LautSchriftSprache | ScriptandSound

LautSchriftSprache | ScriptandSound

Edited by
Paola Cotticelli-Kurras and Gaby Waxenberger

LSS 1
Variation within and among Writing Systems

Reichert Verlag

Paola Cotticelli-Kurras / Alfredo Rizza (eds.)

Variation within and among Writing Systems

Concepts and Methods in the Analysis of
Ancient Written Documents

Reichert Verlag

Contents

In search of the 'perfect fit' between speech and writing.
The case of the Linear B writing

Carlo Consani

bstract

he article reviews the structure and the functioning of the Linear B syllabic script in view of its adequacy and its defects in the rendering of Greek utterances preserved in the tablets of the archives. Putting together a number of observations, both of external and internal nature (literacy, status of the scribes on the one side; structure of the syllabary, spelling rules, development of sematography on the other), the Author claims that the Linear B syllabary was perfectly adequate for the intended purposes, and a sign of its success lies in its use throughout the entire duration of the Mycenaean kingdoms.

1. Nature of writing, writing systems and their adequacy

1.1. Orality and writing

Western civilization is inclined towards the prejudice that writing is just an expedient to overcome two limitations inherent to the oral codification of language: that of its temporal linearity and that of its evanescence. Consequently script is just a subsidiary and accessory representation of the language with respect to the oral manifestation of the same (*language vs speech*), created only to give a stability to the message beyond the communication circle characterized by the contemporary presence of the speaker and the interlocutor.

The roots of this attitude are ancient and we find influential and notorious canonizations of this opinion: one needs only to think of the Platonic formulation of the supremacy of orality over script, suggested in the dialogue between Theuth and Thamous presented in chapter 59 of *Phaedrus*[1] or the representational formulation of the same principle expressed in the introduction of Aristotle's Περὶ ἑρμενείας.[2]

Independently from, and well before these explicit positions, attributable to the genre of the Greek philosophical reflection on the nature of language, we find different clues converging to demonstrate that it is the very origin of the adoption of the alphabet in the Greek world

---

1   It is worth reading the extended version of Thamous' answer, behind which Plato conceals his arguments: «Most scientific Theuth, one man has the ability to beget the instruments of a science, but it belongs to a different person to be able to judge what measure of harm and benefit it contains for those who are going to make use of it; so now you, as the father of letters, have been led by your affection for them to describe them as having the opposite of their real effect. For your invention will produce forgetfulness in the souls of these who have learned it, through lack of practice at using their memory, as through reliance on writing they are reminded from outside by alien marks, not from inside, themselves by themselves: you have discovered an elixir not of memory but of reminding. To your students you give an appearance of wisdom, not the reality of it [...]» (Plato, *Phaedrus*, 274e–275a, engl. transl. by Rowe 1988: 123).

2   «Now spoken sounds are symbols of affections in the soul, and written marks symbols of spoken sounds. And just as written marks are not the same for all men, neither are spoken sounds. But what these are in the first place signs of —affections of the soul— are the same for all; and what these affections are likenesses of —actual things— are also the same. These matters have been discussed in the work on the soul and do not belong to the present subject». (Aristotle, *De Interpretatione*, 16a, engl. transl. by J.L. Ackrill (2002: 43)).

that led to the need to give a visible and concrete support to the ἔπεα πτερόεντα, following the well known metaphor of the Homeric epic (dominated by orality).[3]

A similar attitude, handed down over the centuries with different accents and tones, was expressed, almost literally, in one of the canonic texts of modern linguistics, the Saussurian *Cours*, which, in chapter VI, after an initial theoretic introduction and a reflection on the internal and external elements of language, immediately prior to tackling the phonology, poses the famous stigmatization of script: "langue et écriture sont deux systèmes de signes distinctes; l'unique raison d'être du second est de représenter le premier; l'objet linguistique n'est pas défini par la combinaison du mot écrit et du mot parlé; ce dernier constitue à lui seul cet objet. […]" (*Cours*, cap. VI, in the French edition edited by T. De Mauro, Paris, Payot, 1997: 45).

The influence of classic tradition, strengthened by what is unanimously considered as the foundation of the structuralist paradigm, is sufficient to explain why to the present day the secondary and accessory character of writing compared to oral language continues to enjoy a favour that reaches beyond the theoretical legitimacy of its very formulation.

And by no means independent from this line of thought are the definitions of script codified in classic works such as Diringer's monumental *The Alphabet*,[4] or which we find, not without some surprise, in a work which is a point of reference in the field of linguistics in Italy, such as the *Dizionario di linguistica* edited by G.L. Beccaria.[5]

1.2. Typology of writing systems and Linear B

I have outlined these different positions because I believe they represent a useful backdrop for us to better understand why, since the decipherment of the Linear B script has been accepted by the large majority of the scientific community,[6] the prevailing approach in analysing this script has been twofold: on one side, attempts were made to account for the complex orthographic rules and their function; on the other there was an almost unanimous consolidation of the opinion regarding the inadequacy or at least scarce effectiveness of a similar script system in conveying the Greek language.[7] The connection between this approach and the

---

3   Within the imposing bibliography related to the debated issue regarding the motivations that lie behind the adoption of the alphabet in the Greek world, I would just mention a study which seems to be particularly significant to me: Sherratt (2003).

4   «Literally and closely defined, writing is the graphic counterpart of speech, the "fixing" of spoken language in a permanent or semi-permanent form [...]». Diringer (1968: 13).

5   «Rappresentazione grafica del linguaggio (e del pensiero dell'uomo); essa, come tale, è un mezzo di comunicazione. La trasposizione del linguaggio avviene secondo segni convenzionali; in questo modo, attraverso la s (codice linguistico di secondo grado, detto anche sostitutivo), si risale al codice linguistico di primo grado (cioè alla lingua parlata). La sostituzione, però, non è mai perfetta, poiché nella scrittura non si possono segnare intensità di pronuncia, intonazione, pause, complessità di intreccio delle voci parlanti, ecc. (il canto, che adopera una forma particolare di s, in parte riesce a segnare anche questi fenomeni». Beccaria (ed. 1989: s.v.). The definition of writing as a "secondary code" and the accent placed on the less than perfect respondence between orality and writing represent clear clues of a traditional and inadequate approach to writing.

