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KOSMOS

JEWELLERY, ADORNMENT AND TEXTILES IN THE AEGEAN BRONZE AGE

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KOSMOS IN THE MYCENAEAN TABLETS: THE RESPONSE OF MYCENAEAN ‘SCRIBES’ TO THE MYCENAEAN CULTURE OF *KOSMOS*

It has not gone unnoticed by scholars who concentrate on the work of Mycenaean scribes (we now have come to prefer the more appropriate term ‘tablet-writers’) and how they record information on their texts that they have what we might call aesthetic sensibilities, or an appreciation of style and beauty, that is expressed most conspicuously in the *kosmos* of their tablets.¹

The job of tablet-writers was a specialized occupation. They were operating in a predominantly oral culture, where information would be retained primarily as Herodotus retained it nearly eight centuries later—in memory and orally. For example, Herodotus 7.224 tells us that he learned the names of all three hundred of the Spartans who died at Thermopylae, each one of them having achieved the distinction of being an ἀνὴρ ἄριστος.

The Linear B tablets, in their recording of personal names, in some ways mimic the simplicity of later Spartan tombstones (Pl. CLIXa). But even in the simple grave inscription we use here as an example, we see a characteristic Greek tendency toward orderly presentation: through the anaphoric ἐν that begins lines 2 and 3 and its *stoichedon* orientation with the *epsilon* and *upsilon* of the personal name Eualkēs in line 1:²

Eualkēs
in war
in Mantinea

This same instinct shows itself in some Linear B tablet-writers in an almost calligraphic elegance in their handwriting and in their sensitivity to the overall appearance and arrangement of their final texts.

This is noteworthy because we have put to rest, I believe, the old notion that any of the clay-tablet inscriptions had contents that were important enough to require what we would call ‘fair-copy’ texts. Given that most texts were designed for future reference by the tablet-writers themselves or others who knew the general information parameters of texts on particular topics, the tablet-writers were at liberty to have bad handwriting and even to arrive at end results for information-entry that would strike outside observers as somewhat disordered.

For this we can use PY Tn 316 as a ‘poster child’ (Pl. CLIXb).³ It is then all the more

1 For a comprehensive discussion of Mycenaean scribal practices with ample illustrations, see T.G. PALAIMA, “Scribes, Scribal Hands and Palaeography,” in Y. DUHOUX and A. MORPURGO DAVIES (eds), *A companion to Linear B. Mycenaean Greek Texts and their World* 2 (2011) 33-136. References to discussions of etymology are given by author only and refer to the standard works of P. CHANTRAINE, *Dictionnaire étymologique de la langue grecque: histoire des mots* (2000); H. FRISK, *Griechisches etymologisches Wörterbuch* (1954-1972) and R. BEEKES, *Etymological Dictionary of Greek* (2010) volumes 1 and 2.

2 See L.H. JEFFERY, *The Local Scripts of Archaic Greece*, rev. ed. with suppl. by A.W. Johnston (1990) 197-198, 202, plate 38, no. 60.

3 See PALAIMA (*supra* n. 1) and T.G. PALAIMA, “Kn02 - Tn 316,” in S. DEGER-JALKOTZY *et al.* (eds), *Florent Studia Mycenaea. Akten des X. Internationalen Mykenologischen Colloquiums in Salzburg vom 1.-5. Mai 1995*, *Österreichische Akademie der Wissenschaften Philosophisch-Historische Klasse Denkschriften* 274 (1999) Band II, 437-461.

The attempt by L. GODART, “I due scribi della tavoletta Tn 316,” *Pasiphae* 3 (2009) 99-115, to discover the work of two scribes in Pylos tablet Tn 316 should be viewed with extreme caution. It is not impossible that Emmett L. BENNETT, Jr. in his earliest tentative identification of scribal hands in the Pylos texts, *Athenaeum* 46 (1958) 328-333, and later Emmett L. BENNETT, Jr. and Jean-Pierre OLIVIER in their official identification of scribal hands, *The Pylos Tablets Transcribed II, Incunabula Graeca* 59 (1976) 17 and 62, were mistaken.

