIER, Recueil des inscriptions en linéaire A (= GORILA), vol. V (1985) xxxvi.

<sup>16</sup> E.L. BENNETT, personal communication.

<sup>17</sup> FINKELBERG et al. (supra n. 7) 199-202.

<sup>18</sup> PH 1b.2 and KH 91.3.4 being the only exceptions; see MATSAS 1995 (supra n. 3) 240-41 and nn. 44 and 46.

together with Olivier, that Linear B derives from a much more archaic variant of Linear A than the one we have.<sup>19</sup> With this in view, let us turn to the Tel Haror graffito (Pl. XXVIIIc).

On the accepted chronology of the Aegean scripts, to which we shall return later, the Tel Haror find (the end of the 17th - the beginning of the 16th century BC) is too early to be considered as written in Linear B. Yet, as Olivier points out, "the puzzling thing" about the Tel Haror sample is that in the case of two of the three signs present on it, namely, the "CLOTH + TE" logogram and the "BULL'S HEAD" logogram, "the identification is supplied by the Linear B comparanda."20 We have seen that the situation with the Lachish inscription is quite similar: the second sign of this ostensibly Linear A inscription can only be identified if provided with Linear B parallels. According to Olivier, the above peculiarity of the Tel Haror signs should be attributed to their underrepresentation in the indigenous Cretan scripts. However, this explanation can hardly apply to the fractional sign of the Samothrace nodulus for the simple reason that, as we saw, the counterparts of this sign are found among archaic samples of the Linear A script. Nor is it possible to apply this explanation to sign \*53 of the Lachish inscription, because the very consistency of the latter as compared to its counterparts in both Linear A and Linear B speaks against the possibility that the absence of its exact parallel in Linear A could be due to the hazards of representation. Therefore, postulation of an additional linear script, the one out of which Linear B directly evolved, seems to be the optimal way to account for the peculiarities of the samples of Aegean writing found both in Samothrace and on the territory of ancient Canaan.

Thus, the evidence supplied by the fractional sign T of Samothrace, by the "CLOTH + TE" and the "BULL'S HEAD" logograms of Tel Haror, and above all by sign \*53 of Lachish allows us to suggest that a linear script intermediary between Linear A and Linear B was in use in the Eastern Mediterranean in the second millennium BC. The new finds reinforce therefore the view held by older scholars, notably by Evans, Myres, Grumach, and Dow that, notwithstanding the common inventory of signs, the Linear B script must not be regarded as a direct derivative of Linear A and that an additional script should be taken into account in this connection. This view became unpopular in the early fifties as a result of the decipherment of Linear B, which has created the general impression that Linear B is no more than an adaptation of Linear A for the purpose of writing the Greek language. But, as we saw, it is extremely unlikely that either the Tel Haror graffito or the Lachish inscription, the two texts which display obvious Linear B affinities, could have been cast in Greek.

This raises the question as to the place of origin of the script in question. If we take into account, first, that not only Samothrace in the north but also Tel Haror and Lachish in the south of the Eastern Mediterranean have produced ostensibly Linear A signs, some of which nevertheless are more at home within the graphic context supplied by Linear B; second, that the two Canaanite vessels on which these signs are inscribed are not of Cretan origin (no data concerning the place of origin of the Samothrace finds are available for the present); and third, that no exact parallel to the graphic design represented by the sign AB 53 of the Lachish inscription had ever been attested on Cretan soil until Linear B was introduced to the island by the Mycenaeans, we shall inevitably arrive at the conclusion that it is unlikely that the graphic prototype of Linear B could have developed in Minoan Crete. As far as I can see, this conclusion goes well with the evidence supplied by another new find in the sphere of Aegean writing, namely the Middle Helladic inscription in Linear B discovered at Kafkania in the north-western Peloponnese.

It seems that the unexpectedly early date of the Kafkania inscription (the middle of the 17th century BC) is about to change substantially the accepted view of both the chronology of the Linear B script and its place of origin. The inscription has not yet been published, so that its full impact on the graphic history of Linear B is still not sufficiently clear.<sup>21</sup> If it is shown

<sup>19</sup> J.-P. OLIVIER, "L'origine de l'écriture linéaire B," SMEA 20 (1979) 47. Cf. MATSAS 1995 (supra n. 3) 241 n. 46.

<sup>20</sup> OLIVIER in OREN et al. (supra n. 6) 109.