6   This time can be placed around the middle of the 1950s, and can be identified with the realization of the first International Congress of Myceneaology in Gif-sur-Yvette (April 1956).

7   See the definitions of the spelling rules in works of the initial period (Vilborg 1960, Doria 1965), and those which one can find in recent reference such as Bartoněk (2003: 106–112), Risch/Hajnal (2006: 45–55); significant in the approach of this very balanced latter work is the § "Die Mehrdeutigkeit der Schrift" (Risch/Hajnal 2006: 76).

theories mentioned at the beginning on the ancillary and secondary character of script with respect to orality is evident.

In the sixty years since the deciphering of Linear B, much water has flown under the bridge, both with regard to the theoretical approach to writing and typology of writing systems, and in the analysis of Mycenaean syllabic writing.

In the first aspect one gradually adopted the perspective that recognizes the writing level as having its own autonomy with respect to the spoken language: significant here is the position shown by Gelb as early as the beginning of the 1960s.

Gelb (1973: 18):

> On ne peut jamais tenir l'écriture pour une contrepartie *exacte* du langage parlé. Un tal état idéal, de correspondence point par point, où tout élément de la langue serait noté par un signe unique, où un seul signe exprimerait en retour un élément unique de la langue, n'a jamais été atteint dans une écriture. Même l'alphabet, la plus élaborée de toutes les formes d'écriture. déborde d'inconséquences sur ce plan des relations entre le signe et le son. [...]
>
> Cependant, l'assertion, valable pour l'essentiel, que l'écriture élaborée exprime la langue parlée, ne doit pas être entendue comme signifiant qu'elle n'exprimerait rien d'autre.

This perspective appears today completely integrated in the most popular publications, as an example, amongst the Italian ones, we may mention Valeri's manual (2004: 14), which offers a definition of writing based on the communication circuit:

> Se per *scrittura* intendiamo un insieme di segni tracciati (cioè eseguiti su un supporto con uno strumento qualunque) per registrare il pensiero, si può dire che essa è un codice *artificiale* che si avvale del canale visivo per superare i limiti propri della comunicazione naturale (la lingua). La scrittura quindi non nasce per riprodurre il codice della lingua, ma per esprimere il pensiero attraverso messaggi visivi.

In this definition we can detect a change in perspective with respect to the "traditional" line: writing is not so much a representation of the language ("visible speaking") but rather the representation of thoughts through visual signs ("visible thinking").

The path that led to this renewed approach, with the contribution of researchers such as G.R. Cardona and F. Coulmas, is effectively reconstructed in a work by A. Mioni which was presented in a recent conference dedicated to the relation between orality and writing, organized for the twentieth anniversary of Cardona's premature death.[8]

Important steps forward have been made also in Mycenaean studies, with respect to the classic presentations of LB writing contained in the texts of twenty-five years after its decipherment.[9] On one hand, in fact, there have been various attempts to overcome the traditional problems of the spelling rules connected to the use of the LB, by means of arguments of a phonological nature and directly referring to certain properties of the syllable as an autonomous unit of the linguistic structure: I refer to the works by D. G. Miller (1994), R. Woodard

---

8   Mioni (2009), with further reference on the subject. For the relation between orality and script in perspective and connected issues of literacy in the societies involved, see the synthesis by Coulmas (2013).

9   I consider the 1970s to be the watershed between the first phase of the Mycenaean studies and more recent ones when the second edition of the *Documents* (1973) and of the 20th issue of the journal *Studi Micenei ed Egeo-Anatolici* (1979) appeared.

(1997) and to my own study, Consani (2003), which have recently achieved developments of some interest.[10]

But also beyond a specific analysis of the LB spelling rules, on more than one occasion the nature of this writing and its degree of adequacy has been subject of investigations which have led to decidedly divergent conclusions, such as those argued by Y. Duhoux (2000) and G. Facchetti (2002).

In the light of this state of affairs, I believe that the progress achieved, on a theoretical level as well as with regard to our knowledge of LB structure and its users, allows and calls for a thorough overhaul of the matter.

In my analysis of the situation of the Linear B script, in light of a possible answer to the question of its adequacy, I shall start from the external data (use of writing, type of literacy, *modus operandi* of the scribes), and only subsequently I shall tackle the structural data of the writing repertory at the levels of both system and use.

2. Linear B external data

2.1. Cultural context and literacy

The LB, as is well-known, is a script that is strictly and exclusively connected to the Mycenaean palaces and to the redistribution economy which the Mycenaean kingdoms of the Greek continent and of Crete were based on; its chronological and cultural horizon is placed between the end of the Late Minoan / Late Helladic II periods (1440/1425 BC) and the end of the Late Minoan / Late Helladic III (1200/1180 B.C.).[11]

Script carriers are the best proof of the exclusive connection to the economical-administrative field; up to now, in fact LB is found principally on clay tablets, and subsidiarily on clay nodules and vases, particularly stirrup jars.[12] The very locations in which the documents were found, palaces or anyway buildings connected with the administration of the respective sites,[13] confirm the close connection between the LB writing and the economic sphere. On the other hand, the fact that at least the most important category in terms of documentation, the clay tablets, have been preserved accidentaly with the fires having destroyed the Mycenaean palaces, shows that this documentation can be assumed to make up only a small part, the most ephemeral, of the entire administration of the kingdoms, the recording of which

---

10 The entire issue of the phonological correlations to the graphic rules established by the Mycenaean scribes was discussed at a conference dedicated to the syllable as a phonological unit, held at the University of Chieti and Pescara in April 2013; the results that I presented on that occasion (Consani, currently in print) change, at least in part, some of the conclusions reached in Consani (2003).