Likewise the assembled scholars at the sixth international Mycenological colloquium in 1975, including Jean-Pierre Olivier and Louis Godart, who saw and heard Emmett L. BENNETT, Jr., published as “*PU-RO*

striking that in the late Mycenaean palatial period on the mainland, and notably at Pylos, tablet-writers, with no compelling public social motives for emphasizing or maximizing *kosmos*, reach a zenith of elegant and streamlined execution of signs and meticulously organized formats of information.

At the *Aegeum EIKΩN* conference,⁴ I discussed how the Mycenaean tablet-writers might have been influenced by their surroundings (especially by looking at frescoes) in the process of drawing ideograms (I chose as an example deer) upon the tablets. Ruth Palmer is now in the process of taking this work further where deer are concerned. I also discussed the artistic qualities of scribal doodles.

Here I want to take up what we can say from the evidence of the tablets and the social and political environments in which the writers of the tablets worked about what *kosmos* entails in the Mycenaean period and how the Mycenaean tablet-writers developed a sense of *kosmos*. There had to be social conditions that sensitized tablet-writers to develop also their repertory of descriptive terms relating to the kinds of items that are manufactured and used in elite environments. Human beings are drawn to beauty. This is a basic instinct for as long as we know about them, i.e., about us, too, who still are subject to this impulse.

Cynthia Shelmerdine focuses in her paper on the fascinating details of what the scribes chose to record about specific items of artistic value. Here I discuss more general considerations.

It is true that the repertory of descriptive terms in the Linear B texts is limited by the relatively banausic nature of the tasks the tablet-writers are performing. They are not writing, after all, for a museum guide, a connoisseur magazine or art history journal. Their aim is to keep track of objects by identifying, grouping or differentiating them in unique ways and doing so in ways that keep their texts brief and to-the-point and keep their tablets, which have to be stored at least temporarily, compact and economical with regard to space. Still they have freedom in choosing how to describe the color, size, shape, materials, and details of specific items. In so doing they might have revealed or even developed their own artistic tastes.

We are also somewhat limited in what we can say, because the surviving texts are concerned with the large-scale picture and the impersonal item. Even when a vase (for example, a *qe-ra-na* on PY Ta 711) is described as *wa-na-se-wi-ja* (pertaining to the *wanasseus*, or official attendant on the *wanassa* and her activities and affairs), it is in the context of a general inventory of ritual paraphernalia, some clearly heirlooms, and not items connected with a specific *wanassa* or her specific *wanasseus*, at a particular time and place.⁵

Our records therefore do not reflect the tastes and desires that the *wanassa* and *wanasseus*, at the time the Ta tablets were written and preserved in late LH IIIB, had in commissioning or wanting to acquire, retain and use such an object. They do reflect an antiquarian instinct of sorts, but this is likely to be based on broader social instincts and necessities, e.g., the veneration of traditional cultic *paraphernalia*, the rarity of objects of an out-of-date style, and even the relative scarcity of crafts personnel and raw materials.

vacant...," in E. RISCH and H. MÜHLESTEIN (eds), *Colloquium Mycenaeanum* (1979) 221-234, give his clear and detailed explanation of the textual history of Tn 316 and how it was ruled, laid out and written section-by-section and line-by-line by a single scribe, may have been remiss not to offer objections. The late John Chadwick, in fact, after Bennett's paper (p. 234), explicitly commented that the complicated textual history of PY Tn 316 "can only be due to uncertainty on the part of the scribe about the exact form of his text."

It is also possible that their cumulative errors were perpetuated by me in *Scribes of Pylos* (1988), and in 1995 (published 1999) when I treated at length the entire textual and interpretative history of Tn 316, from Michael Ventris, pre-decipherment, onward, again in the presence of experts in the Aegean scripts *per se*, like Godart, Bennett, Olivier, Duhoux and Driessen.