<sup>21</sup> See however GODART, CRAI 1994 (supra n. 4) 727-30; Idem, "Una iscrizione in lineare B del XVII secolo A.C. ad Olimpia," Rendiconti dell'Accademia Nazionale del Lincei. Classe di Scienze morali, storiche e filologiche s.9, v. 6 (1995) 441-47.

conclusively that the inscription is written in Linear B, it is not out of the question that the ensuing change in the chronology of this script will also be able to account for the graphic peculiarities of the Tel Haror graffito; this, however, would not affect the present interpretation of either the Samothrace or the Lachish inscription for the simple reason that, as we saw, the numeral "10" of the first and the signs \*10 and, especially, \*732 of the second can only be identified if Linear A is taken into account. In any case, we can be sure of one thing: the early dating of the Kafkania find goes well with the conclusion of the present paper that it is unlikely that the prototype of Linear B developed in Crete itself.<sup>22</sup>

To sum up, there can be little room for doubt that the recent discoveries in both East and West will substantially change the current view of the derivation, the chronology, and the distribution of the Aegean scripts. In view of this, it would only be fair to remind ourselves on this occasion that the direction in which these discoveries seem to be pointing coincides in its general outline with what was once looked upon as an extremely unorthodox hypothesis brought forward by the late James T. Hooker years before these discoveries were made. Let me therefore conclude my paper with the following passage from his 1979 *Minos* monograph on *The Origin of the Linear B Script*:

"I suggest that a Minoan script, related to that of the Ayia Triada tablets but not identical to it, was introduced to the mainland early in the sixteenth century and was subsequently used there by a school of Minoan scribes. These scribes were, I presume, attached to such important centers of mainland culture as Mycenae and Tiryns. ... I believe that the spread of the Mycenaean culture in southern Greece, together with the intensification of trade between the Mycenaean area and other regions, provided a favourable environment for the use and development of a system of writing. ... If this possibility is acknowledged, it seems equally possible that a constant development of Minoan writing took place on the mainland as well as in Crete... In the course of time, and for reasons I have sketched earlier, the script was gradually modified in its external forms. During this long period of development, when varieties of Linear A were still in use in Crete, more and more Greek words came to be employed by the Minoan writers of the "proto-B" script, and in particular by those working on the mainland; or might we venture to postulate a school of scribes who were not attached to a specific site but moved from place to place as need dictated?"<sup>23</sup>

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As a matter of fact, this is also the conclusion made by Godart in view of the early date of the Kafkania inscription; see GODART, CRAI 1994 (supra n. 4) 729: "La date de cette inscription tranche définitivement les questions relatives aussi bien à l'épaisseur chronologique du linéaire B qu'à l'endroit où cette écriture a été inventée. Il ne fait plus aucun doute que les Grecs mycéniens ont bel et bien utilisé le linéaire B durant plusieurs siècles et il est désormais virtuellement prouvé que l'invention de cette écriture s'est faite sur le continent grec et non en Crète où l'on a aucune trace d'une présence stable d'hommes venus du continent à cette haute époque."

<sup>23</sup> HOOKER (supra n. 2) 72.

## LIST OF ILLUSTRATIONS

Pl. XXVIIIa	The Lachish Inscription (after M. FINKELBERG, A. UCHITEL, and D. USSISHKIN, "A Linear A
	Inscription from Tel Lachish [LACH Za 1]," Tel Aviv 23 [1996] 195-207).
Pl. XXVIIIb	The Samothrace Inscription (after D. MATSAS, "Minoan Long-Distance Trade: A View from the
	Northern Aegean," in <i>Politeia</i> , 235-47).
Pl. XXVIIIc	The Tel Haror Graffito (after E. OREN, JP. OLIVIER, Y. GOREN, P.P. BETANCOURT, G.H.
	MYER, and J. YELLIN, "A Minoan Graffito from Tel Haror [Negev, Israel]," Cretan Studies 5
	[1996] 91-117).

Discussion following M. Finkelberg's paper:

- E.L. Bennett: I have a question: why do you say that it is written from right to left, rather than from left to right? If you are writing on stone, it's very hard to decide, I think.
- M. Finkelberg: By the signs; it's from right to left.
- E.L. Bennett: If you are identifying a sign *da*, whatever its number is, and you are identifying a sign *re*, whatever its number is, they are not mutually in the same direction.
- M. Finkelberg: No, but here there are examples of writing from right to left in Linear A, about five or six examples, and it's very close to what we know from the other examples.
- E.L. Bennett: I find the shape of your ri sign not really very close to Linear B. If Linear A is indeed the predecessor of Linear B, then you would expect a different form out of which Linear B has created a modification. This itself looks like the end result of a process, rather than the beginning, if one is starting out as frequently in Linear B and in Linear A starting out from a pictorial sign. This inscription seems to have only one curved line in it, which is a little odd for both Linear A and Linear B. One other thing: you pointed to word dividers, but I couldn't see them. Where are they? Between the first and second [signs] from the right?
- M. Finkelberg: I could show you in my picture.
- E.L. Bennett: Please...Oh, there. Oh, at the very right.
- M. Finkelberg: They are very clear, I think.
- E.L. Bennett: And the long line in the middle, the three lines? Oh, in there. All right, all right, I accept those, that's all right. I am afraid that I think this is not at all connectable to Linear B. In linear A, there is still room for additional signs that haven't been found on the tablets that have shown up so far. So I am perfectly willing to accept that might be a Linear A sign.

[Remainder of discussion inaudible and/or not recorded].