11 "The *raison d'être* of the Linear B tablets is not society but economy". This is the beginning of a recent work on the nature of the Linear B as palace script (Shelmerdine 2008: 115).

12 Bartoněk (2003: 30) gives us these exact numbers for the three types of carriers: 5561 tablets, 171 nodules, 170 vase inscriptions. Also this last type is strictly connected to the commerce of oil, perfumes and other goods controlled by the palaces, as we learn also by the term *wa-na-ka-te-ro* ("pertaining to the *wanax*", recurrent in the painted inscriptions: regarding this type of text, see Duhoux (2010, *ubi alii*).

13 I refer in particular to the tablets found in the so called "House of the oil merchant" in Mykene. Quite different instead is the picture of the LA script, even if limitedly to the type of tablets: it was in fact shown that less than 1/5 of the total tablets in LA come from a palace structure in the true sense and that both the quantities recorded and the type of products listed (mostly foodstuffs, domestic animals and staff, but not crafts or industry products) are coherent with the administration of limited, private estates and not that of a state, as in the case of the documents in LB (Olivier 1987).

probably made use of materials (hide, papyrus or similar) which, owing to their perishability, have not reached us.

The purely economic function that LB fulfilled in the Mycenaean world, receives due attention when inserted within the wider picture of the writings of the Aegean region, (Cretan Hieroglyphic, Linear A, Cypro-Minoan and Classic Cypriot Syllabary), the reciprocal connections of which have since been ascertained, although some aspects are still susceptible to analysis and investigation.[14] If we simply consider the LA, whose ancestry with respect to the LB is an accepted fact, the functional picture could not be more different with respect to LB; in LA, in fact, together with those connected to the functions of administrative nature (tablets, nodules, roundels), we find a wide variety of scipt carriers such as stone vases ('libation tables'), clay vases (with engraved or painted inscriptions), architectural supports (stucco or stone), metal objects (vases, brooches, rings, axes), and various others (weights, stones, statuettes).[15]

The natural conclusion is that the level of literacy in the Minoan world, characterized by the use of a geographically and culturally widespread form of writing used for different functions, with the adoption of script by the Mycenaean world, was undeniably restricted within the economic sphere connected to the administration of the Mycenaean kingdoms.[16]

2.2. The scribes

The aspects we have treated up to now have important consequences in outlining the characters and approaches of LB users. Since the beginning of Mycenaean studies, profound differences have been noted between the 'anonymous' Mycenaean scribes and those of the Near-East (Bennett jr. 1960); the research subsequently dedicated to the scribes of the two largest archives of Pylos and Knossos,[17] as well as the progress made in the reconstruction of the complex Mycenaean administration,[18] have produced a general consensus on the fact that behind the vague label of 'scribes' we must identify functionaries of different rank in the palatine administration, accustomed to recording the transactions of which they were responsible on the tablets. The same writing activity of these functionaries, reconstructed with the aid of the physical traces of their presence in the different areas of the palace, shows us that the written recordings must have been made in the place where the economic transactions took place; the tablets, once they had been engraved, remained in these places (the so-called 'deposits'), and only subsequently could it happen that some texts were moved to what is

---

14 For a comprehensive overview of the writing systems and their connections see Consani (2008 [2010]).

15 From a quantitative point of view, if one disregards the nodules which alone number more than a thousand, the relation between the administrative documents and the non-administrative ones is approximately 2,8:1 (Facchetti 2002: 141–142).

16 This is not the place to reflect more deeply on the motivations and nature of this sort of cultural regression that emerges from the comparison between the use of writing in the Minoan and Mycenaean worlds; in this regard I refer to Palaima (1987) and other considerations that I have presented on this subject (Consani 1996;1998).

17 For Pylos see Palaima (1988a), for Knossos, as well as Olivier (1967), see the important updates offered by Driessen (2000); important analyses dedicated to the work of individual scribes are represented by the works of Kyriakidis (1996–1997 [1999]) and Pluta (1996–1997 [1999]).

18 The results presented by Shelmerdine-Palaima (Eds. 1984) on Pylos have been updated by the works of the same Palaima (2003).

more appropriately defined as 'archive', where the data would be crosschecked and, eventually, recapitulations would be drawn up.[19]

The most interesting consequence of this collection of data is that the activities of the scribes must have been characterized by conditions different from those expected in solitary writing, i.e. in a situation of calm and reflection, like the one we are used to, and associated with the image of the scribe in the medieval world. This must have affected the users' approach to writing, the nature of the writing process, as well as the product of such activity: the combination of the above mentioned data contributes to qualify all three of these aspects as characterized by a perfectly natural approach to script, as appears to be confirmed by the analysis of the *lapsus* and errors that we find in the Mycenaean documents. A thorough examination of the cases documented on the tablets shows that the vast majority of the types of errors corresponds to the natural psycho-linguistic tendencies that recur both in the spoken and written language (anticipation, omission and persistence of elements), whereas there is a minimal quantity of errors technically attributable to the use of syllabic script or alleged problems of adequacy in the notation of the underlying linguistic reality;[20] the conclusion that we must draw from these elements is that the approach of the functionary-scribes to writing does not appear to be characterized or conditioned by the efforts to render, through an inadequate instrument such as an open syllabary, the complex syntagmatic distribution of sounds of the Greek language, but rather relates to an utterly plain and natural use of the writing system in the palatine administrative practice.[21]

3. Structure and function of the LB script

3.1 System, level of use, spelling rules

In the sphere of relations that exist between the Aegean scripts, the direct filiation of LB from LA is by now established, and we find a reflection of this, moreover, in the common numeration of the graphemes of the two writings used since 1980s and presently in common use. We know that, in the case of borrowing and adapting writings, the approach that characterizes the borrowers and the choices consequently operated are of utmost importance in adequately describing the new script both in respect of the language and in relation to the functions for which the script was created: thus it appears of primary interest to apply a similar line of analysis to the creation of LB, tackling first the system level and subsequently that of its concrete uses.