Godart does not treat any of these works and their arguments; nor does he consider the factors that cause variations of sign forms within individual scribal hands, especially when tablet-writers are writing lengthy texts or a series of many texts, or when they are writing repeatedly particular signs within texts or series, or when they are writing, as Bennett suggested, with some interruption in their work. Nor does Godart discuss how the irregular surfaces of the faces of tablet Tn 316 might influence how a scribe writes his signs.

So caution is urged until PY Tn 316 can be thoroughly restudied

4 T.G. PALAIMA, "Mycenaean Scribal Aesthetics," in *EIKΩN* 63-75.

5 See Pylos tablet Ta 711, where two *qe-ra-na* that are designated as *wa-na-se-wi-ja* are recorded. Also recorded is one *qe-ra-na* that is identified as *a-mo-te-wi-ja* (of the **harmoteus* 'the person who is involved with the "joined item",' i.e., most likely the 'supervisor' *vel sim.* of chariot wheel and chariot manufacture.

We have no surviving texts describing something like the famous collection of non-Aegean seals from Thebes or individual items of personal clothing or adornment, such as wrist seals or necklaces or individual garments.

By looking at how tablet-writers make references to color, decorative motifs and the materials of which objects are made, we might be able to determine to what degree they, as individuals, were satisfied with generic vs. specific terms or used variation in terminology that would reflect eyes trained for the particular, a *sine qua non* in connoisseurship.

But it is also important to try to reconstruct the visual environment and overall organizational ambience that would have conditioned the responses of tablet-writers to physical objects.

At the *Aegaeum EPOS* and *DAIS* conferences, I have tried to argue for a positive vision of the Mycenaean palatial system and what it was able to achieve within the limited resources available to the Mycenaeans in the territorial environments of the Greek mainland.⁶ A key part of understanding what the Mycenaeans were able to accomplish in the 14th and 13th centuries BCE is the self-conception of the palatial elites (*wanax*, *lāwagetās*), regional aristocrats (collectors) and village ‘big men’ (*basilēwes*) as they organized and maximized the human and material resources of this region, which in historical times was something of a backwater, exploited by the Spartans mainly as a ‘bread basket’ for agricultural produce. The Mycenaeans who ran the region in LH IIIB locally and at the palatial center conceived of themselves as bringing sustenance to the general populations under their control. This is reflected in the vocabulary relating to the administrative agents and officials of the palace (*korētēr*, *prokorētēr*, *dāmokoros*) as providing ‘satisfaction’ (the **kor-* root) within palatial provinces and the sub-regions controlled by second-order centers.

kosmos itself does not show up in the Mycenaean lexicon, perhaps not surprisingly given that its use to designate an official or magistrate, the kind of lexical item that might show up in the Linear B texts, is confined to archaic Crete.⁷

The root of *kosmos* is, however, attested as an element in Mycenaean Greek personal names, most conspicuously *ko-sa-ma-to* in the Pylos landholding documents (Eb 905.A and Ep 212.8) as a landholder who is a *te-o-jo do-e-ro* = ‘servant (honorific no doubt) of the deity’ and on a Knossos text listing what appears to be a distribution of coriander seed (Ga 685).⁸ The standard interpretation of this form as from a verbal adjective as **Kόνσματος* (cf. later Greek κοσμητός) is problematical because the eta in the historical Greek form derives from an epsilon in the denominative verb κοσμέω. For the basic noun *kosmos*, R. Beekes (*Etymological Dictionary of Greek* [2010], 759-760) prefers the reconstruction from Indo-European **kens-* ‘order’ with **koNs-mo-*, related to Latin *cēnsēō* ‘to estimate’, having an original meaning of ‘to put in order (by speaking)’, and a secondary development in Greek of ‘adorn’ and ‘adornment’.