3.1.1. LB system

The whole set of LB syllabograms derives from the LA script and the cases in which such derivation is not documentable on a formal level are attributable to either the insufficient Minoan documentation or to the fact that the LB syllabary probably derives from a more archaic form of LA rather than the one, more stylized and evolved, preserved in the archives of the TM II, *in primis* of Hagia Triada. The strong preference accorded to syllabograms with open syllable structure, in evident discordance with Greek phonotaxis, was also attributed to

---

19 Palaima (1988a: 179 f., 2003, 2011: 121–123), Driessen 2000. For an updated and comprehensive overview see also the data produced by Marazzi in this volume.

20 For a comprehensive analysis of the types of slips of LB, see Consani (2002; 2003: 57–70).

21 Consani (2003: 70), Palaima (2011: 95–127).

the fact that said characteristic would correspond to a trait of the phonology of the language for which LA was created; this characteristic would have been assumed without apparent interventions or amendments by the *prôtos heuret̄és* of LB.[22]

However, the adaptation to Greek was not altogether a passive one and some limited but particularly evident cases show that it was probably executed by people who had a primary linguistic competence in the Greek language. The proof can be found in the introduction of signs not included in the initial syllabic repertory and explainable only in a Greek and/ or Indo-European idiom. The LA syllabary shows various lacks in the syllabic series of the vowel /o/[23] which are filled by new creations of LB: the signs B 15/*mo*, B 32/*qo*, B 42/*wo*. For the second and third of these cases it is possible, based on the shape of the respective signs, to suggest the hypothesis that the acrophonic principle was beginning to evolve starting with a Greek lexeme:

– 32/*qo*, which represents the extreme stylization of an ox head, as compare to H 11, could reflect the initial of the term for "ox" with the initial labiovelar *g^{w}ou̯s (alphabetical Greek βοῦς);[24]

– 42/*wo* derives from the splitting of AB 90/118 *dwo*/*du-wo* intended as 'double *wo*'.[25]

– To these cases one must add 62/*pte* which, according to a convincing hypothesis advanced by G. Neumann (1996), may represent the wings of a flying bird, for which the phonetic value of the syllabogram reflects the initial of the Greek term for 'wing', πτερόν / πτέρυξ (πτε-ρ-όν with reduced apophonic degree of the root of πέτομαι "I fly".

These examples, though quantitatively limited, are sufficient to demonstrate the role played by the Greek language speakers in the adaptation of the syllabic repertory of LB.

3.1.2. LB: the level of use and the spelling rules

In addition to the cases just examed, an absolutely innovative strategy was followed by the users of the LB syllabary in establishing a series of orthographic criteria needed to adequately render through an open syllabary a language such as Greek, full of consonantal clusters in the various positions of the word and of the syllable; confirming the originality of the direction taken by the users of LB, it is useful to remember that LA, from which LB derives, had no such orthographic rules, as one can deduce from a statistical analysis of the two scripts.[26]

Unlike the classic Cypriot, probably due to the influence of the alphabetical spelling, LB users adopted the completely original approach of noting with a certain perseverance and accuracy all the segments preceding the syllabic peak, omitting instead the final segments of the syllable and of the word: I shall not here linger in detail on this innovation,[27] which has consequences of great importance. In fact, the notation of the syllabic onsets and the omission of the codas corresponds to a well-known law of preference for the construction of the syllabic unit at phonologic level: this enables us to bring all the complex chapter on spelling rules at the level of the innate phonological competence of the speaker/writer; it is thus possible to overcome the difficulty of having to imagine that the scribes/functionaries had an

22 On the characteristics of the LB syllabary and on the syllabic types noted in the same, see Consani (in print).
23 Also this trait was attributed to a characteristic of the language for which the LA would have been created (Consani 2008 [2010]: 389).
24 The theory is suggested by F. Soldani in an unpublished PhD dissertation discussed at the University of Milan.
25 For the demonstration of this procedure see Consani (1995 [1998]).
26 Consani/Federighi (1986).
27 For the analysis of this question see Consani (2003; in print).

explicit codification of the spelling rules, so complex that it creates considerable problems even to the modern scholar, if considered as a complex of spelling rules associated with an explicit and formal teaching of writing. Needless to say that this goes in the same direction as the perfectly natural and thoughtless use of LB writing by its users, already confirmed by elements of different nature (see *supra*).

Now, the choice of such a writing strategy entails profound consequences on what LB users wanted to obtain from such a script, and that is, from the point of view of the external observer, on the degree of adequacy of the writing and its functions: on this level, in fact, the writing of the onsets and the omission of the codas of the syllables and words, applied to an inflectional language such as Greek, privileges the lexical access and the semantic identification of the lexemes, with simultaneous indifference for the rendition of the morpho-syntactic aspects of the utterances. On the other hand, such a strategy should be attributed to a precise choice operated by the LB users and cannot be considered as dependent on the nature of the writing system: this aspect, which is fundamental in this analysis, is corroborated by the fact that a great part of the characteristics we have just highlighted, traditionally considered motives of inadequacy of the LB, have been resolved by the SCC users, who had a syllabary that was not structurally different to that of the LB, through the application of different spelling rules, through which it was possible to render also a large part of the syllable and word codas.[28]

3.2. Development of the sematographic system of the LB

Another aspect in which the original contribution of the creators of the LB is fully revealed, in comparison with the Minoan antecedent, is the creation of an ideographic repertory. Even ignoring the lack of the fractional system used in the LA to resort to a new type of notation of the quantities of liquids and solids,[29] it was noted that the LB follows original lines in the creation of its own sematographic repertory.[30]

3.2.1. LB ideographic repertory

Reliable calculations reveal that in the face of an almost complete correspondence of the syllabic repertories of the LA and the LB, about 80% of the sematographic apparatus of the LA has been abandoned for the creation of a new repertory which includes the goods of greater pertinence to the economy of the palaces, as demonstrated by the ideograms for the armours (162, 163 TUNica, 240–242 BIGae), those for the animals (104–109), agricultural products (120–131), textiles (159), the imposing series of ideograms of vases (201–229).[31]

Within this profound innovation one can identify precise tendencies, above all the abandonment of the "ligature", a writing type that was largely used in the LA, in which an ideogram is specified through the addition of a syllabic sign; if the syllabogram added to the basic LA sign represented a specification either of the product or of the transaction – expressed through the acrophonic abbreviation of a Minoan word – the abandonment of this practice is

28 For an in depth comparison between the rules for using the two syllabic structures used in Greek, LB and SCC, see Consani (in print).
29 Chadwick (1980: 141–149), Schoep (2002: 30–37).
30 For a comprehensive perspective see Palaima (1988) and Schoep (2002: 28–30).
31 Bartoněk (2003: 113–117).

attributable to the fact that the new script had to render a different language than the Minoan one so that such abbreviations must have lost a great part of their perspicuity and utility.[32]

An equally important tendency – which has been noted for some time – is represented by the creation in the LB of new sematographic signs starting from the combination of the syllabograms which represent the phonetic expression of the word;[33] this is a phenomenon that is frequently indicated with the term "monograms". For example:

*127 KA+PO ↑ [ka(r)po(i)], "fruits"

* 128 KA+NA+KO ↑ [knāko(s)] "saffron"

*133 A+RE+PA ↑ ↓ [aleipha(r)] "scented oil"

*135 ME+RI ↓ [meli] "honey"

*145 MA+RU/RO ↑ [mal(l)o(n)] "wool"

* 156 TU+RO$_2$ ↓ [tūrjo(i)] "whole cheese"

*247 DI+PTE ↓ [dip(s)te(rai)] "hides"

This writing strategy was neither developed nor standardized by the users of the LB, as we can see from the fact that the direction according to which the syllabic signs that compose the ideogram are ordered is variable, sometimes the same sign (cf. A+RE+PA); however, the introduction of this new type of writing, which in theory could appear as an incomprehensible and pointless complication, in actual fact reveals the importance that the Mycenaean functionary-scribes attributed to the sematographic apparatus of their writing, as they tried to create recognizable signs not through the decoding of sounds expressed by the single syllabograms, but directly through a sematographic process. From the point of view of a typology of writing systems, this confirms that the evolution of writing does not necessarily follow linear paths which tend towards a phonographic notation of the language, regarded as the best or most adequate phase in the scale of writing systems types, but is rather characterized by far more complex developments that depend on the attitudes and needs of the users of the script.[34]

3.2.2. Level of use and double scripts

It is interesting to complete these considerations on the composition of the ideographic repertory of the LB and its relation to the syllabic repertory with a few comments on the level of use.

From this point of view a new and significant discordance should be pointed out regarding the manner in which the users of the two linear scripts LA and LB have treated the relation between sematographic and phonographic notation. We know that, as of the years immediately following their deciphering, it was observed that on the LB tablets, the sematographic notation was often preceded, usually relegated to the end of every entry, with a more or less accurate description in syllabic writing of the object of the registration or of the type of transaction: this characteristic was exploited by those sceptical of the correctness of Ventris' decipherment; on the other hand, also among the militant Mycenaeologists, the question was

---

32   This line of interpretation is reflected in Schoep (2002: 29); though there is a problem with some abbreviations added to the ideograms on the vases that reappear identically in the LA as in the LB, albeit usually intended as abbreviations of Greek terms: for this aspect see Consani (1983).

33   This type of script, characteristic of the LB, was highlighted at first by Bennett jr (1972) and was then subject of analysis in Palaima (1988b) and Consani (1996).

34   Important considerations in this sense are found in Cardona (1991²: 21 f). For a more ample and updated overview see Coulmas (2009).

treated with some embarrassment and liquidated more or less as an expedient to attribute either to the low adequacy of the LB in notating the Greek language or as an aid for less literate scribes.[35] Subsequently, attempts were made to verify if such a practice recurred also in LA; in spite of the the lower degree of consistency of the Minoan corpus and the problems concerning the lack of a complete decipherment of this script, the substantially negative conclusion that Neumann reaches at the beginning of the Sixties was confirmed by more thorough analyses based on all the material available in the Nineties: the few cases in which a similar recording strategy was assumed by the Minoan scribes turned out to be simply misleading.[36]

On the contrary, in the Linear B the use of an extensive and pervasive sematographic apparatus is the norm, as we can see also from certain significant statistical data: of the c. 5600 tablets written in this script, only 154 belong to the V series, which collects the texts without a sematographic apparatus; if we subtract from this number the more than 100 tablets that are incomplete on the right side, for which we cannot tell if they were actually without ideograms and numerals, we see that only 50 tablets out of a total of more than 5000 (that is less than 1%) contain only written text in syllabic writing. These figures speak for themselves and the well-known interpretation difficulties that characterize the texts in this series confirm, both from the point of view of the writers and of modern readers like ourselves, the exceptionality of a writing practice in LB without sematographic elements.

The greater standardization of the formats of script carriers for the LB, the increased attention paid to the *'mise en page'*, revealed by the preparation of the tablet with guidelines for writing,[37] produce the effect of seeing the Mycenaean document as susceptible to a double interpretation in the eye of the scribe/functionary: a rapid read through scrolling the final part of the lines and the records was sufficient to obtain all the essential information of a qualitative and quantitative nature on the object recorded, expressed in ideographic form; and a second and calm reading would integrate the first and essential decoding with more detailed information contained in the parts written in syllabic writing.

4. Sematography and syllabic script

The contribution made by the sematographic notations on tripods with and without handles, contained in the Pylos tablet Ta 641, to confirm the deciphering of the LB is by now a *topos* of Mycenaeanology; but alongside this case, in a way an exemplary one, a glance at a couple of documents is sufficient to see the relevance of the sematographic notation.