The Linear B texts also are lacking specific descriptions of items of personal jewelry, so we do not have the word attested in a true early semantic specialization: ornament or decoration, especially of women (Homer, *Iliad* 14.187; Hesiod, *Works and Days*, 76), but also of horses (Homer, *Iliad* 4.145).

Hesiod *WD* 72-76 (I intentionally use a cumbersome literal translation for the noun and verbal forms of *kosmos*) in discussing the creation of Pandora by the gods reads as follows:

6 T.G. PALAIMA, “Mycenaean Society and Kingship: *Cui Bono?* A Counter-Speculative View,” in S.P. MORRIS and R. LAFFINEUR (eds), *EPOS. Reconsidering Greek Epic and Aegean Bronze Age Archaeology. Proceedings of the 11th International Aegean Conference, Los Angeles, UCLA - The J. Paul Getty Villa, 20-23 April 2006, Aegaeum* 28 (2007) 129-140; and “The Significance of Mycenaean Words Relating to Meals, Meal Rituals, and Food,” in *DAIS*, 383-389.

7 JEFFERY (*supra* n. 2) 309-313, Crete plate 59, 1a Dreros and 2 Gortyn.

8 J.L. MELENA, “Coriander on the Knossos Tablets,” *Minos* 15 (1976) 136-137. J.-L. GARCÍA RAMÓN, “Latin *cēnsēre*, got. *hazjan* und das idg. Präsens **kens-e-ti*,...,” in G. MEISER (ed), *Indogermanica et Italica* (1993) 107-108 and 119-120, discusses other Linear B personal names derived from this root: e.g., */Kessandros/*, */Kestilos/*, */Lāwokestās/*, */Kestilāwos/*, and forms like *ke-sa-da-ra* and *ke-sa-do-ro* and *ke-sa-me-no* (cf. later Greek dialect form Κέσσανδρα), all with an original meaning relating to ‘speaking solemnly to men or the united body of men (*lāwos*)’. See also *ka-e-sa-me-no*.

ζῶσε δὲ καὶ κόσμησε θεὰ γλαυκῶπις Ἀθήνη
 ἀμφὶ δὲ οἱ Χάριτές τε θεαὶ καὶ πότνια Πειθῶ
 ὄρμους χρυσεῖους ἔθεσαν χροὶ ἀμφὶ δὲ τήν γε
 ὦραι καλλίκομοι στέφον ἀνθεσιν εἰαρινοῖσιν
 πάντα δὲ οἱ χροὶ κόσμον ἐφήρμοσε Παλλὰς Ἀθήνη.

Goddess gray-eyed Athene girded and **set her in order**
 And around her goddess Graces and mistress Persuasion
 set golden necklaces upon her skin; And round about her
 the beautiful-haired Seasons set a crown with springtime flowers;
 And Pallas Athene fastened to her skin every **orderly adornment**.

It should be noted that in *Iliad* 17.210 the same formula as in *WD* 76 is used of fastening τεύχεα (armor) upon the skin of Hector.

Iliad 4.141 is the famous passage where the blood staining Menelaus' wounded thighs is likened to the cheek pieces of horses, made of ivory, that are specially stained with purple decoration by Maeonian and Carian women specialists. We are told that such special pieces are desired by many horsemen. But they cannot acquire the piece of resplendent artistic beauty because:

Il. 4.144-5: βασιλῆι δὲ κείται ἄγαλμα
 ἀμφοτέρων κόσμος θ' ἵππῳ ἐλατῆρι τε κῦδος

it is stored up for a king as an **honorific object of delight**
 at one and the same time **an adornment** for a horse and **a mark of public praise** for his rider.

It is fair to say that the early meanings of *kosmos* “ordre, bon ordre” (Chantraine, s.v., already found in Homer) and “Ordnung, Anstand” (Frisk, s.v., already in the *Iliad*) had not yet developed into the later sense of “political arrangement or system, government, even constitution (Spartan)” found in Thucydides (4.76, 8.48, 8.67, 8.72) and Herodotus (1.65).