4.1. Analysis of some tablets

Tablet KN Fp 1+31 (*fac simile* in *CoMIK* I: 1) records the offerings of different quantities of oil to different divinities and in different localities made in the month of *de-u-ko-*; it is easy to identify the ideogram of the oil at a glance and the quantities recorded at the end of every line (here highlighted in grey).

35 For the two positions see Schachermeyer (1959: 59–60), Grumach (1969–1970: 335–338) and respectively, *Documents*[2]: 49.

36 For the results of a selective analysis of all the cases of possible of "double script" in the LA, known in the mid Nineties, see Consani (2002).

37 On such changes in the preparation of the surfaces see the observations in Palaima (1988b; 2003).
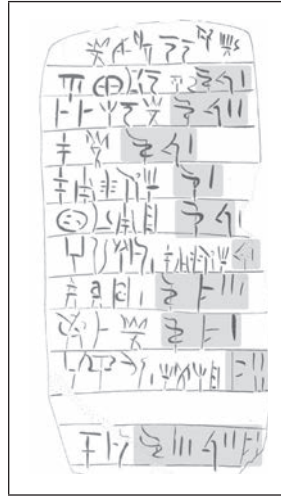
Another tablet, of the palm-leaf shape kind, KN Od 562 (*fac simile* in *CoMIK* I: 202) records wool consignments to the palace by different individuals, whose names are written in syllabic script, like the verb *pe-re* [pherei] "(s)he delivers", whereas, at the end of the line, the ideogram of wool is followed by the relative numbers:
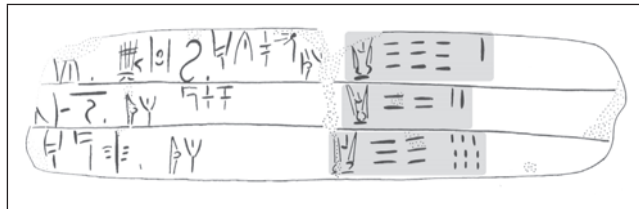
Here too, the distinction between the part written phonetically and the sematographic apparatus placed at the end of the line is evident.

The examples could be easily multiplied to the extent of covering the greater part of the existing Mycenaean corpus, with the only marginal exception, as we have said, of the tablets of the V series – which don't contain ideograms.

4.2. A particular case

However, in some cases, which we could define as extreme, there is a maximum permeation of phonetic and sematographic script; a good example is represented by the Knossos tablet Ca895, which records equines:
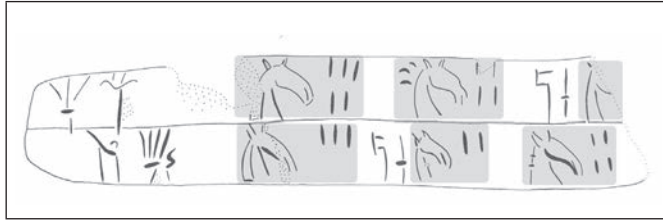
KN Ca 895+fr (*fac-simile* in *CoMIK* I: 363)

.1	i - qo	EQU^f 5	EQU$^{[m]}$ 4	po-ro EQU[
.2	o - no	EQU^f 3	po-ro EQU 2	EQU^m 4

The information, as we can see, is often duplicated, but not in an uncritical or banal manner, since the part written in syllabic writing and that written sematographically combine to offer a combination of data which only partially overlap: the first term written phonetically *i-qo* [ikk^{w}o(i)],[38] more than literally meaning "horses", as is translated also in works of reference, is to be intended as EQUINE and the two subsequent ideograms, each followed by a numeral, specify that we are talking about 5 MARES and 6 STUDS. The distinction between the animals' gender recorded in the tablets is obtained by adding to the basic ideogram the sign ∧ for the female and ‡ for the male. It is interesting to note that, whereas in the second line the ideogram EQU^m appears in the expected form (with the modifier for the male version), in the first line, the male gender corresponding to the second ideogram is expressed only in the negative form and as an opposite to the female gender of the previous ideogram, in that the shape of the sign corresponds to the basic sign without modifications (EQU), apart from a particularly marked and realistic mane. Also in other cases the ideogram without addition might substitute that of the male gender, but never that of the female gender,[39] from which we can deduce that, from a cognitive point of view, the scribes perceived the male gender as unmarked compared to the female gender: an element that finds a precise parallel in the structure of the grammatical oppositions of an Indo-European language such as Greek language.

The second term written phonetically, *po-ro*, which we find again as the last entry of the tablet, is intended to mean [pōlo(s/-i)] "foal/s", whereas at the beginning of the second line we find the phonetically written *o-no* [onoi], to indicate the DONKEYS specified in the subsequent ideograms.

As we can infer from a comprehensive interpretation of the document, the data entered phonographically and that entered sematographically interact with each other in an all but banal way without the phonetic part written at the beginning of the first and second line, it would not be possible to infer that the ideograms conventionally transcribed as EQUus refer not only to horses but also donkeys and, on the other hand, it would also not be possible to infer that the term *po-ro* on the first line most probably refers to horse foals, and donkey foals in the second.

---

38 On the reasons for which the term has to be transcribed without initial aspiration see Duhoux (2008: 255–256).

39 An example of this phenomenon is found in KN Co 903, where the following sequence is attested: OVIS^m 60 OVIS^f 270 CAP^m 49 CAP^f 130 SUS 17 SUS^f 41 BOS^m 2 BOS^f 4, from the context it is evident that SUS stands for SUS^m. Also in KN Ce 59 entries are recorded relating to *we-ka-ta* BOS^m x (OXEN x), but in the fourth entry where we would expect to find the ideogram BOS^m we find instead the basic BOS.

The phonographic and sematographic interaction, an exclusive characteristic of the LB, emerges thus as an all but original way of recording information in the entire Aegean landscape of the second and third millennium B.C.

5. Discussion

If we look at the various series of elements analysed, it appears quite evident that they can all be integrated with each other well and they may contribute to the outlines of a unitary and coherent picture.