The root of *kosmos* is unclear, with suggestions of the following range:

(1) **κεδνός ‘careful, diligent, trusty’** (cf. *κήδομαι*) and already found applied to the *ἄναξ* in *Odyssey* 14.170 and, at the other end of the social scale, an *ἀμφίπολος* in *Odyssey* 1.335. This first etymology for *kosmos* stresses the meticulous care and reliability with which a person does things. Think of how this would be applied to specialist crafts personnel and political actors and other social agents in the Mycenaean period. In Homer it can be used as a quality of an august king or an attendant who puts household or personal effects in order.

(2) Latin *censeo* ‘to tax, assess, rate, estimate’ with the related meaning of putting property and persons into appropriate *census* classes. We can see clearly how this would be appropriate to the kind of state organization the palatial system imposed. The **land documents (series E-)** and **regional taxation documents (series Ma)** pay painstaking attention to evaluating **the exact level of what we might call tax obligation required of o-na-to (beneficia) holders** and districts and their capital centers respectively. The Greek form would come from **κόνσμος*, which Chantraine considers “le rapprochement le moins improbable.”

This preferred etymology would fit the kind of orderly structures that the palatial system imposes on human and natural resources and the features of economic and political arrangement that make the overall palatial system work.

(3) from **χόθμος* from Indo-European *ghodh-* ‘vereinigen, eng verbunden sein.’

This etymology suits the control and organization the palatial system imposes by virtue of being able to assess abilities and resources, obligations and benefits and then *unite closely* persons and disparate geographical, social and political groups and units into cooperative and cohesive wholes.

In many ways the Mycenaean palatial territories are all about the imposition of *kosmos* understood in what must have been its root sense of ‘**orderly and culturally acceptable and identifiable (decorous) arrangement.**’ The geographical organization of the palatial territories,

whether militarily, politically or economically, would have used order to maximize stability and productivity.

The *kosmos* of the Mycenaean palatial system would have been conspicuous in its hierarchy of social units *that* controlled human activity and resources. The different social and settlement units make up the fundamental framework:

ra-wa-ke-si-ja = *lāwagesiā* (as securely restored on KN As 1516) an organization responding to the authority of the *lāwagetās*;

ke-ro-si-ja = *geronsia* = later *gerousia* (PY An 261.2-17 and v. .1-2) councils of elders operating at the village level and organizing and mobilizing labor and the exploitation of other resources;

qa-si-re-wi-ja = *g^wasilewiā* (KN As 1516.12, PY Fn 50.1-3 and Fn 867.3) bodies either made up of *g^wasilēwes* or led by one of them in local village areas;

da-mo = *dāmos* (*passim*) bodies at the local community level that see to the distribution (as is etymologically clear) of land allotments for *usufruct*;

po-to-ri = *ptolis* (in personal names *po-to-ri-jo* and *po-to-ri-ka-ta*) the ‘city’ as it would be conceived and defined in the Mycenaean palatial period;

wa-tu = *wastu* (PY Tn 316 v. line .1 and KN V 114.b; and personal names *wa-tu-o-ko* = *wastuhokhos* and *wa-tu-o* = **wastuōn*) the ‘town’ as it would be conceived and defined in the Mycenaean palatial period;

i-je-ro = *hieron* (at least by implication) the sacred precinct;

na-wi-jo > *nāwos* ‘dwelling place of the deity’;

do-de (with *do-* [cf. the root of the Greek verb δέμω, ‘construct in layers’] = ‘the built room, hall’, cf. later *domos*);

wo-ko-de (*woikos*) ‘to the house’, i.e. the social group that defines the *oikos* in this period;

me-ka-ro (*megaron*) to the megaron or central hearth/throne room;

and so forth.

In Messenia, the architecturally sophisticated and decoratively refined central Palace of Nestor no doubt stood as a magnificent memorial to the ability of the *wanax*, the *lāwagetās*, and the regionally cooperating power figures, institutions and settlements to maintain productive and edifying order and control. Imagine living in a smaller settlement during this period. An inhabitant of a small town in LH IIIB Messenia on a daily basis would have been accustomed to what was architecturally simple, irregular, small, drab and functional, with houses built mostly out of local materials that lay to hand. Their environs (housing, furniture, clothing, diet, instruments of daily life) would have produced a form of monotonous sensory deprivation, relieved mainly on occasions when it was possible to attend ceremonies at higher-order centers in their districts. If their lives had some respite from being “solitary, poor, nasty, brutish, and short,” it was because of the central palaces. On some occasions several thousand people could gather at Pylos proper and participate in feasting and related rituals there.

Imagine approaching and eventually entering the palatial center. Imagine its straight-lined external appearance and the regularity of form and decoration in the interior, combined with its rich profusion of colors and decorative patterns, all created by specialized professional builders and decorators using specially chosen non-local materials and coloring agents. Such an experience would have been overwhelming for a visitor from the periphery of the kingdom, and a clear demonstration that all was right with the authority of the palatial rulers. Individual inhabitants of Messenia in the late 13th century B.C.E. who were fortunate enough to participate in such ceremonies, when they returned home, would tell stories of their experiences within their families and clans and local social units.

The degree of organization and order needed to monitor particular economic spheres

at Mycenaean Pylos is also well known and reveals the remarkable advance in systematized structuring of information and information categories over earlier phases of record-keeping, both in Linear A texts and in Knossos tablets from the Room of the Chariot Tablets. The laying out of information upon the texts in a manner that is a forerunner of later Greek alphabetic *stoichedon* inscriptions is a truly remarkable manifestation of *kosmos*.

We use three examples:

(1) the Eleusis inscribed stirrup jar (Pl. CLIXc); its painted inscription is a clear example of how the orderliness of tablets affects its layout, so far unique among isj's.

(2) PY Cn 608 (Pl. CLIXd) shows us that the instinct for order manifests itself even in simple texts; this one comes from a palatial context and deals with the nine major centers of the Hither Province; it records fatted pigs associated with those centers and designates them as 'to be fattened.'

(3) PY Jn 829 (Pl. CLXa), the famous bronze recycling text, represents what might be the pinnacle of systematic order, seen best in its structural layout as analyzed by John Bennet.

We should not think that, given the information, communication and travel technologies of the period, it was a simple or even short-term matter to achieve this level of *kosmos* within the polity of LH IIIB Messenia (Pl. CLXb). The palatial center at Pylos during the LH IIIA and B periods had unified 50,000-100,000 people and ca. 250 settlements over an area of roughly 2,000 square kilometers. This area was not easy to control. It was divided by ridges and mountains and presented a long coastline exposed to a hostile world of pirates, raiders and foreign navies.

Nor was it a small achievement within the written records to keep track of all the data necessary to help impose orderly arrangement and structure on the interlinking systems, economic, social and political, that enabled the Messenian palatial polity to operate efficiently, survive and thrive.

My last figure, from the twentieth century, reminds us how difficult it is even to acquire command of the streamlined Roman alphabet, much rather the complex Linear B script and all of the tricks of information recording and presentation that experienced tablet-writers used.

We see here a famous photograph (Pl. CLXc) from the Depression Era taken by American photographer Russell Lee. It shows school children learning to write in Lake Dick, Arkansas in October 1938. You can see on the blackboard above her how hard a task it is for the poor girl who has dropped her chalk even to form the letter **A** correctly.

Given the natural tendency toward entropy of human systems at any level of complexity, *kosmos* does not come easily.