In fact, the internal structural data, regarding both the formation of the repertories of phonographic and sematographic elements and the coordinated and integrated use of phonetic and ideographic notation, form the exact counterpart of the functions of the LB script and of the type of literacy that characterizes the Mycenaean society: the first are at the same time precondition and consequence of the second and vice versa. This type of structural data would not be conceivable if the LB had had purposes other than strictly economic-administrative ones and, at the same time, if the users of this script and the Mycenaean society had been interested in the use of script for purposes other than those attested and of more sophisticated kind, there is no doubt that they could have adopted, for the same repertory, different spelling rules, as we see occurring a few centuries later in a different cultural climate in archaic and classic Cyprus. For these reasons, wondering if such a writing system would have been suitable for writing poetry, treaties or other kinds of text is dictated solely by a modern and alphabet-centred perspective of writing, but is senseless if related to LB; the functions of this writing system, in fact, more than an external and occasional circumstance, are revealed to be instead like a feature that determines the function of script in a society like the Mycenaean one which, in different regards, remains strictly bound to the oral culture.

If we insert this information into the landscape of the Aegean scripts, with particular reference to the LA from which the LB derives and, on the other hand, with the other syllabic script attested for writing in Greek, the Classic Cypriot Syllabary, the originality of the path taken by the Mycenaean scribes/functionaries appears quite evident: they have generated a peculiar type of mixed syllabic and sematographic writing, perfectly suitable for the attested administrative purposes, but with little interest for a faithful annotation of the linguistic reality. This last aspect must be considered in relation to the limited circulation of these documents which, in a fundamentally illiterate society, must have been used by a very restricted number of people besides those who were responsible for writing them. Thus, the drastic graphic rules marked by economy of space and sided by an elaborate sematographic apparatus are the instruments perfected by the scribes/functionaries in a manner that is perfectly coherent with the functions of this writing.

Quite different instead was the path taken a few centuries later by the users of the Classic Cypriot Syllabary which, though lacking any sematographic apparatus, because of the establishment of rules based on the graphic rendition of all the sounds of the spoken language, could be used for many centuries and for writing documents of different nature, resisting the competition of the clearer and more performative alphabet.

In the cultural landscape of the Aegean of the Late Bronze Age, the LB, in spite of the limited chronological reach of its use and the narrowness of its circulation, both geographic and at a social level, reveals itself to be a perfectly functional and adequate writing, the elaboration and functions of which are not lacking in elements of originality and, we might add, genius.

References

Aristotle*, Categories and De Interpretatione*, translated with notes by J.L.Ackrill, Oxford, Claredon Press 1963 (repr. 2002).

Bartoněk, Antonin, 2003, *Handbuch des mykenischen Griechisch*, Heidelberg, Universitäts Verlag Carl Winter.

Beccaria, Gian Luigi (diretto da), 1989, *Dizionario di linguistica e di filologia, metrica, retorica*, Torino, Einaudi.

Bennett, Emmett L. jr 1972, "Linear B Sematographic Signs". *Minos* 11: 55–72.

Cardona, Giorgio Raimondo, 1991², *Antropologia della scrittura*, Torino, Loescher.

Consani, Carlo, 2008 [2010], "Il greco dal periodo prealfabetico all'età ellenistica e le lingue dell'area egea". *Annali del Dipartimento di Studi del Mondo Classico e del Mediterraneo antico. Sezione linguistica* 30/II: 341–428.

——, 2003, *Sillabe e sillabari fra competenza fonologica e pratica scrittoria*, Alessandria, Edizioni Dell'Orso.

——, 2002, "Il sillabario lineare B fra psicolinguistica dello scriba e antropologia della scrittura". *Incontri Linguistici* 25: 173–193.

——, 2002, " 'Double Writings' in Minoan Linear A". In: *Collectanea Philologica IV Ignatio Richardo Danka Sexagenario Oblata*, Łódz, Wynawnictwo Uniwersytetu Łódzkiego:15–25.

——, 1998, "Fenomeni di Prestito e di adattamento di Scritture nell'Egeo del II e del I millennio a.C.". In: Agostiniani, Luciano / et alii (eds.), *Do-ra-qe pe-re. Studi in memoria di A. Quattordio Moreschini*, Pisa-Roma, Istituti Editoriali e Poligrafici Internazionali: 163–170.

——, 1996, "Le scritture sillabiche egee: dati esterni e caratteri strutturali". In: De Miro, Ernesto / Godart, Louis / Sacconi, Anna (eds.), *Atti e Memorie del II Congresso Internazionale di Micenologia*, Roma, GEI: 229–236.

——, 1995 [1998], "AB 118 DWO tra minoico e miceneo". *Annali del Dipartimento di Studi del Mondo Classico e del Mediterraneo antico. Sezione linguistica* 17: 97–105.

——, 1983, "Nomi di vaso micenei e minoici: per un'ipotesi sui rapporti linguistici tra greco miceneo ed area minoica". In: Quattordio Moreschini, Adriana / Consani, Carlo / Benedetti, Marina, *Studi di linguistica minoico-micenea ed omerica*, Pisa, Giardini: 17–39.

——, in stampa, "Syllables and Syllabaries. Evidence from two Aegean Syllabic Scripts". In press.

Consani, Carlo / Federighi, Marco, 1986, "Ancora sulle proprietà statistiche delle scritture sillabiche. La lineare A e il sillabario cipriota". *Studi Classici e Orientali* 36: 17–34.

Coulmas, Florian, 2013, *Writing and society. An Introduction*, Cambridge, Cambridge University Press.

Coulmas, Florian 2009, "Evaluating merit – the evolution of writing reconsidered". *Writing Systems Research* 1: 5–17.

Diringer, David, 1968, *The Alphabet, a key to the history of mankind*, London, Hutchison (2 vols.).

Documents² = Ventris, Michael / Chadwick, John, 1973, *Documents in Mycenaean Greek*, Cambridge: Cambridge University Press.