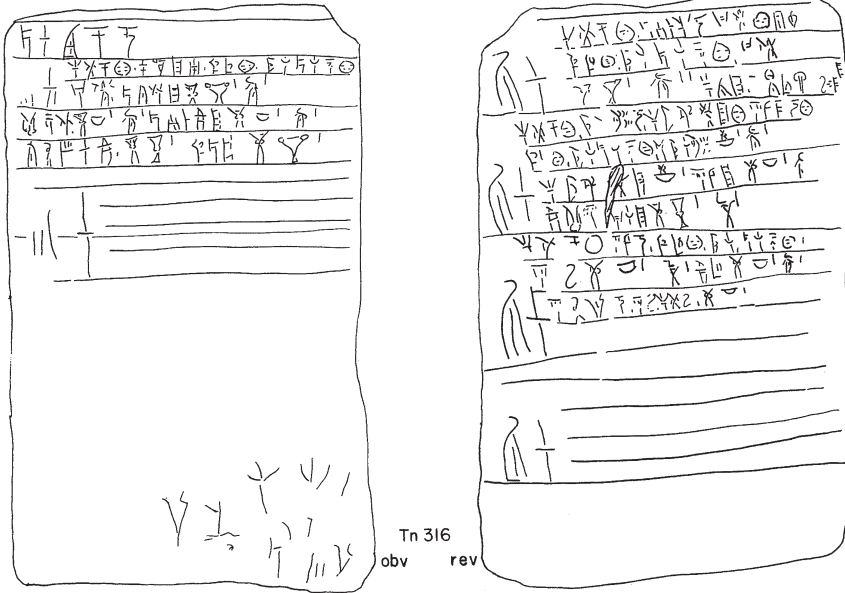
Thomas G. PALAIMA

LIST OF ILLUSTRATIONS

- Pl. CLIXa Spartan grave inscription for Eualkēs who died in the Battle of Mantinea (418 B.C.E.). After JEFFERY (*supra* n. 2) plate 38, no. 60.
- Pl. CLIXb Drawings of front and back of Pylos tablet Tn 316. After E.L. BENNETT, Jr., “PU-RO *vacant* (PY Tn 316.7-10, v. 13-16),” in E. RISCH and H. MÜHLESTEIN (eds), *Colloquium Mycenaeanum* (1979) 222.
- Pl. CLIXc Drawing of Eleusis stirrup-jar inscription EL Z 1. After A. SACCONI, *Corpus dell’ iscrizioni vascolari in lineare B* (1974) 113.
- Pl. CLIXd Pyos tablet Cn 608 (photo courtesy of the Program in Aegean Scripts and Prehistory of the University of Texas at Austin and the University of Cincinnati Archaeological Excavations) with annotations by Kevin Pluta.
- Pl. CLXa Pylos Jn 829 structurally analyzed by John Bennet. After J. BENNET in J. DAVIS (ed.), *Sandy Pylos* (2008) 118, fig. 59.
- Pl. CLXb Messenian palatial geography in the LH IIIB period. After BENNET (*op. cit.*) 121, fig. 61.
- Pl. CLXc Russell Lee, photograph of Arkansas school children during the Great Depression October 1938 (courtesy of the Humanities Research Center, University of Texas at Austin).

E V A A K E Σ
 E N Π O Λ E M O I
 E N M A N T I M E A I

a



b

si-a₂-ro is aligned as a header for the SUS+SI ideograms

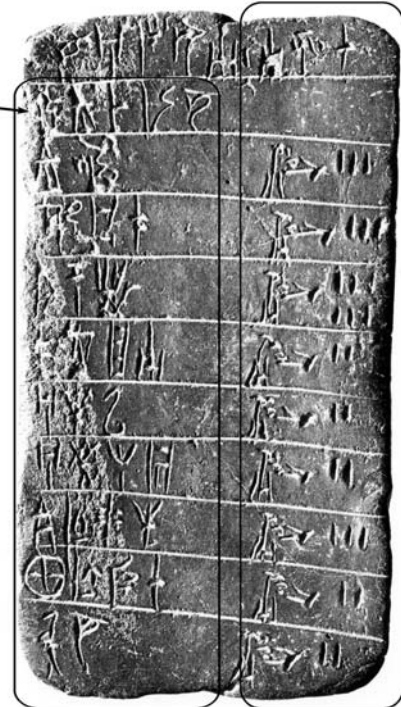
EL Z 1



1:4

- .1 da*22-to
- .2 da-pu₂-ra-zo , wa ,

c



o-pi-da-mi-jo is aligned as a header for the toponyms

d

Official Pylos Serial Number — **Jn 829**

the officials listed below

"points, for javelins and spears"