Doria, Mario, 1965, *Avviamento allo studio del miceneo: struttura, problemi e testi*, Roma, Edizioni dell'Ateneo.

Driessen, Jan, 2000, *The Scribes of the Room of the Chariot Tablets at Knossos. Interdisciplinary Approach to the Study of a Linear B Deposit*, Salamanca, Ediciones Universidad de Salamanca.

Duhoux, Yves, 2010, "La fonction des vases à étrier inscrits en linéaire B". *Kadmos* 49: 47–92.

——, 2008, "Mycenaean Anthology". In: Duhoux, Yves / Morpurgo Davies, Anna (eds.), *A Companion to Linear B. Mycenaean Greek Texts and their World.* Vol. I, Louvain-La-Neuve, Peeters: 241–393.

——, 2000, "Le linéaire B; une sténographie de l'âge du Bronze". *Živa Antika* 50: 37–57.

Facchetti, Giulio, 2002, "La lineare B: una scrittura contabile e largamente imperfetta". *Kadmos* 41: 141–147.

Gelb, Ignace, J., 1973, *Pour une théorie de l'écriture*, Paris, Flammarion.

Grumach, Ernst, 1969–'70, "Bemerkungen zu Ventris-Chadwick, *Evidence*". *Orientalistische Literaturzeitung* 52: 293–342.

Kyriakidis, Evangelos, 1996–1997 [1999], "Some Aspects of the Role of Scribes in Pylian Palace Administration". *Minos* 31–32: 201–229.

Miller, Gary D., 1994, *Ancient scripts and phonological knowledge*, Amsterdam-Philadelphia, John Benjamins.

Mioni, Alberto M., 2009, "Conoscenze, memorie e riti della scrittura e della parola: continuando il viaggio di Giorgio R. Cardona". In: Consani, Carlo / Furiassi, Cristiano / Guazzelli, Francesca / Perta, Carmela (a cura di), *Atti del 9° Congresso dell'Associazione Italiana di Linguistica Applicata. Oralità/Scrittura. In memoria di Giorgio Raimondo Cardona (Pescara 19–20 febbraio 2009)*, Perugia, Guerra Edizioni: 13–45.

Neumann, Günter, 1996, "Zur Schaffung der Zeichen *91/two und *62/pte von Linear B". In: De Miro, Ernesto / Godart, Louis / Sacconi, Anna (eds.), *Atti e Memorie del II Congresso Internazionale di Micenologia*, Roma, GEI: 91–99.

Olivier, Jean-Pierre, 1987, "Structure des archives palatiales en linéaire A et en linéaire B". In: Lévy, Edmond (ed.), *Le système palatial en Orient, en Grèce et a Rome : actes du Colloque de Strasbourg, 19–22 juin 1985*, Leiden, Brill: 227–235.

——, 1967, *Les scribes de Cnossos*, Roma, Ateneo.

Palaima, Thomas G., 2011, "Scribes, Scribal Hands and Palaeography". In: Duhoux, Yves / Morpurgo Davies, Anna (eds.), *A Companion to Linear B. Mycenaean Greek Texts and their World.* Vol. II, Louvain-La-Neuve, Peeters: 33–136.

——, 2003, " 'Archives' and 'Scribes' and Information Hierarchy in Mycenaean Greek Linear B Records". In: Brosius, Maria (ed.), *Ancient Archives and Archival Traditions: Concepts of Recordkeeping in the Ancient World*, Oxford: Oxford University Press: 153–193.

——, 1988a, *The Scribes of Pylos*, Roma, Ateneo.

——, 1988b, "The Development of the Mycenaean Writing System". In: Olivier, Jean Pierre / Palaima, Thomas G., *Texts, Tablets and Scribes. Studies in Mycenaean Epigraphy and Economy Offered to Emmett L. Bennett, jr.*, Salamanca, Ediciones Universidad Salamanca: 269–342.

——, 1987, "Comments on Mycenaean Literacy". *Minos* 20–22: 499–510.

Pluta, Kevin, 1996–1997 [1999], "A Reconstruction of the Archives Complex at Knossos dating to either c. 1375 or c. 1200 B.C.". *Minos* 31–32: 231–250.

Risch, Ernst / Hajnal, Ivo, 2006, *Grammatik des mykenischen Griechisch*, on line at: http://sprawi.uibk.ac.at/content/grammatik-des-mykenischen-griechisch-0

Plato, *Phaedrus*. With Translation and Commentary by Cristopher J. Rowe, Oxbow Books. Oxford, 1988.

Saussure, Ferdinand de, 1997, *Cours de linguistique générale*. Édition critique preparée par T. De Mauro, Paris, Payot.

Schachermeyer, Fritz, 1959, "Die Entzifferung der mykenischen Schrift". *Saeculum* 10: 48–72.

Shelmerdine, Cyntia W. / Palaima, Thomas G. (eds.), 1984, *Pylos comes alive: industra-tion in a mycenaean palace: papers of a Symposium sponsored by the Archaeological Institute of America Regional Symposium Fund*, New York: Fordham University: Lincoln Center.

——, 2008, "Mycenaean Society". In: Duhoux, Yves / Morpurgo Davies, Anna (eds.), *A Companion to Linear B. Mycenaean Greek Texts and their World.* Vol. I, Louvain-La-Neuve, Peeters: 115–158.

Sherratt, Susan, 2003, "Visible writing: questions of scripts and identity in early Iron Age Greece and Cyprus". *Oxford Journal of Archaeology* 22: 225–242.

Valeri, Vincenzo, 2004, *La scrittura. Storia e modelli*, Roma, Carocci.

Vilborg, Ebbe, 1960, *A tentative grammar of Mycenaean greek*, Goteborg, Elanders Boktryckeri Ak-tiebolag.

Woodard, Roger D., 1997, *Greek Writing form Knossos to Homer. A Linguistic Interpretation of the Origin of the Greek Alphabet and the Continuity of Ancient Greek Literacy*, New York-Oxford, Oxford University Press.