Heading

.1 jo-do-so-si , (ko-re-te-re) , du-ma-te-qe ,
 .2a { ————— e-we-qe
 .2 { (po-ro-ko-re-te-re-qe) , ka-ra-wi-po-ro-qe , o-pi-su-ko-qe , o-pi-ka-pe-
 .3 ka-ko , na-wi-jo , (pa-ta-jo-i-qe) , e-ke-si-qe , a3-ka-sa-ma

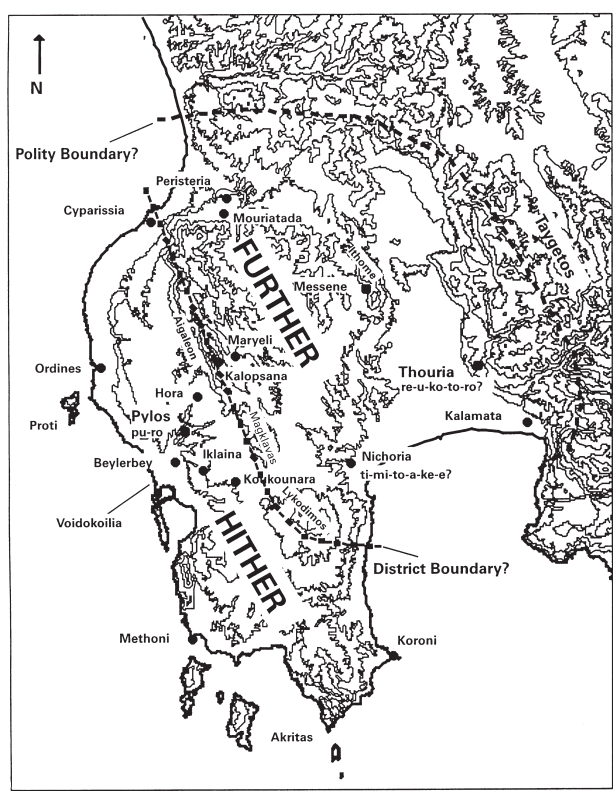
Main Text

.4 (pi-*82) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .5 (me-ta-pa) ko-re-te AES M 2 po-ro-ko-re-te AES N 3] *vacat*
 .6 (pe-to-no) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .7 (pa-ki-ja-pi) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .8 (a-pu2-we) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .9 (a-ke-re-wa) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .10 (ro-u-so) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .11 (ka-ra-do-ro) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .12 (ri-ljo) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .13 (ti-mi-to-a-ke-e) ko-re-te AES M 2 po-ro-ko-re-te AES N 3
 .14 (ra-]wa-ra-ta2) ko-re-te AES M 2 N 3 po-ro-ko-re-te AES N 3
 .15 (sa-]ma-ra) ko-re-te AES M 3 N 3 po-ro-ko-re-te N 3
 .16 (a-si-ja-ti-ja) ko-re-te AES M 2 po-ro-ko-re-te N 3
 .17 (e-ra-te-re-wa-pi) ko-re-te AES M 2 po-ro-ko-re-te N 3
 .18 (za-ma-e-wi-ja) ko-re-te AES M 3 N 3 po-ro-ko-re-te N 3
 .19 (e-re-i) ko-re-te AES M 3 N 3 po-ro-ko-re-te N 3
 .20–.23 *vacant*

Lines ruled, but left blank

Quantities of bronze [AES] ranging from 3.75 kg. [M 3 N 3] to 0.75 kg. [N 3]

a



b



c